Innovative Urban Village

Final Environmental Impact Statement

PREPARED FOR

Innovative Urban Living, LLC
432 Park Avenue South
2nd Floor
New York, NY 10016

PREPARED BY

One Penn Plaza
Suite 715
New York, NY 10119
212.857.7350

CEQR No. 20DCP057K
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Innovative Urban Village

Final Environmental Impact Statement (FEIS)

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Lead Agency:	City Planning Commission, City of New York Daniel R. Garodnick, Chair
Lead Agency Contact:	Stephanie Shellooe, AICP Director, Environmental Assessment and Review Division New York City Department of City Planning 120 Broadway, 31st Floor New York, NY 10217
Project Applicant:	Innovative Urban Living, LLC
Prepared by:	VHB One Penn Plaza, Suite 715 New York, NY 10119-0800 212-857-7350
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The FEIS is available on the website of the New York City Department of City Planning, via the Innovative Urban Village project page on ZAP: **https://zap.planning.nyc.gov/projects/2019K0038**.

To view the Innovative Urban Village FEIS and Appendix, navigate to the project page in ZAP and select Public Documents, then "FEIS_20DCP057K".

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Executive Summary

Introduction

The Applicant, Innovative Urban Living, LLC, is seeking discretionary approvals from the City Planning Commission (CPC) to facilitate the proposed large-scale development of a site located on Brooklyn Block 4430, Lot 1; and Block 4434, Lots 1 and 10 in the East New York neighborhood of Brooklyn, Community District 5 (the Development Site). These approvals include a zoning map amendment that would apply to the entire Project Area, which in addition to the Development Site includes *de minimis* portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100, and extends to the centerlines of Flatlands Avenue, Louisiana Avenue and Pennsylvania Avenue. Additional approvals include zoning text amendments to establish the Project Area as a Mandatory Inclusionary Housing (MIH) area and to expand the boundary of the Transit Zone to include the Rezoning Area, a large-scale general development special permit, and a special permit for a public parking garage (the Proposed Actions). A portion of the site is currently occupied by the 92,784-gross-square-foot (gsf) Christian Cultural Center (CCC) facility, which would remain on the site as part of the project.

The Proposed Actions would facilitate the development of a mixed-use, purpose-built development on the site of the CCC, which would be comprised of income-based affordable housing; a Performing Arts Center (PAC); a grocery store; local retail; new publicly accessible open space; and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood (the Proposed Project). Overall, the Proposed Project would include a total approximate 2,200,538-gsf development to be constructed in phases over a planned 10-year period, with ten buildings ranging from two to

15 stories.[1] The proposed building program for the site would include approximately 1,645,820 gsf of residential space accommodating approximately 2,050 residential units; approximately 100,904 gsf of community facility space, including general community facility space to include a day care (approximately 12,320 gsf), other community facility uses such as a senior center or medical clinic (approximately 9,900 gsf), and the existing CCC facility (78,684 gsf); approximately 110,570 gsf of commercial space that includes a grocery store (approximately 14,300 gsf) and local retail space (approximately 65,670 gsf), a trade school (approximately 14,100 gsf) to be located in one wing of the existing CCC building (thereby reclassifying approximately 14,100 gsf of existing community facility space to commercial space) and a PAC (approximately 16,500 gsf); and approximately 343,244 gsf of parking, including 145,684 gsf of below grade parking and a 197,560-gsf public parking garage that would accommodate accessory parking for the retail and community facility uses.[2]

The Applicant intends to develop a total of approximately 2,050 income-based residential units, including approximately 200 units of affordable senior ~~or supportive~~ housing units and up to 100 residential units offering affordable home ownership opportunities, including affordable condominiums and approximately 30 maisonettes under affordable homeownership that would be within four of the residential buildings. The Proposed Project would also include approximately 84,950 square feet (sf) of publicly accessible passive open space, approximately 36,000 sf of private passive open space, and approximately 29,400 sf of private active open space.[3]

The Proposed Actions are subject to City Environmental Quality Review (CEQR). The New York City Department of City Planning (DCP), acting on behalf of the CPC, is the lead agency for the environmental review.

This chapter provides a summary and description of the Proposed Actions, the Project Area's location, existing conditions, project purpose and need, Proposed Project, reasonable worst-case development scenario (RWCDS) under the No-Action and With-Action conditions, and public review process required for approval of the Proposed Actions. The analyses following this chapter examine the potential for the Proposed Actions to result in significant adverse environmental impacts in accordance with the appropriate guidance provided in the *2021 New York City Environmental Quality Review Technical Manual (2021 CEQR Technical Manual)* and the *Final Scope of Work*.

[1] As shown in **Figure 2** below, the ten buildings include eight residential buildings, the above grade parking garage, and the PAC. Residential buildings 7 and 8 would be connected as one building and Buildings 9 and 10 would be connected as one building, though they would have separate residential lobbies.

[2] The 197,560-gsf public parking garage includes 18,400 sf of flex space that would be provided on the roof to allow for increased parking capacity during the church's peak parking periods (Sundays and Tuesday evenings). At all other times, this space would be reserved for recreational space.

[3] The proposed private active open space would also be accessible to the public. The rooftop recreation space, considered private active open space, would be accessible to the public with the exception of peak church parking demand periods on Tuesday evenings and Sundays and within the hours posted per the public access agreement (PAA). The playground would be available to the public outside of day care operating hours. However, as these spaces are considered private, they are not included in the quantitative analysis in the Open Space chapter.

Project Area and Context

Development Site

The Development Site, as indicated above, encompasses the northern portion of the block bounded by Flatlands Avenue, Pennsylvania Avenue, Louisiana Avenue, and Vandalia Avenue and consists only of Block 4430, Lot 1 and Block 4434, Lots 1 and 10.

The Project Area, which is coterminous with the proposed Rezoning Area and the proposed Transit Zone expansion, contains the Development Site as well as de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100 and is bounded by the centerlines of Flatlands Avenue (a wide street with a width of approximately 110 feet) to the north, Pennsylvania Avenue (a wide street with a width of approximately 120 feet) to the east, and Louisiana Avenue (a narrow street with a width of approximately 70 feet) to the west (see **Figure 1**).

The Development Site runs along the full length of Flatlands Avenue from Louisiana Avenue to Pennsylvania Avenue to a depth as measured from Flatlands Avenue of up to approximately 597 feet, 6 inches along Louisiana, a depth of approximately 369 feet, 6 inches in the midblock, and a depth of approximately 291 feet along Pennsylvania Avenue. Overall, the Development Site has a lot area of approximately 10.32 acres, or approximately 449,653 sf. Approximately 562,066.25 zoning sf (zsf) of residential floor area is permitted at the Development Site under the present zoning controls, and approximately 899,306 zsf is permitted for community facility uses.

The Development Site is currently improved with the one-story (with mezzanine), 92,784-gsf CCC—a large, non-denominational house of worship constructed in 1997. Situated on the western portion of the Development Site and surrounded by a surface parking lot containing approximately 385 striped accessory parking spaces,[4] the CCC has a footprint of approximately 56,050 sf and is set back approximately 90 feet, 6 inches from Louisiana Avenue at its closest point and 129 feet from Flatlands Avenue. It is accessed via a curb cut along Flatlands Avenue immediately opposite of Alabama Avenue and via two existing curb cuts along Louisiana Avenue. The eastern portion of the Development Site is unimproved land, serving as a location for overflow parking during church services and other events at the CCC and otherwise not used.

The CCC serves as a "third place" for people to gather in worship, prayer, learning, and community service, with approximately 12,000 members attending in-person[5] on a regular basis and over 60,000 individuals attending virtually at different times. The primary space in the CCC building is a large worship center which currently has a capacity of approximately 3,800 persons. Other spaces in the building are used for the CCC's youth ministry, children's ministry, and kindergarten. In addition to the main worship center, the CCC building includes a lobby space, which can double as a banquet space, a chapel, a number of classrooms and conference rooms, a café space which is used as a public gathering space, and a meditation space. Throughout the CCC building are a number of religious historical

[4] Parking spaces estimated based on an aerial of the Development Site and counts conducted during a site visit.

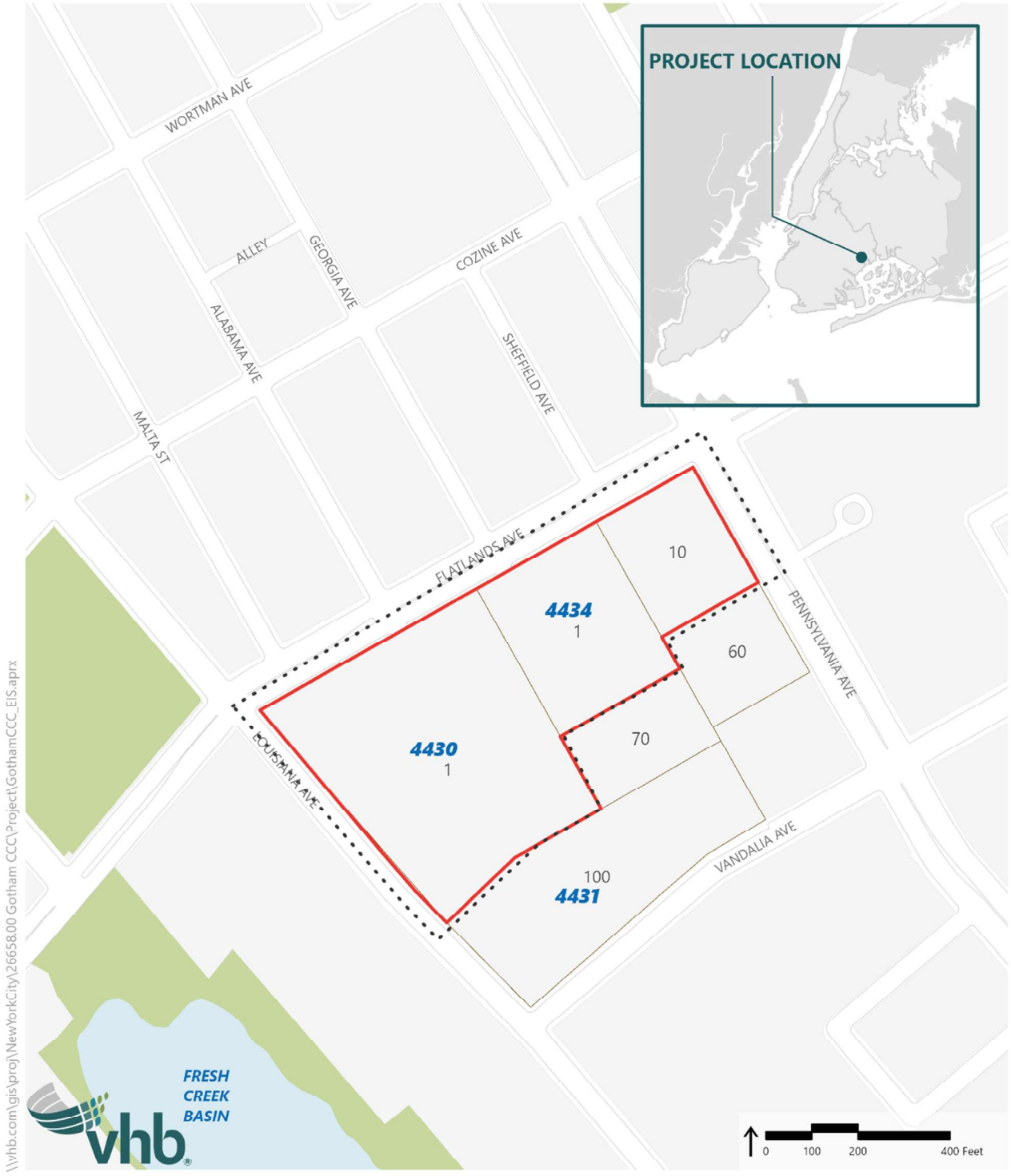
[5] Prior to COVID.

artifacts and works of art and architecture which highlight Christian history as well as showcase symbols of faith and tradition of other religions.

All of these spaces are made available to the public, community groups, city agencies, and businesses in the area on a regular basis and for a wide range of purposes consistent with the values of the CCC, including for worship, weddings, funerals, baby dedications, counseling, graduations (e.g., for the ~~New York City Fire Department (FDNY)),~~FDNY), banquets (e.g., an interfaith meeting of 150 clergy), organization meetings (e.g., Alcoholics Anonymous), organizational needs (e.g., large training orientations, employment application screening center), and vocational training (construction, electrical, plumbing, and culinary). The CCC also uses its capacity virtually, through its administration and virtual teachings for the New School of Biblical Theology.

The CCC serves as a center to the surrounding community not only through its gospel and by providing a physical gathering space, but also through its support of the community at large. In particular, the CCC's largest community impact is through its food assistance program, which fed over 100,000 people per year in the last two years, including through home delivery to seniors and emergency response to disasters such as Hurricane Sandy, where the CCC provided food and also blankets and generators to those in need. Among its many community service accomplishments, the CCC has provided a computer lab to a local school, provided backpacks of school supplies to children in the neighborhood, and rebuilt homes in New Orleans. The CCC also leverages its capacity, including its roughly 1,500 volunteers, to assist smaller churches in their ministries, by raising money through corporate sponsorships, and by joining forces with other existing organizations to provide community services locally and abroad. The Proposed Development would increase the CCC's capacity to respond to the needs of the community and further these efforts.

Figure 1 Site Location Map



**The Project Area boundary is coterminous with the Transit Zone expansion*

Project Area

The Project Area contains the Development Site as well as de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100. The Project Area is located within East New York in Brooklyn Community District 5. The East New York neighborhood extends to the north, east, and south and the Canarsie neighborhood is located to the southwest and west. Louisiana Avenue comprises the eastern boundary of Brooklyn Community District 18.

Flatlands Avenue and Pennsylvania Avenue are the two major thoroughfares that abut the Project Area along the north and east, respectively. Flatlands Avenue runs east-west and provides access to Flatbush Avenue, Utica Avenue, Ralph Avenue, Remsen Avenue, and Rockaway Parkway. Pennsylvania Avenue runs north-south and includes an access point to the Shore Parkway (also known as Belt Parkway), an arterial highway to the south of the Project Area.

The Project Area is well-served by mass transit, including the following bus lines:

- BM2 Express and BM5 Express, which are express routes that commence at Starrett City and end in Manhattan. The BM2 provides access to Downtown Manhattan while the BM5 provides access to Midtown Manhattan.
- B6, which extends from East New York to Coney Island~~,~~ and provides access to the Rockaway Parkway L subway station~~).~~.
- B60, which extends from East New York (starting a block from the Project Area) to Williamsburg and provides access to the Rockaway Parkway L subway station).
- B82 and B82 Select Bus Service (SBS) (which extend from Starrett City to Coney Island and provide access door-to-door connection to the Rockaway Parkway L subway station (five stops away for B82, two stops for the B82 SBS). The B82 SBS only runs on weekdays.
- B83, which extends from Gateway Shopping Center to the Broadway Junction subway station (served by the A, C, J, L, and Z subway lines). The B83 bus line also provides access door-to-door connection to the Pennsylvania Avenue 3 subway station (an approximately 20-minute ride).
- B103 limited bus lines, which provides access to Downtown Brooklyn.

The East 105th Street and the Canarsie - Rockaway stations on the L Subway line are located an approximately 15- and 20-minute walk northwest from the Project Area, respectively. The Canarsie - Rockaway station is directly accessible from the B82 and B82 SBS bus lines and also the B6 and B60 lines. The Pennsylvania Avenue station on the 3 Subway line is located to the north of the Project Area.

The area located to the north of Flatlands Avenue is located within a Transit Zone, as set forth in Transit Zone Map 12 in Appendix I of the Zoning Resolution. Car ownership in the Surrounding Area is approximately 0.3 cars per household, based on census tract data for the Project Area (census tract 1058.04) and Starrett City (tract 1058.01). Across the Brooklyn transit zone, there is an average of 0.47 vehicles per household, and the overall average vehicle ownership rate for the entire borough of Brooklyn is 0.57 vehicles per household.

The Project Area is currently mapped within an R5 zoning district. R5 districts are widely mapped in certain neighborhoods in the outer reaches of Brooklyn, Queens, and the Bronx, and permit residential and community facility uses listed in Use Groups 1 through 4.

Commercial and manufacturing uses are not allowed in absence of a commercial overlay. R5 districts allow for a maximum FAR of 1.25 for most residential uses and 2.0 for community facility uses.

Overall, approximately 562,067.16 sf of residential floor area is permitted at the Development Site under the present zoning controls, and 899,307.46 sf is allowed for community facility uses. Lot coverage is limited to 55 percent for residential uses and limited to 60 percent for corner lots and 55 percent for interior lots for community facility uses.

Background and Surrounding Context

The Project Area is located at the northwestern end of the peninsula between Fresh Creek and Hendrix Creek—both inlets of Jamaica Bay. Much of the peninsula, including the areas south and east of the Project Area, is occupied by Spring Creek Towers (formerly known as Starrett City), a 140-acre affordable housing complex opened in 1974 that contains over 5,800 residential units in 46 buildings. The complex includes a community center and two schools. To the east of Spring Creek Towers/Starrett City, along Hendrix Creek, is the New York City Department of Environmental Protection's (NYC DEP) 26th Ward Wastewater Treatment Plant.

In addition to Spring Creek Towers/Starrett City, the area includes a number of other affordable housing properties. Immediately south of the Project Area are the New York City Housing Authority's (NYCHA) Vandalia Avenue complex and Council Towers, an assisted living facility for low-income seniors[6]. Northwest of the Project Area is the 65-acre, 1,600-unit Breukelen Houses complex, which extends from East 103rd Street to Louisiana Avenue, and the Breukelen Ballfields, which are located northwest of Flatlands Avenue between Williams and Louisiana Avenues. To the northeast is NYCHA's 21-building Linden House complex. These surrounding NYCHA housing developments were generally built between the 1950s and 1970s.

Across Flatlands Avenue to the north of the Project Area is a mapped M1-1 zoning district, an area that includes low-rise buildings constructed in the 1950s and 1960s. Businesses in this area include used car sales, auto repair, auto parts stores, transportation and busing businesses, and self-storage, along with mixed retail and commercial businesses. A 1980s low-rise commercial complex with restaurants, a bank, and a supermarket is located just west of the Project Area across Louisiana Avenue. The Fresh Creek Nature Preserve borders the creek's east and west sides; the area west of the creek consists mainly of single-family development that is part of the Canarsie neighborhood.

The Project Area was zoned R3-2 dating back to 1961, during which time the Project Area was configured as separate blocks bisected by Malta Street and Alabama, Georgia, and Sheffield Avenues. In 1966, the superblock to the east of the Project Area was rezoned to C4-2 and R5 (CP-18730). In 1967, the C4-2 portion of the Project Area was rezoned to R5 (CP-19815), and later that year the block to the south of Vandalia Avenue was likewise rezoned

[6] A narrow strip of this development with varying widths up to approximately 15 feet is located within the Project Area.

to R5 (CP-20066). The Spring Creek Towers/Starrett City complex was developed in the early 1970s in these locations.

Other rezonings surrounding the Project Area included the mapping of commercial overlays, with two blocks to the northeast of the Project Area along Pennsylvania Avenue being mapped with a C2-2 overlay in 1973 (CP-22531) and the block immediately west of the Project Area along Louisiana Avenue being mapped with a C2-2 overlay in 1979 (M 770445A ZMK). In 1980, the southern portion of the project block, immediately south of the Project Area, was rezoned to R5 to facilitate the development of the Vandalia Avenue housing complex (C 800248 ZMK).

The remainder of the project block, including the Project Area, was rezoned to R5 in 1992 to facilitate a proposed large-scale residential development known as Fresh Creek Estates (C 900891 ZMK). Related actions included demapping of Alabama, Georgia, and Sheffield Avenues within the Project Area (C 900890 MMK). The Fresh Creek Estates proposal included 477 affordable housing units to be developed within three-story townhouse apartment buildings, with on-site accessory parking and interior roadways. However, the project was never realized, and the Project Area remained undeveloped until 1997 when the CCC was constructed. The Project Area has remained in its current condition since that time.

Proposed Actions

The Proposed Actions include the following discretionary actions:

Zoning Map Amendment

The Applicant is seeking a zoning map amendment to change the existing R5 district within the Project Area to an R7-2 district with a C2-4 commercial overlay. The existing R5 zoning does not allow for commercial uses, limiting possibilities for local retail and economic opportunity for small business owners. The C2-4 commercial overlay would address this need by allowing for a range of commercial uses at the Development Site, including a grocery store and local retail to serve residents of the Proposed Development and the surrounding neighborhoods. In addition, the R5 zoning does not allow for sufficient density to create the integrated residential, local retail, and community facility development at the proposed affordable income levels envisioned for the Development Site. The rezoning from an R5 district to an R7-2 district would allow for an increase in the development potential in the Development Site from 1.25 FAR for residential to 4.6 FAR in an MIH district, and from 2.0 for community facility use to 6.5 FAR. The Proposed Development contemplates an FAR of 4.29 including the parking garage[7], and floor area allowed by the R7-2 zoning aligns with the Proposed Development in a manner appropriate to the area. The Project Area is immediately adjacent to two wide streets, including one providing direct access to the Shore Parkway, and has good access to mass transit and is an appropriate area for the additional density being proposed, and without resulting in additional development potential that would occur with a higher density zone, such as an R8 district.

[7] FAR exclusive of the parking garage would be 3.86.

The proposed Zoning Map Amendment would also modify height and setback and yards controls in the Project Area to establish a dynamic street wall presence within the Project Area in buildings with heights reflective of other residential buildings in the surrounding area. In particular, under Quality Housing and MIH controls and in absence of the additional land use actions being proposed, the proposed R7-2 zoning would require that (i) buildings be located at the street rather than separated from the streets by a front yard, (ii) buildings have a minimum base height of 40 feet and a maximum height of 75 feet before setback rather than a maximum street wall height of 30 feet; and (iii) a maximum building height of 135 feet and 13 stories where affordable is provided on site, instead of a maximum height of 40 feet.[8] While the other land use actions seek some adjustment to these street wall controls to make the building configuration even more dynamic, the general bulk controls for R7-2 districts are appropriate for the area by bringing uses and building heights already in the area out to the street line, lending to their accessibility, providing more activity and eyes on the streets, and promoting a more pedestrian-friendly environment.

Zoning Text Amendment

The Applicant is seeking two zoning text amendments:

1. An amendment to Appendix F of the Zoning Resolution (ZR) (Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas) to establish the Project Area as an MIH area, Option 1.
2. An amendment to Appendix I of the ZR (Transit Zone) to expand the boundary of the existing Transit Zone that is currently mapped north of Flatlands Avenue to include the Project Area.

Special Permits

The Applicant is seeking two special permits:

1. A special permit pursuant to ZR 74-743(a)(2) to locate buildings within a large-scale general development without regard to yard, distance between buildings, and height and setback regulations to allow for the centralized community-centered core and street-oriented residential buildings envisioned by the Proposed Project.
    a. Yards:
        - The Development Site is comprised of a series of corner lot, through lot, and interior lot areas and would require a series of yards adjacent to the common lot line with the neighboring property, even though a significant setback exists between the common lot line and the adjoining buildings. In particular, waivers are being requested for ZR 35-54 and ZR 23-51, which require a side yard along the common side lot line to the south with a minimum depth of 8 feet; of ZR 33-303 which requires a rear yard of 20 feet for commercial uses; and ZR 23-471 and 23-543, which require a rear yard of 30 feet for residential uses. Waiving side and rear year requirements along the common property line allows for the

[8] Within 25 feet of an adjoining R5 district, buildings are limited to a maximum height of 55 feet within 100 feet of a wide street and 45 feet beyond 100 feet of a wide street.

location of the PAC in the center of the Proposed Project and the introduction of the central quadrangle as a significant community open space. The yard waivers would also allow for the location of the public parking garage in proximity to the PAC and the CCC. Accordingly, the Applicant requests a modification of the rear yard requirements of Zoning Resolution Section 23-47 (Minimum Required Rear Yards) and the special side yard requirements of Section 23-51 (Special Provisions for Yards Adjacent to R1 Through R5 Districts) to eliminate yard requirements along portions of the southern boundary of the Development Site.

b. Distance between buildings:
   - In order to introduce a residential presence along Louisiana Avenue and at the same time maintain the CCC in its existing location, limited modifications to the requirements of Zoning Resolution Section 23-711 (Standard minimum distance between buildings) are requested between Building 7 and 8 and the CCC building. At the closest point, there would be a separation of 30 feet 6 inches between the two buildings; the amount of separation quickly expands in the areas where the modification is requested. A modification is also requested between Building 5, Building 6, Building 9 and 10, and the CCC. These modifications would allow the large-scale general development (LSGD) to improve the streetscape by introducing a residential and retail presence along Louisiana Avenue and Flatlands Avenue and at the same time maintain the CCC in its existing location. Because the CCC building is only 36.6 feet tall, this condition is limited to the lowest floors of the residential buildings. A modification is also requested between Building 4 and the PAC to allow the PAC to be situated at the core of the LSGD and adjacent to the central quadrangle and public parking garage, resulting in a better site plan.

c. Height and Setback:
   - While the proposed R7-2 district provides an appropriate density for the Project Area and the Proposed Project, R7-2 MIH developments are subject to height and setback controls that do not allow for the strong street wall presence and variation in heights envisioned for the Proposed Project. In particular, MIH developments are limited to a height of 75 feet within 10 feet of a wide street and 15 feet of a narrow street and an overall building height of the lesser of 135 feet or 13 stories, and a minimum base height of 40 feet is required. Additionally, within 25 feet of an adjoining R5 district, buildings are limited to a maximum height of 55 feet within 100 feet of a wide street and 45 feet beyond 100 feet of a wide street. While much of the Proposed Project would comply with the minimum and maximum height limitations, the height of portions of the Proposed Project's street wall would exceed the 75-foot height. In addition, portions of the Proposed Project would exceed the 135-foot and 13-story height limitation by one story for Buildings 3, 5, and 6 (to a height of up to approximately 154.84 feet plus bulkhead) and by two stories for Building 1 (to a height of approximately 160.87 feet plus bulkhead). Building 2 would not exceed

the maximum number of stories permitted but would exceed the maximum permitted height and rise to a height of approximately 139.77 feet plus bulkhead. Within 25 feet of the southern boundary of the Development Site, portions of Buildings 2, 4, 9 and 10, the PAC, and the garage would exceed the maximum permitted height within 25 feet of an R5 district. Portions of the street wall of Buildings 1, 3, 5, 6, and 7 and 8 would be set back at a height lower than the minimum base height but no higher than above the second story. The modification of height and setback controls allows for buildings with a dynamic and varied profile with building elements ranging from six to fifteen stories creating visual interest throughout the project. The higher elements also allow for the introduction of the central quadrangle to the middle of the Project Area surrounded by the lower scale core anchored by the CCC and the PAC, which is anticipated to have a maximum height of approximately 50 feet. Accordingly, a modification to Zoning Resolution Sections 23-693 (Special provisions applying adjacent to R1 through R6B Districts), 23-951 (Height and Setback for compensated developments in Inclusionary Housing designated areas), 23-952 (Height and setback in Mandatory Inclusionary Housing areas), and 23-66 (Height and Setback Requirements for Quality Housing Buildings), 35-65 (Height and Setback Requirements for Quality Housing Buildings), and 23-693 (Special provisions applying adjacent to R1 through R6B Districts) is requested to permit modifications of minimum and maximum base height before setback and maximum building height controls.

2. A special permit pursuant to ZR 74-512 to permit a public parking garage with more than 150 spaces some of which would be located on the roof of the public parking garage during periods of peak parking demand for the church (Sundays and Tuesday evenings). This special permit would allow for a public parking garage that would be a sufficient size to serve the congregants of the CCC, visitors to the PAC and other community facility and commercial uses that are part of the Proposed Project and would consolidate the existing surface parking into an enclosed facility allowing for the productive use of the Development Site for the Proposed Project.

The Applicant also intends to seek public funds and/or financing from various City and New York State agencies and/or programs related to affordable housing development. The discretionary CPC actions listed above, along with the discretionary public funds that may be sought by the Applicant, are collectively referred to as the Proposed Actions.

The project approvals would also include recordation of an (E) Designation (E-679) on the Development Site (Brooklyn Block 4430, Lot 1 and Block 4434, Lots 1 and 10), as well as a Restrictive Declaration to codify commitments made in the FEIS related to the environmental review. The Restrictive Declaration would be recorded against the Development Site to ensure project components related to the environment and mitigation measures are implemented.

Proposed Project

The Applicant is proposing to replace the underutilized portions of the Development Site with a vibrant mixture of community facility, commercial, and residential uses targeted at creating a sustainable, affordable neighborhood anchored by the presence of the CCC and targeted at addressing a number of economic, social, educational and cultural needs of the neighborhood. Overall, the Proposed Project would incorporate ten new buildings on the Development Site, including eight predominately residential buildings[9] ranging in height from two to 15 stories, with a total of approximately 2,050 units affordable to households with a range of incomes between 30 percent and 100 percent of the area median income (AMI). The CCC building would remain as the dominant feature of the Development Site. Serving its parishioners and the surrounding community, the CCC would be part of a multi-faceted community facility core that includes the PAC, a trade school, a day care facility, a senior center, and a central green space.

Ground floor retail and a grocery store providing opportunities for local businesses would be introduced along the public and private street frontages, creating economic opportunity and responding to the dearth of walkable local retail in the neighborhood. A privately-owned, publicly accessible street system would be introduced into the Development Site aligned with the adjoining street grid to invite people into the Proposed Project and create a more walkable environment. Finally, a seven-story public parking garage, accommodating up to approximately 500 parking spaces for these uses, would be located near Louisiana Avenue and would serve as a replacement to the surface parking that exists today. Overall, the Proposed Project would include approximately 84,950 sf of publicly accessible open space, consisting of a public plaza on the corner of Flatlands Avenue and Louisiana Avenue, a public arcade and entry plaza and a central quadrangle. The Proposed project would also include an 11,000-sf playground adjacent to the childcare center which would also serve residents, ~~a~~an 18,400-sf private recreational space to be located on the roof of the parking garage which would be flexible to accommodate parking for vehicles during peak church hours (Sunday and Tuesday evenings only), and approximately 36,000 sf of private passive open space including residential building courtyards and rooftop areas. The Proposed Project would include pedestrian paths and a private street network that would run through the Development Site. Construction of the Proposed Project would be phased over a ten-year period, with completion anticipated in 2031.

It is the Applicant's intention that the Proposed Project would comply with and exceed the requirements of Option 1 of the City's MIH program. Option 1 has the following requirements:

- 25 percent of new housing units must be set aside for families making an average of 60 percent or less of AMI.
- Of this set-aside, at least 10 percent must be for families making an average of 40 percent or less of AMI.

Further, the Proposed Development is focused on meeting the needs of a significant portion of the population in East New York and in Brooklyn at large by providing workforce housing at the very low-, low-, and moderate-income housing brackets. According to the U.S. Census

[9] As shown in **Figure 2** below, the ten buildings include eight residential buildings, the above grade parking garage, and the PAC. Residential buildings 7 and 8 are connected as one building and Buildings 9 and 10 are connected as one building, though they would have separate residential lobbies.

Bureau's 2019 American Community Survey (ACS) data, a three-person household in Brooklyn Community District 5 (East New York and Starrett City) has a median income of $51,648,[10] approximate to the 50 percent AMI band set by the NYC Department of Housing Preservation and Development (HPD). Utilizing this datapoint as a reference, the Proposed Development would fill the need for affordable housing in the area by providing housing within the 30 percent to 100 percent AMI band, with 50 percent of units at 60 percent of AMI or less. 25 percent of units would be provided at 80 percent of AMI or less and 25 percent of units would be provided at 100 percent of AMI or less.

In addition, up to 100 homeownership units would be provided through the HPD Open Door program at the moderate-income band. In total the Proposed Development would include approximately 2,050 units of 100 percent rent-stabilized, intergenerational, income-based housing. The units provided would be a diverse mix of unit types, including 2-bedroom and 3-bedroom residences and would be coupled with requisite resources to allow members of the community to thrive.

The Proposed Development would be consistent with Housing New York 2.0's goal of creating more homes for seniors by providing up to 200 units for seniors. In addition, the Proposed Development would further the plan's goal of building protections against displacement in fast-changing neighborhoods by providing mixed-income dwelling units at a range of income bands, allowing residents to remain in the community, even if their economic health changes. Finally, the Proposed Development would be constructed on the currently vacant and underutilized lots on the eastern portion of the Development Site, furthering the plan's goal of unlocking the potential of vacant lots.

The Proposed Development would support several of the initiatives outlined in OneNYC 2050 as well, including the initiative to ensure all New Yorkers have access to safe, secure, and affordable housing.

In total, the Proposed Project would result in approximately 2,200,538 gsf of development. This would include approximately 100,904 gsf of community facility space, including general community facility space to include a day care (approximately 12,320 gsf), other community facility uses such as a senior center or medical clinic (approximately 9,900 gsf), and the existing CCC facility (78,684 gsf); approximately 110,570 gsf of commercial space that includes a grocery store (approximately 14,300 gsf) and local retail space (approximately 65,670 gsf), a trade school (approximately 14,100 gsf) to be located in one wing of the existing CCC building[11]; a new PAC (approximately 16,500 gsf); and approximately 343,244 gsf of parking including a total of approximately 886 parking spaces within subgrade parking (approximately 386 parking spaces) and an approximately 7-story, 500-space public parking garage for the retail and community facility uses. During peak parking periods for the church (Sundays and Tuesday evenings), approximately 21,889 sf of parking (of the approximately 182,277 gsf public parking garage) would be provided on the roof of the proposed public parking garage. **Table 1** summarizes the total development projected for the Development Site.

[10] 2019 ACS 5-Year Estimates Detailed Tables; Table B19019, "Median Household Income in the Past 12 Months (In 2019 Inflation-Adjusted Dollars) by Household Size" for NYC-Brooklyn Community District 5 – East New York and Starrett City.

[11] The proposed trade school is geared towards providing vocational training and career trajectory counseling for adults and would not be adding public school seats towards primary and secondary school education. Thus, the approximately 16,500 gsf would not be included in the public schools analysis as detailed in **Chapter 4, Community Facilities and Services**.

Table 1 Overview of Projected Development

Use	Total GSF[1]
Residential	**1,645,820**
Community Facility	**100,904**
Day Care	*12,320*
General Community Facility (Senior Center and/or Medical Office)	*9,900*
Existing CCC Facility	*78,684*
Commercial	**110,570**
Local Retail	*65,670*
Grocery Store	*14,300*
Trade School	*14,100*
Performing Arts Center	*16,500*
Community Facility/Commercial Parking	**197,560**
Residential Parking	**145,684**
TOTAL GSF	**2,200,538**
Total ZSF	**1,928,868 zsf**
FAR	**4.29**
FAR (excluding Parking)	**3.86**
Residential Units	**2,050**

[1] All GSF numbers are approximate

The new buildings would be arranged around the existing CCC building to create a community facility core anchored by the CCC, with residential uses surrounding and adjacent to this core. Similar to its current configuration, the CCC would be accessed by pedestrians through a courtyard plaza leading from Louisiana and Flatlands Avenues to the building's front door, with a second entrance leading from Flatlands Avenue. Adjacent to the CCC, in the interior of the Development Site, would be an open quadrangle and the PAC, creating a central gathering space for community facility visitors, churchgoers, occupants of the residential buildings, and the general public. The central quadrangle and the PAC would be visible from Flatlands Avenue, with views highlighted by an approximately 20-foot-tall arcade within Building 5 connecting Flatlands Avenue to the central quadrangle. The proposed public parking garage would be located adjacent to the PAC and CCC along Louisiana Avenue, limiting the visibility of this use and placing it in close proximity to the intended users of the facility. It is anticipated that private[12] basketball courts or other recreation space would be located on the roof of the proposed public parking garage as an additional amenity for residents.

Vehicular access to the Development Site would include proposed entrances from Pennsylvania Avenue and Louisiana Avenue and a right-turn-in/right-turn-out access on Flatlands Avenue at Sheffield Avenue. Interior vehicular circulation would be facilitated via extensions of Sheffield Avenue and Georgia Avenue through the northern portion of

[12] The proposed private active open space would also be accessible to the public. The rooftop recreation space, considered private active open space, would be accessible to the public at all times with the exception of peak church parking demand periods on Tuesday evenings and Sundays and within the hours posted per the PAA. However, as this space is considered private, it is not included in the quantitative analysis in the Open Space chapter.

Development Site, connecting with a proposed east-west interior roadway providing access to the proposed public parking garage, drop-off areas for the CCC, and the mixed-use buildings located on the western portion of the site. Site egress would be provided onto Flatlands Avenue from both Georgia Avenue and Sheffield Avenue. A signal warrant analysis will be conducted to determine if a new traffic signal can be installed at ~~this location.~~the Georgia Avenue/Flatlands Avenue intersection. **Figure 2** shows the Proposed Project axonometric diagram and **Figure 3** shows the program site plan.

Figure 2 Innovative Urban Village Site Axonometric Diagram



Figure 3 Innovative Urban Village Program Site Plan



In order to create strong street presence and allow for local retail in the base of the buildings, the proposed residential buildings would front on the perimeter avenues and the private streets. The residential buildings would range in height from approximately 129 to 161 feet—with street wall heights within 100 feet of Flatlands Avenue ranging between approximately 20 and 161 feet, and street wall heights beyond 100 feet of Flatlands Avenue of approximately 21 and 120 feet along Pennsylvania Avenue and ranging between approximately 25 feet and 134 feet along Louisiana Avenue.

The residential buildings would contain ground floor commercial and community facility uses facing outward, including a grocery store and local retail shops fronting on the perimeter avenues. Approximately 30 residential maisonette units with individual entrances and front stoops would be located on the newly created private inner streets. The proposed residential buildings would contain between approximately 179 and 315 dwelling units. Parking would be located below-grade in the cellars of various buildings, with a total approximate 386 parking spaces proposed.

Existing curb cuts on Louisiana and Pennsylvania Avenues would be relocated to facilitate the new internal private street network. On Flatlands Avenue, one existing curb cut that aligns with Georgia Avenue would be maintained, and a second would be relocated from its current alignment with Alabama Avenue to align with Sheffield Avenue.

In addition, the Proposed Project would facilitate better access to public transit options through the operation of a private shuttle service available to residents and the CCC (on Sundays) to and from the nearest subway stops (East 105th Street on the L line and Pennsylvania Avenue on the 3 line) during peak commuting hours. The shuttle is anticipated to commence operation upon full completion of the overall development.

It is anticipated that the Proposed Development would be constructed in several phases, during which time the CCC would remain operational. Phase 1A would consist of Buildings 1 and 2, located in the easternmost portion of the Development Site adjacent to Pennsylvania Avenue. Buildings 3 and 4, located just west of Phase 1A, and the Garage would be constructed in Phase 1B, which is currently contemplated to occur following Phase 1A. During this time, sufficient parking for CCC would be provided on the paved parking lot. Upon completion of the Garage, congregants and visitors to the CCC would be able to utilize the Garage for parking, with access provided via the existing paved parking lot, allowing for construction of the later phases while maintaining necessary parking for CCC services.

Phase ~~2A~~2A1 and Phase ~~2B~~2A2, which may be constructed in any order or simultaneously, would include Building 5 and Building 6 located to the north of the CCC along Flatlands Avenue, and the PAC and quadrangle, respectively. Phase ~~2B~~2A2 would also include the final leg of the construction of the private streets providing permanent access between the parking garage and Louisiana and Flatlands Avenues. Building 7 and 8 (which is a single building with two portions) located to the west of the CCC along Louisiana Avenue would be constructed in Phase ~~3A~~2B and Building 9 and 10 (which is also a single building with two portions) at the southwestern corner of the Development Site adjacent to the parking garage would be constructed in Phase ~~3B~~2C.

Project Purpose and Need

The Proposed Actions are being requested to allow the bulk, uses, and density required to meet the Applicant's goals for the Proposed Project. As detailed above, the Project Area is located within an area densely developed with affordable housing. To the east and south, the Spring Creek Towers/Starrett City and Vandalia Avenue housing complexes are made up of 10- to 20-story towers, while the Breukelen Houses to the northwest are three to seven stories in height. Across Flatlands Avenue and Louisiana Avenue are low-rise industrial and commercial businesses. The CCC is located in the northwest corner of the Development Site, however the site overall is underutilized, and is otherwise occupied by paved and unpaved parking.

The Development Site's existing R5 zoning, with a maximum FAR of 1.25 and a height limit of 40 feet, typically produces three- and four-story attached houses and small apartment houses. However, demand for affordable housing in East New York continues to grow, and Brooklyn Community District 5 has identified needs for additional affordable housing and other amenities that cannot be met under the existing zoning. In addition, New York City's affordable housing plan, "Housing New York 2.0," aims to create and preserve 300,000 high-quality, affordable homes by 2026 to address the needs for affordable housing throughout the City. The Proposed Actions would address these needs as follows:

- The zoning map amendment is needed to facilitate the additional density required to provide a substantial amount of affordable housing and other desired uses in Community District 5. The existing R5 zoning does not allow for commercial uses, limiting opportunities for local retail and economic opportunity for small business owners. The C2-4 commercial overlay would address this need by allowing for a range of commercial uses on the Development Site, including a grocery store and local retail to serve residents of the Proposed Project and the surrounding neighborhoods. In addition, the R5 zoning does not allow for sufficient density to create the integrated residential, local retail, and community facility program envisioned for the Development Site. The additional density would allow for a new public parking garage to replace the open parking which presently occupies the majority of the Development Site, in turn allowing for new development across the entirety of the Development Site. The rezoning from an R5 district to an R7-2 district would allow for an increase in the development potential on the Development Site from 1.25 FAR for residential to 4.6 FAR in an MIH district, and from 2.0 for community facility use to 6.5 FAR. The Proposed Project would be 4.29 FAR and would be consistent in scale with the existing affordable housing developments in the area, such as the Spring Creek Towers/Starrett City and Vandalia Avenue complexes.
- The zoning text amendment to designate the site as an MIH area would support community and citywide public policy goals by providing permanently affordable housing across a range of income levels, which otherwise would not be required if the Development Site were developed as-of-right.
- The zoning text amendment to include Project Area within the Transit Zone is needed to avoid unnecessary costs of building parking on the Development Site in excess of anticipated demand by residents. The Project Area is directly across Flatlands Avenue from the Transit Zone boundary to the north and has a range of transit options serving the Project Area, including the Subway (the East 105th Street stop on the L is located a six and a half block walk from the Development Site) and the BM2 Express, BM5 Express,

B6, B6 limited, B60, B82, B82 SBS, B83, and B103 limited bus lines, providing local and express service throughout Brooklyn, Manhattan, and Queens. For this reason, it is anticipated that most new residents would use public transit as the primary transportation method. Currently, approximately 62 percent of the residents, based on census data, commute to work via mass transit. The change in boundaries would reflect this fact and would promote more sustainable forms of transportation.

- The Special Permit for a large-scale general development is needed to accommodate the desired housing density and facilitate a superior site plan, including driveways for circulation, a pedestrian-friendly site, a centralized community-centered core, and to create visual interest with varied building heights and profiles throughout the Proposed Project.
- The Special Permit for a public parking garage with more than 150 spaces, some of which are to be located on the roof of the garage, would allow for a garage of sufficient size to serve the congregants of the CCC, who travel from across the City, as well as the visitors to the retail and community facility uses, and would consolidate the existing surface parking into an enclosed facility allowing for the productive use of the Development Site for the Proposed Project.

Analysis Framework and Reasonable Worst-Case Development Scenario

The *2021 CEQR Technical Manual* will serve as guidance on the methodologies and impact criteria for evaluating the potential environmental effects of the Proposed Project that would result from the Proposed Actions. As the Proposed Project would be complete and operational in 2031, the environmental setting for analysis is not the current environment, but the future environment. To the extent that the Proposed Actions would allow for a range of possible scenarios that are considered reasonable and likely, the scenario with the most severe environmental impacts will be chosen for CEQR analysis. This is considered to be the Reasonable Worst-Case Development Scenario (RWCDS), the use of which ensures that, regardless of which scenario actually occurs, its impacts would be no worse than those considered in the environmental review. The CEQR assessment examines the incremental differences between the RWCDS of the future without the Proposed Actions in place (the No-Action condition) and the future with the Proposed Actions in place and the associated operation of the Proposed Project (the With-Action condition). The Proposed Project was determined to be the RWCDS because development pursuant to the Proposed Actions would be restricted to the bulk and density associated with the general large scale development special permit and shown on the special permit drawings.

For the purpose of the environmental analyses, the No-Action condition represents the future absent the Proposed Actions and serves as the baseline by which the Proposed Project (or With-Action condition) is compared to determine the potential for significant environmental impacts. The difference between the No-Action and With-Action conditions represents the increment to be analyzed in the CEQR process.

Future No-Action Condition

Under the baseline, or No-Action condition, it is assumed that the Development Site would remain in its existing condition, with only the existing CCC operational on the site. As relevant for each area of analysis, future growth in population and employment ~~will be~~has been considered in the development of the No-Action condition of that study area. This ~~will include~~included both background growth and growth generated by known projects (developments that are under construction, planned, or proposed). Inclusion of known developments ~~will be~~was based on, but not limited to, consideration of whether the project requires discretionary approvals, the status of that approval process, and the project size.

Future With-Action Condition

The With-Action condition within the Development Site reflects the Proposed Project, detailed above in **Table 1**. The With-Action condition would include approximately 2.18 million gsf of development (4.29 FAR). **Table 2** provides the increment for analysis.

Table 2 Future No-Action and With-Action Comparison

Use Group		Existing Condition	No-Action Condition	With-Action Condition	Increment
Residential	Dwelling Units	-	-	2,050	2,050
	Total Residential gsf	**-**	**-**	**1,645,820**	**1,645,820**
Commercial gsf	Local Retail	-	-	65,670	65,670
	Grocery	-	-	14,300	14,300
	Performing Arts Center	-	-	16,500	16,500
	Trade School	-	-	14,100	14,100
	Total Commercial	**-**	**-**	**110,570**	**110,570**
Community Facility gsf	Day Care	-	-	12,320	12,320
	Senior Center/Medical Office			9,900	9,900
	Existing CCC Facility	92,784	92,784	78,684	-14,100
	Total Community Facility	**92,784**	**92,784**	**100,904**	**8,120**
Parking[1]	Lot Spaces	385	385	-	- 385
	Public Parking Garage Spaces	-	-	500	500
	Public Parking Garage gsf	**-**	**-**	**197,560**	**197,560**
	Accessory Residential Parking Spaces	-	-	386	386
	Accessory Residential Parking gsf	-	-	**145,684**	**145,684**
	Total Parking gsf	**-**	**-**	**343,244**	**-**
	Total Development gsf	**92,784**	**92,784**	**2,200,538**	**2,082,344**
Open Space gsf	Public Open Space	-	-	84,950	84,950
	Private Open Space	-	-	65,400	65,400
	ZSF	91,700	91,700	1,928,868	1,812,520
	Residents[2]	0	0	4,797	4,797
	Employees[3]	130	130	610	480

[1] Of the total 197,560 gsf of public parking provided, 25,410 sf would include flex space provided on the roof of the proposed public parking garage to allow for increased parking capacity during the church's peak parking periods (Sundays and Tuesday evenings).

[2] The number of residents is based on an average household size of 2.34 persons per dwelling unit for the half-mile study area, including Census Tracts 982, 984, 986, 1016, 1058.01, 1058.04, 1104 and 1106 (2014-2018 ACS).

[3] Employee estimates were derived using ratios provided by the NYC Department of City Planning. The number of employees working in residential buildings was calculated by dividing the total residential units by 25 dwelling units (82 building employees). The number of retail and grocery workers was calculated by dividing the total commercial gsf by 333.3 sf (240 retail employees). The number of employees generated by the PAC, Trade School, and general community facility space including a day care and senior center was calculated by dividing the total gsf by 333.3 sf (158 employees). The number of employees of the existing CCC Building was provided by the CCC (130 employees).

Analysis (Build) Year

Assuming a conservative build-out of approximately ten years, the Proposed Project is expected to be complete and operational by 2031.

Principal Conclusions of Environmental Analysis

Land Use, Zoning, and Public Policy

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts on land use, zoning, or public policy.

Land Use and Zoning

The Proposed Actions would result in new land uses and greater bulk and density than what currently exists on the Development Site. New uses to the Development Site—including residential, commercial space, and open space—would be compatible with surrounding land uses. Additionally, the increased bulk and density on the Development Site facilitated by the Proposed Actions would be comparable to existing developments in the East New York neighborhood, as exhibited by the Spring Creek Towers/Starrett City complex and NYCHA's Breukelen Houses, both of which are located within close proximity to the Development Site. The requested discretionary actions would not conflict with the current surrounding zoning. Rather, the Proposed Actions would facilitate development that is well-integrated with current built conditions and the existing zoning framework within the study area. Therefore, the Proposed Project would not adversely affect surrounding land uses or zoning.

Public Policy

The Proposed Project would be supportive of several city policies, including Housing New York 2.0, OneNYC 2050, the Waterfront Revitalization Program (WRP), and Zoning for Coastal Flood Resiliency. The Proposed Project would expand the City's current affordable housing stock by introducing 2,050 affordable units across ten new mixed-use buildings. Moreover, the Proposed Project would expand facilities currently serving study area residents through the construction of the PAC, a trade school, and a daycare. A small portion of the Project Area falls within the 500-year floodplain, a moderate risk flood area (see **Appendix A**). As described in **Chapter 2, Land Use, Zoning and Public Policy**, the proposed buildings would be designed to withstand future flood events and mitigate potential flood-related damages pursuant to the City's Building Code requirements, consistent with Policy 6 of the WRP and the goals set forth by the Zoning for Coastal Flood Resiliency. Therefore, the Proposed Project would directly support relevant City policies.

Socioeconomic Conditions

For the Proposed Project, preliminary and detailed analyses of indirect residential displacement were warranted.

The Proposed Project would comply with and exceed the requirements of Option 1 of the City's MIH program. Sitewide, the Proposed Project would include 50 percent of units at 60

percent of AMI or less, with the majority of these units rented at 40 or 50 percent of AMI and senior housing capped at 60 percent AMI. An additional 25 percent of units would be affordable at 80 percent of AMI or less and the remaining 25 percent of units would be affordable at 100 percent of AMI or less. In all, it is expected that the first 1,000 homes to be constructed would not include any rents above 80 percent AMI.

The non-MIH units would be income-based affordable housing through various city and state programs for low, moderate, and middle income. The income bands for the affordable housing units in excess of the MIH requirement, as well as the applicable programs for the senior~~/supportive~~ housing units, would remain subject to the availability of capital subsidy and other public capital sources at the time of construction.

The Proposed Project would result in an alternative housing option in the neighborhood because 75 percent of the proposed units would be available for households earning 80 percent or less of AMI. It is also noted that many renters in the area rely on Section 8 vouchers. Section 8 vouchers would be accepted at the Proposed Development, creating another housing option for low-income renters in the area. The proposed affordable ownership or condominium units would also provide a path for area low-income renters looking to own their home. The detailed assessment determined that the Proposed Actions would not result in significant adverse impacts to socioeconomic conditions.

Community Facilities and Services

In accordance with *CEQR Technical Manual* guidelines, detailed analyses of potential indirect impacts on public elementary and intermediate schools, public libraries, and publicly funded early childhood programs were conducted for the Proposed Actions. A preliminary assessment of healthcare facilities and police and fire protective services identified that the Proposed Project would not introduce a sizeable new population to the neighborhood, nor would it displace or alter the existing healthcare facilities and police and fire protective services. Therefore, significant adverse impacts to healthcare facilities and police and fire protective services are not anticipated and further analysis is not warranted.

Indirect Effects on Public Schools

Following the methodologies in the *CEQR Technical Manual*, the study area for the analysis of elementary and intermediate schools is the school districts' "subdistrict" (also known as a "region" or "school planning zone") in which the Proposed Project is located, specifically Subdistrict 3 of Community School District (CSD) 19.

Under the With-Action condition, the utilization rate of elementary and intermediate schools would not exceed 100 percent. Therefore, based on *CEQR Technical Manual* guidelines, the Proposed Actions would not result in significant adverse impacts to elementary and intermediate schools.

Indirect Effects on Early Childhood Programs

In the With-Action condition, the Proposed Actions would result in the incremental development of approximately 2,050 dwelling units to the Project Area, of which 1,338 units are intended to be affordable for non-senior households with incomes up to 80 percent of AMI, as compared to the No-Action condition. Based on the multipliers for estimating the

number of children eligible for early childhood programs according to the New York City Department of Education (DOE), the Proposed Actions are anticipated to generate the need for approximately 238 childcare slots.

Based on a detailed analysis, early childhood programs would be over capacity with a shortfall of 665 slots in the With-Action condition. The utilization rate would be 141.3 percent and the change in utilization rate would be 14.8 percent. Since the collective utilization rate for early childhood programs would be greater than 100 percent and would increase more than five percent from the No-Action condition, the Proposed Actions would result in a significant adverse impact on publicly funded childcare and Head Start Centers, and would therefore require consideration of mitigation, as discussed in **Chapter 20, Mitigation**. As detailed, the Proposed Project would incorporate a new 12,320-gsf childcare facility within the Project Area.

Indirect Effects on Libraries

There is one library within 0.75 miles of the Project Area: the Brooklyn Public Library Spring Creek branch. As stated in the *CEQR Technical Manual*, a significant adverse impact would occur if a project would increase the population of the library catchment area by five percent or more, and this increase would impair the delivery of library services in the study area. The catchment area population would increase by ~~seven~~6.9 percent from the No-Action to With-Action condition and the holdings per resident would decrease from 0.0714 in the No-Action condition to 0.0688 in the With-Action condition.

The analysis concludes that the Proposed Project could result in a significant adverse impact to public libraries. Based on the projected population change of 6.9 percent to the Spring Creek Library catchment area population. Per the guidance of the *CEQR Technical Manual*, a proposed project may result in a significant adverse impact to public libraries if the Proposed Project would increase a library catchment area population by 5 percent or more, compared to the conditions in the future without the Proposed Actions, and if this increase would be expected to impair the delivery of library services in the study area. Residents in the catchment area for the library also reside in the catchment areas for other nearby libraries (including Jamaica Bay Library, Canarsie Library, and New Lots Library) and would also be served by these libraries. Both the current and projected populations would also have access to the entire Brooklyn Public Library (BPL) and New York Public Library (NYPL) system through the interlibrary loan system and could have resources delivered to their nearest library branch. Finally, there are thousands of online resources available to card holders throughout the public library system. However, even if the Proposed Project would not affect the access to holdings, the Proposed Project could affect access to computer resources, programming space, and program staffing.

As the Spring Creek Library catchment area population is projected to increase by approximately 6.9 percent, exceeding the 5 percent threshold cited in the *CEQR Technical Manual*, and the Proposed Project could impair the delivery of library services, a significant adverse impact to public libraries could result from the Proposed Project. This impact requires consideration of mitigation, as discussed in **Chapter 20, Mitigation**.

Open Space

The Proposed Actions would not have a direct impact on open space resources in the study area. The Proposed Actions would not result in the physical loss of existing public open space resources, and would not result in any adverse shadow, air quality, noise, or other environmental impacts that would affect the usefulness of any study area open space. As the Proposed Actions are expected to introduce approximately 4,797 residents and 480 incremental workers in the future with the Proposed Actions, a detailed open space analysis for a residential (half-mile) study area was conducted to assess the potential for indirect effects, pursuant to the *CEQR Technical Manual*. The Proposed Project would not generate a net increase in workers above the 500-worker threshold. Therefore, a non-residential open space analysis is not warranted.

In the future with the Proposed Actions, within the half-mile residential study area, the passive open space ratio (OSR) would decrease by 5.30 percent to 0.652 acres per 1,000 residents; although this decrease is greater than the City's guideline of five percent, the passive OSR would remain higher than the benchmark ratio of 0.50 acres per 1,000 residents. The active and total OSRs would remain below the City's guideline ratios of 2.0 acres per 1,000 residents and 2.5 acres per 1,000 residents, respectively, in the future with the Proposed Actions. The active OSR would decrease by 12.97 percent to 1.140 acres per 1,000 residents and the total OSR would decrease by 10.33 percent to 1.792 acres per 1,000 residents. Although the project would result in percent increases that exceed the DCP Guidelines, it is anticipated that any potential for adverse open space impacts would be alleviated by qualitative factors, including the introduction of approximately 0.67 acres of private active open space and approximately 0.83 acres of private passive open space as part of the Proposed Project and the open space resources available to the thousands of residents of the adjacent Spring Creek Towers (formerly Starrett City).

As described in **Chapter 5, Open Space Resources**, there would be a temporary indirect active open space impact during construction related to the phasing of the project as new demand for open space resources would materialize from residents prior to the completion of all of the planned on-site open spaces. Therefore, a discussion of mitigation is warranted, see **Chapter 20, Mitigation**. This temporary impact would be eliminated upon full build-out of the project when all proposed open spaces are constructed.

Furthermore, the Spring Creek Towers/Starrett City open space resources are for residents only and are therefore not accounted for in the open space calculations; however, it is anticipated that the residents would continue to use these on-site open space amenities. Open spaces in the adjacent NYCHA Breukelen and Linden Houses such as basketball courts and playgrounds are available for use by residents of those housing developments, though not considered in the quantitative analysis. In addition, the 400-acre Shirley Chisholm State Park is located just outside of the study area, which could be reasonably assumed to be utilized by study area residents and residents introduced by the Proposed Actions. Further, the residential study area has a higher median age and a greater percentage of senior citizens than Kings County or New York City as a whole, which would reflect a higher demand for passive open space resources and less demand for active open space amenities. Therefore, the Proposed Project would not result in any permanent open space impacts.

Shadows

A preliminary shadows assessment conducted for the Proposed Project determined that in the With-Action condition, project-generated shadows could reach two sunlight sensitive resources: Breukelen Ballfields and the Fresh Creek Nature Preserve. The assessment shows that shading that could occur on Fresh Creek Nature Preserve on the June 21st analysis day would be de minimis and does not warrant further analysis. Breukelen Ballfields could receive shading on three analysis days, but the shading would be of short duration and in the early morning, and therefore is not anticipated to affect the vegetation or public use of the park. Therefore, there would be no significant adverse impacts from the Proposed Project with respect to shadows as a result of the Proposed Actions.

Historic Resources

A preliminary assessment concluded that the Proposed Actions would not result in significant adverse impacts to historic and cultural resources. A request for an environmental review letter was sent to LPC to determine if there were any architectural or archaeological resources on the Development Site or within an approximate 400-foot radius of the site. According to the response letter issued by LPC and dated September 6, 2019, the Development Site has no archeological significance and does not contain buildings or structures with architectural significance. In addition, no buildings or structures with architectural significance were identified within 400 feet of the Project Area. Therefore, the Proposed Actions would not cause significant adverse impacts to historic and cultural resources and no further analysis is warranted.

Urban Design and Visual Resources

Urban Design

The Proposed Actions would not result in significant adverse impacts to urban design. The Proposed Actions would result in built forms and building types that are similar in height and bulk to the low- to mid-density residential buildings that currently exist within the study area. The design of the Proposed Project would provide strong and consistent street wall buildings and would integrate varied building heights and setbacks that would create visual interest and enhance the pedestrian experience. The inclusion of private streets, pedestrian walkways, and publicly and privately accessible open spaces would contribute to an inviting urban fabric that would be well-integrated into the existing neighborhood and create new pedestrian connections and amenities. The introduction of street-fronting retail; residential lobbies and maisonettes; the trade school, PAC, and childcare facility would activate the street frontages at the perimeter of the site and within the site. The Proposed Project would also incorporate approximately 84,950 ~~square feet~~sf of publicly accessible open space, consisting of an entry plaza for sitting and mingling, as well larger areas suitable for active programing and events; contemplative gardens flanking the entry plaza that would provide landscaped pedestrian connections to the rest of the site; and a centrally located publicly accessible open space, which would form the civic heart of the site, anchored by the PAC and bookended on either side by the trade school and childcare facility. Additionally, the Proposed Project would include an 11,800-sf privately accessible playground as part of the ~~child care~~childcare center and an 18,400-sf private recreation space to be located on the roof

of the parking garage which would be flexible to accommodate parking for vehicles during peak church hours (Sunday and Tuesday evenings only). The Development Site would introduce buildings of greater bulk and density arranged around a coherent grid that would surround the proposed quadrangle. These elements, together with the church and the PAC, would contribute to orientation and legibility of pedestrians navigating the site. These elements of the Proposed Project's design, along with the introduction of street-fronting retail; residential lobbies and maisonettes; a trade school, PAC, and childcare facility, would serve to activate the Development Site and provide needed facilities and services to the surrounding community. Compared to the No-Action condition, the With-Action condition would improve the built environment with a mix of land uses and new open spaces that would improve the urban design of the Development Site.

Visual Resources

There are two visual resources located within the study area: Fresh Creek Nature Preserve and Fresh Creek Basin. These resources are separated from the Project Area by a shopping plaza and residential development along Louisiana Avenue, and the majority of these resource's features, such as wetlands or walking paths, are not visible from the Project Area. In addition, the Project Area is not visible from these resources. Therefore, no significant adverse impacts to these two visual resources would occur as a result of the Proposed Actions.

Natural Resources

As the Project Area does not support natural resources, the Proposed Actions do not have the potential to result in direct effects to same. As defined in Chapter 11 of the *CEQR Technical Manual*, the potentially relevant indirect effects of the Proposed Actions to nearby natural resources (i.e., the Fresh Creek Nature Preserve and Jamaica Bay) include potential impacts due to shadows, decreases in water quality, or introduction of impervious surfaces that alter drainage patterns. Based on the analyses present in **Chapter 9, Natural Resources** and supported by analyses from **Chapter 6, Shadows** and **Chapter 11, Water and Sewer Infrastructure**, the identified potential impacts would not occur, were determined to be *de minimis*, or would be avoided through regulatory agency requirements and implementation of best management practices (BMPs).

Specifically, the very limited temporal and areal extent of incremental shading that would occur within Fresh Creek Nature Preserve would be limited to ecologically degraded, upland portions of the preserve, and would not affect Fresh Creek Basin. Therefore, shading impacts to natural resources would be *de minimis* and do not warrant further analysis. Based on implementation of BMPs and conformance with the NYC DEP, New York State Department of Environmental Conservation (NYSDEC) and other regulatory agency regulations and permitting requirements, the Proposed Actions are consistent with the applicable NYC DEP Water Quality and Stormwater Objectives for Jamaica Bay included in the *Jamaica Bay Watershed Protection Plan Volume II*. Therefore, no significant adverse impacts to natural resources are anticipated due to implementation of the Proposed Actions, and no further analyses are warranted.

Hazardous Materials

Environmental site assessments have been conducted in the Development Site, which have determined that the Development Site does require remediation prior to development. Subsurface investigations confirmed historic site uses, including landfilling activities associated with the placement of ash from city incinerators to level the land, were the source of this contaminated soil material. This material is known as "historic fill~~".~~." To address the historic fill and other contamination based on the additional historic uses of a former gasoline filling station and former auto wrecking facility identified within the Development Site, Block 4430, Lot 1 and Block 4434, Lots 1 and 10, an (E) Designation (E-679) for hazardous materials is appropriate for the Development Site, which would be remediated in accordance with, at a minimum, the (E) Designation program administered by the New York City Mayor's Office of Environmental Remediation (OER).

Notably, Block 4434, ~~Lot~~Lots 1 and 10 ~~has~~have already been entered into the NYSDEC Brownfield Cleanup Program (BCP) and shall be remediated in accordance with the BCP requirements under NYSDEC regulatory oversight and pursuant to a Brownfield Cleanup Agreement (BCA) Index No. C224290-04-19 dated May 31, 2019. All reports generated for the benefit of NYSDEC will also be shared with OER. OER will generally accept the reports generated in the BCP for the purpose of complying with the (E) Designation (E-679) requirements on that lot once the State Remedial Action Work Plan is approved. Compliance with the respective remediation regulatory programs would provide for the protection of human health and the environment within the Development Site once a Certificate of Completion (COC) issued by NYSDEC or a Notice of Satisfaction (NOS) by OER, and any required long term institutional and engineering controls are in place. Therefore, the Proposed Actions would eliminate any significant adverse impacts related to hazardous materials through implementation of required regulatory remediation of the Development Site and long-term site management. Additional details relating to the subsurface investigations are provided in **Chapter 10, Hazardous Materials**.

The subsurface investigation conducted on the BCP portion of the Development Site (Block 4434, Lot 10) evaluated for the presence of contamination in soil/fill materials, groundwater and soil vapor based on historic uses, which included a gasoline filling station, automobile junkyard/vehicle dismantling facility, and historic ash landfilling by the city. Miscellaneous debris, including tires, porcelain, wire, plastic, fabric and shoes were found in test pits installed as part of the subsurface investigation. The results of the Phase II Environmental Investigation (EI) Report indicated the presence of semi-volatile organic compounds (SVOCs) and heavy metals in soils that exceed NYSDEC soil cleanup objectives (SCOs) for residential, commercial, and industrial use and were attributed to historic site activities. Groundwater evaluated on Block 4434, Lot 10 also exhibited contamination—including SVOCs and heavy metals at concentrations exceeding NYSDEC groundwater standards and guidance values—attributed to historic site uses. While historic investigations in the early 2000's found some methane vapor, more recent field screening completed during the Environmental Investigation (EI) Report did not reveal methane exceedances.

To address these conditions during site redevelopment, a BCP application was submitted to the NYSDEC on December 14, 2018. A BCA was executed on May 15, 2019, and Block 4434, Lot 10 was entered into the NYSDEC BCP as of that date. As such, hazardous materials remedial requirements associated with Block 4434, Lot 10 shall be completed under the

NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH. A comprehensive Remedial Investigation (RI) was implemented and the RI Report (RIR), submitted on July 23, 2021, was approved on February 1, 2022. Next, the NYSDEC-approved Remedial Action Work Plan (RAWP) and Construction Health and Safety Plan (CHASP) will be prepared and implemented. Upon completion of the approved remedial action, a Final Engineering Report (FER) shall be completed and submitted to NYSDEC for review and approval. Any potential institutional or engineering controls (ICs/ECs) relating to site management would be followed in accordance with an NYSDEC-approved Site Management Plan (SMP).

The remainder of the Development Site (Block 4430, Lot 1 and Block 4434, Lot 1) were evaluated in a recent July 2021 Phase II Environmental Investigation (EI) Report, which identified soil and groundwater contamination above applicable regulatory standards attributed to similar landfilling and petroleum related historic site activities and the presence of historic fill materials. Elevated SVOC, pesticides, PCBs and metals above applicable NYSDEC SCOs were identified in soils across the non-BCP portions of the Development Site, which were attributed to the presence of historic fill materials. SVOC, metal and PCB contamination in groundwater identified in the Phase II EI was attributed to sediment entrainment of fill material in the groundwater samples. Methyl tert-butyl ether (MTBE), a chemical additive to petroleum, was also identified.

To address the conditions identified on Block 4434, Lot 1, a BCP application and Remedial Investigation Work Plan (RIWP) were submitted to the NYSDEC on January 13, 2022 and were issued for public comment on March 23, 2022. ~~If the site is~~A BCA for Block 4434, Lot 1 was executed May 23, 2022. As the site has been accepted into the BCP, hazardous materials remedial requirements associated with Block 4434, Lot 1 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH, similar to Block 4434, Lot 10. A comprehensive RI will be implemented and documented in a RIR, followed by the preparation of a RAWP and CHASP. Upon completion of the approved remedial action, a FER shall be completed and submitted to NYSDEC and NYSDOH for review and approval. Any potential ICs/ECs relating to site management would be followed in accordance with an NYSDEC-approved SMP.

Given the conditions identified within the Development Site in the subsurface investigations, the Proposed Actions would include an (E) Designation for hazardous materials (E-679), which would be applied to the Development Site (Brooklyn Block 4430, Lot 1 and Block 4434, Lots 1 and 10). The (E) Designation provides a mechanism for regulatory oversight for future remedial action as a pre-construction requirement to ensure the potential risks or exposures associated with the presence of hazardous substances shall be reduced or eliminated to the maximum extent possible as related to the hazardous materials present. The implementation of the preventative and remedial measures required under the (E) Designation would avoid the potential for significant adverse hazardous materials impacts due to the Proposed Actions. As previously indicated, Block 4434, ~~Lot 10,~~Lots 1 and ~~potentially Block 4434, Lot 1~~10, shall be remediated under the BCA with regulatory oversight provided by NYSDEC. However, OER will generally accept the reports generated in the BCP for the purpose of complying with the (E) Designation requirements once the State RAWP is approved. Additionally, BCP eligibility may be explored in the future for the remaining portions of Development Site that are not currently entered in the BCP.

With regulatory oversight provided by NYSDEC under the BCA executed for Block 4434, ~~Lot 10 and potentially for Block 4434, Lot 1~~Lots 1 and 10, and the placement of an (E) Designation for the Development Site, the Proposed Actions would not result in any significant adverse impacts with respect to hazardous materials for the Development Site since the hazardous materials present will be properly remediated under the oversight of either or both State and City remediation agencies.

Water and Sewer Infrastructure

According to the *2021 CEQR Technical Manual,* discretionary actions that would increase density or change the drainage conditions may warrant a water and sewer infrastructure analysis. Specifically, development that would result in an exceptionally large demand for water (more than a million gallons per day (mgd)) or that is located in an area that experiences low water pressure require an analysis of potential impacts on the water supply system. Additionally, developments located in combined sewered areas exceeding incremental development thresholds (above the predicted No-Action condition) of 400 residential units or 150,000 square feet (sf) or more of commercial, public facility, and institution, and/or community facility space in Brooklyn would warrant a sewer infrastructure analysis. An analysis of the Proposed Actions' potential impacts on the City's wastewater and stormwater conveyance and treatment system is therefore warranted and is provided in **Chapter 11, Water and Sewer Infrastructure**.

~~The Proposed Project would result in a total daily water demand of approximately 0.55 mgd; therefore, no analysis of the water supply system is warranted. The Proposed Actions would result in a net incremental increase of 2,050 residential units and 211,474 sf of commercial/public and institution/community facility space, as compared with the No-Action condition, in a primarily combined sewered area.~~

As described in **Chapter 11, Water and Sewer Infrastructure**, a preliminary assessment was conducted and determined that the Proposed Actions would not result in a significant adverse impact on the City's water and sewer infrastructure. Although the Proposed Actions would create new demand for water and treatment of sewage in comparison to the No-Action condition, based on the methodology set forth in the *CEQR Technical Manual*, the incremental increases would be well within the capacity of the City's systems, and the effects would not be considered significant or adverse.

Solid Waste and Sanitation Services

The Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services. The Proposed Actions would generate an increment above the No-Action condition of approximately 56.94 tons per week of solid waste but would not directly affect a solid waste management facility. Approximately 73 percent of the additional solid waste generated by the Proposed Actions would be handled by the New York City Department of Sanitation (DSNY), and 27 percent would be handled by private carters. Overall, the uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately 3.36 DSNY truck loads per week and 1.24 commercial carter truck loads per week. Although this would be an increase compared with conditions in the future without the Proposed Actions, the additional solid waste resulting from the Proposed Actions would be a negligible increase relative to the approximately 9,000 tons of waste handled by

commercial carters every day or the 12,260 tons per day handled by DSNY, and it would also represent approximately 0.036 percent of the City's anticipated future weekly commercial and DSNY-managed waste generation in 2025, as projected in the Solid Waste Management Plan (SWMP). As such, the Proposed Actions would not result in an increase in solid waste that would overburden available waste management capacity. The Proposed Actions would also not conflict with, or require any amendments to, the City's solid waste management objectives as stated in the SWMP. Therefore, the Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services.

The Proposed Actions are also not expected to directly affect operations at the DSNY garage located on the block bounded by Cozine Avenue, Milford Street, Flatlands Avenue, and Montauk Avenue. Under the Proposed Actions, it is anticipated that there would be no geometric changes nor operational changes (e.g., roadway closures, reversals, etc.) to the street network used by sanitation trucks to access the DSNY garage. In addition, there would be no changes to curbside parking regulations on block fronts along Cozine Avenue, Milford Street, Flatlands Avenue, and Montauk Avenue that are currently used for garage operations. (Sidewalks and curbside space adjacent to the DSNY garage are routinely used for sanitation truck and employee auto parking as well as for the storage of snowplow blades and other equipment.)

Transportation

Traffic

The Proposed Project would generate a total of 668 vehicles per hour (vph) (277 "ins" and 442 "outs") in the weekday AM peak hour, 536 vph (268 "ins" and 268 "outs") in the weekday midday peak hour, 722 vph (402 "ins" and 320 "outs") in the weekday PM peak hour, 771 vph (380 "ins" and 391 "outs) in the Saturday peak hour, and 789 vph (379 "ins" and 410 "outs") in the Sunday peak hour. Of the 13 intersections analyzed, the Proposed Project would result in significant adverse traffic impacts at nine intersections during the weekday AM peak hour, seven intersections during the weekday midday peak hour, nine intersections during the weekday PM peak hour and seven intersections during the Saturday peak hour. A subset of seven intersections was analyzed for the Sunday peak hour (coinciding with CCC church services) and significant traffic impacts were identified at four of these seven intersections. The identification and evaluation of traffic capacity improvements needed to mitigate potential significant adverse traffic impacts created by the Proposed Projected are presented in **Chapter 20, Mitigation**.

Parking

The Proposed Project would provide approximately 886 on-site parking spaces between four garages – three underground garages with a total capacity of approximately 386 spaces located under Buildings 1 and 2, Buildings 3 and 4, and Building 9, and an approximately 500-space garage which would be located next to the CCC and performing arts center buildings and would be used for CCC church services, and community facility and commercial uses.

While the project's overall projected parking demand would be accommodated during the day there would be an anticipated residential shortfall of 418 parking spaces during the

overnight or early morning hours, 194 parking spaces during the weekday morning and 65 parking spaces during the Saturday afternoon periods. Based on the results of the quarter-mile parking inventory survey, there would be enough available on-street parking to accommodate the projected parking shortfall during these periods. Adequate parking supply would be provided for the other uses that include local retail, food store, and community facility uses.

An approximately 500-space parking garage would be developed as part of the project and would accommodate the majority of the church's on-site parking demand of 810 spaces during the 10 AM to 11 AM Sunday peak hour. The church parking overflow would be accommodated by the surrounding on-street parking within a quarter mile from the site (a five-minute walk) with a modest projected excess demand of 29 spaces that could be accommodated by surrounding on-street parking just beyond a five-minute walk of the Development Site. The parking demand for the proposed new uses would be expected to exceed the on-site parking by 191 spaces which would also need to be accommodated by surrounding on-street parking beyond a five-minute walk of the Development Site (total shortfall of 220 spaces). The Proposed Project would also provide shuttle bus service for CCC visitors from the subway stations which could potentially reduce the amount of church and residential-related parking demand.

Subways

Three fare control areas were analyzed at the Rockaway Parkway L subway station during the commuting peak hours. The analysis determined that all station elements that were analyzed would operate at acceptable levels of service with the exception of the Glenwood Road fare control during the AM peak hour. As part of the recent station renovations, there is no fence or other barrier behind the Glenwood Road fare control and the vast majority of subway riders were observed to not use the fare control and instead walk directly into the station without paying the fare. The analysis of this fare control area conservatively assumes that all subway riders would use the fare control and not evade the fare, and the fare control would be significantly impacted as a result of the Proposed Project.

A subway line haul analysis was conducted for the L subway line and determined that the subway line would operate at over-capacity conditions during the commuting peak hours. However, the project would result in an increase of 1.63 passengers per car in the Manhattan-bound direction during the AM peak hour and 1.53 passengers per car in the Brooklyn-bound direction during the PM peak hour; these increases are below the five subway passengers per car threshold that are considered a significant impact per the *CEQR Technical Manual* criteria. Therefore, significant subway line haul impacts are not expected as a result of the project.

Buses

Bus line haul analyses were conducted for three bus routes (B82, B82 SBS and B83) based on the *CEQR Technical Manual's* screening assessment. The With-Action condition analysis determined that there would be adequate supply for the Proposed Project's projected demand for the B82 and B82 SBS in the eastbound direction during the AM peak hour, and the B82 (both directions) and B82 SBS in the westbound direction during the PM peak hour.

However, the Proposed Project would result in a capacity shortfall for the bus routes listed below; these bus routes would be significantly impacted.

- The B82 bus route in the westbound direction during the AM peak hour
- The B82 SBS bus route in the westbound direction during the AM peak hour, and in the eastbound direction during the PM peak hour
- The B83 bus route in both directions during both the AM and PM peak hours

The identification and evaluation of bus service improvements needed to mitigate potential significant adverse bus impacts created by the Proposed Projected are presented in **Chapter 20, Mitigation**.

Pedestrians

Pedestrian analyses were performed for nine sidewalk elements, 14 crosswalk elements, and 13 corner elements at key intersections for the weekday AM, midday, PM, and Saturday peak hours. Of the 36 pedestrian elements analyzed, the Proposed Project would result in significant adverse impacts at one pedestrian element (one crosswalk) during the weekday AM and midday peak hours, two pedestrian elements (two crosswalks) during the weekday PM peak hour, and four pedestrian elements (three crosswalks and one sidewalk) during the Saturday peak hour. Due to the confluence of pedestrian activities from the Proposed Project and the church services, the Proposed Project would result in significant pedestrian impacts at 12 of the 14 pedestrian elements analyzed for the Sunday peak hour (three sidewalks, five crosswalks, and four corner analysis locations). Mitigation measures that could be implemented to mitigate these significant adverse pedestrian impacts are discussed in **Chapter 20, Mitigation**.

Vehicular and Pedestrian Safety

Nine of the 13 traffic analysis locations have been identified as high crash-locations according to New York City Department of Transportation (NYC DOT) criteria. The intersection of Pennsylvania Avenue and Stanley Avenue had at least five bicycle and/or pedestrian crashes recorded within a consecutive 12-month period and was identified as a high-crash location. In addition to this intersection, eight traffic analysis locations are located along the Pennsylvania Avenue, Linden Boulevard, and Rockaway Parkway corridors which have been identified by NYC DOT as priority corridors as part of the NYC Vision Zero Program and therefore are considered high-crash locations per the *CEQR Technical Manual* criteria.

Air Quality

The air quality analysis addressed mobile sources, parking facilities, emissions from the HVAC and hot water systems and from industrial sources.

Mobile Sources

The number of incremental trips generated by the Proposed Actions would be higher than the screening thresholds for carbon monoxide (CO) and particulate matter ($PM_{2.5}$) identified in the *2021 CEQR Technical Manual*. A mobile source screening assessment was undertaken,

which indicated the need for additional analysis. Based on screening analysis results and consultation with the NYC DCP, the intersection of Louisiana Avenue and Flatlands Avenue was selected as a worst-case location. A microscale analysis for CO and PM was conducted for this location using the weekday traffic. The highest predicted CO and PM concentrations were below respective National Ambient Air Quality Standards (NAAQS) and the City's *de minimis* ~~value~~values.

Parking Facilities

A parking garage analysis was undertaken for the two largest proposed parking garages. One facility is a subgrade accessory parking garage that would be mechanically ventilated; the other is a naturally ventilated seven-story public parking garage. The accessory parking facility would be located under Buildings 3 and 4, while the public parking garage would be a standalone structure next to Buildings 9 and 10. The analysis determined that emissions from both parking facilities would not result in a significant adverse air quality impact. Since the two other proposed accessory parking facilities (under Buildings 1 and 2 and Buildings 9 and 10) would have lower parking capacities and lower inbound and outbound traffic volumes, it was determined that no impacts would result from these facilities. Overall, no significant adverse air quality impacts are expected from the parking facilities.

Stationary Sources

An analysis of the potential for the Proposed Actions to result in stationary source impacts was undertaken. The detailed analysis of HVAC and hot water systems emissions from Buildings 1 through 10 and the PAC demonstrated that these buildings must use natural gas with low NOx burners in their fossil fuel-fired heating and hot water systems[13] and ensure that the exhaust stacks are located at the highest proposed building tier and at specified height above grade to avoid any potential significant adverse air quality impact. Further, the exhaust stacks for Building 4 must be located at a certain horizontal distance from northern and eastern edge of the building to avoid potential significant adverse air quality impacts. These commitments are memorized in an (E) designation for the Proposed Actions (E-679). With these measures, the Proposed Development would not result in significant adverse stationary source air quality impacts.

Industrial Sources

No industrial sources were identified within a 400-foot radius of the Project Area and no large or major sources were identified within a 1,000-foot radius of the Project Area. Therefore, the analysis of industrial, large or major sources was not warranted.

Greenhouse Gas Emissions

The Proposed Actions would be consistent with the applicable City GHG emissions reduction and climate change goals, and there would be no significant adverse GHG emission or climate change impacts as a result of the Proposed Actions.

[13] While the stationary source assessment assumes the use of natural gas for conservative analysis purposes, the Applicant may consider the use of electric heating and hot water systems.

Following the methodology provided in the *CEQR Technical Manual*, it is estimated that the Proposed Actions would result in approximately 7,682 metric tons of carbon dioxide equivalent (CO_2e) emissions from its annual operations and 8,110 metric tons a year of CO_2e emissions from mobile sources. This represents less than 0.03 percent of the City's overall 2019 GHG emissions of 55.1 million metric tons, an insignificant contribution.

The Proposed Project will comply with the 2020 Energy Conservation Construction Code of New York State and 2020 New York City Energy Conservation Code, which govern performance requirements of heating, ventilation, and air conditioning systems, as well as the exterior building envelope of new buildings. As a result, the Proposed Project will generate emissions below the Local Law 97 requirements and will contribute towards the NYC GHG reduction goals.

Since the Development Site is located within the 0.2 percent annual chance floodplain, the potential effects of global climate change have been considered and are presented in **Appendix A: Waterfront Revitalization Program Consistency Assessment**. The assessment considers the effects of climate change on rising sea levels, storm surge, and coastal flooding resulting from the Proposed Actions. As detailed in the Appendix, it was determined that the Proposed Project would be supportive of Policy 6.2 of the New York City WRP. Therefore, adverse impacts to climate change are not anticipated as a result of the Proposed Actions.

Noise

A noise assessment was conducted to determine whether the Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors, and if new noise receptors that would be introduced would be in an acceptable ambient sound level environment as defined in applicable provisions of the City's noise code.

Existing Noise Receptors

The Project Area includes existing residential and community facility receptors. The Proposed Actions would introduce new stationary and mobile sources of noise.

The increase in noise due to mobile sources with the No-Action and With-Action conditions have been determined with proportional noise modeling at 13 intersections and 6 monitoring locations throughout the study area. Mobile source noise levels would increase by up to 1.2 dBA for the With-Action condition compared to No-Action condition due to traffic generated by the Proposed Actions. Mobile source noise levels would increase up to 1.8 dBA for the With-Action condition compared to existing conditions due to background traffic growth and traffic generated by the Proposed Actions.

The closest existing noise-sensitive building is a NYCHA property at 1 Vandalia Avenue southeast of the Project Area. The building includes a 10-story portion approximately 108 feet from the Project Site and the proposed rooftop basketball court. No-Action noise levels at this receptor would range from 56.5 dBA to 66.7 dBA (Leq). With-Action noise levels at this receptor including stationary and mobile sources would range from 58.0 to 67.6 dBA (Leq). The Proposed Actions would result in an increase up to 1.6 dBA (Leq) in noise. Since

noise levels would not increase by 3 dBA or more at these receptors, there would be no significant adverse impacts due to mobile and stationary sources.

The residential building at 1180 Pennsylvania Avenue is approximately 80 feet from the Project Site and proposed daycare recreational area. No-Action noise levels at this receptor would range from 52.8 to 66.5 dBA (Leq). With-Action noise levels at this receptor including stationary and mobile sources would range from 59.4 to 67.7 dBA (Leq). The Proposed Actions would result in an increase up to 6.5 dBA (Leq) in noise. Since noise levels would increase by 5 dBA or more at these receptors, primarily resulting from the proposed childcare facility playground at Building 4, there would be a significant adverse noise ~~impacts~~impact due to ~~mobile~~the Proposed Actions. However, the existing window and ~~stationary sources.~~through-wall air conditioners would provide enough attenuation to maintain an interior noise level of 45 dBA or below. Therefore, interior noise to would be at an acceptable level and would result in a finding of no unavoidable significant adverse noise impacts at this location.

New Noise Receptors

The noise analysis for new receptors evaluates whether receptors would be introduced into an environment with acceptable ambient noise conditions. With-Action noise levels have been evaluated at new receptors based on ambient noise measurements, mobile source proportional noise modeling, detailed Sunday peak hour interior road analysis using CadnaA, and modeling of noise from proposed recreation areas.

The With-Action noise level at the northern and eastern facades of Building 1 including mobile and stationary sources would be up to 78.6 dBA (L_{10}). Therefore, the eastern façade along Pennsylvania Avenue, the northern façade along Flatlands Avenue, the western façade within 50 feet of Flatlands Avenue, and the southern façade within 50 feet of Pennsylvania Avenue would require a minimum composite window/wall of 35 OITC.

The With-Action noise level at the eastern façade of Building 2 including mobile and stationary sources would be up to 78.6 dBA (L_{10}). Therefore, the eastern façade along Pennsylvania Avenue and the northern and southern façades within 50 feet of Pennsylvania Avenue would require a minimum composite window/wall of 35 OITC.

The With-Action noise level at the northern façade of Building 3 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the southern façade of Building 4 including mobile and stationary sources and the new childcare facility playground would be up to 75.9 dBA (L_{10}). Therefore, the southern ~~façade~~, eastern, and western façades of Building 4 within 50 feet of the proposed childcare facility playground would require a minimum composite window/wall sound attenuation of 31 OITC.

The With-Action noise level at the northern façade of Buildings 5 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the northern façade of Buildings 6 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the northern, western, and southern façades of Building 7/8 including mobile and stationary sources would be up to 74.5 dBA (L_{10}). Therefore, the northern, western, and southern façades of Building 7/8 would require a minimum composite window/wall sound attenuation of 31 OITC.

The With-Action noise level at all façades of Building 9/10 including mobile and stationary sources and the proposed rooftop basketball court would be up to 75.5 dBA (L_{10}). Therefore, all façades of Building 9/10 would require a minimum composite window/wall sound attenuation of 31 OITC.

Other facades of the proposed buildings and the PAC are setback from Louisiana Avenue, Flatlands Avenue, and Pennsylvania Avenue where With-Action noise levels would be below 70 dBA (L_{10} or L_{eq}). Therefore, there would be no need for a minimum composite window/wall sound attenuation requirement at these locations.

To implement these attenuation requirements, an (E) designation (E-679) would be applied to the Development Site specifying the appropriate amount of window/wall attenuation and an alternate means of ventilation. With these commitments, the Proposed Project would not result in any significant adverse noise impacts.

Public Health

As described in the relevant analyses of this EIS, the Proposed Actions would not result in unmitigated significant adverse impacts in any of the technical areas related to public health: hazardous materials, water quality, air quality, or noise.

Due to contamination on the Development Site, Block 4434, Lot 10 has already been entered into the NYSDEC BCP and shall be remediated in accordance with the BCP requirements under NYSDEC regulatory oversight and pursuant to a BCA Index No. C224290-04-19 dated May 31, 2019. To address the conditions identified on Block 4434, Lot 1, a BCP application and RIWP were submitted to the NYSDEC on January 13, 2022 and were issued for public comment on March 23, 2022. ~~If~~As the site ~~is~~was accepted into the BCP on May 23, 2022, hazardous materials remedial requirements associated with Block 4434, Lot 1 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH, similar to Block 4434, Lot 10. A comprehensive RI will be implemented and documented in a RIR, followed by the preparation of a RAWP and CHASP. Upon completion of the approved remedial action, a FER shall be completed and submitted to NYSDEC and NYSDOH for review and approval. Any potential ICs/ECs relating to site management would be followed in accordance with an NYSDEC-approved SMP. Further, the Proposed Actions would include the placement of an (E) Designation (E-679) for the entire Development Site (Brooklyn Block 4430, Lot 1; Block 4434, Lot 1 and 10). Therefore, the Proposed Actions would not result in any significant adverse impacts with respect to hazardous materials for the Development Site.

The analysis of operational air quality showed that the Proposed Actions would not result in significant adverse air quality impacts from stationary sources including the proposed garages' emissions. A refined analysis of emissions from the HVAC and hot water systems demonstrated that if the fuel is restricted to natural gas, low NO_x boilers are used, and requirements to the stack height for all proposed buildings are memorialized in the (E) Designation (E-679), significant adverse impacts are not anticipated. Additional horizontal restrictions would be imposed on Building 4 in order to avoid significant adverse air quality impacts. A microscale mobile source analysis was conducted for the intersection of Louisiana and Flatlands Avenues, the selected worst-case location. The highest predicted CO and PM concentrations were below respective NAAQS and the City's *de minimis* ~~value~~values.

Mobile source noise levels would increase by up to 1.2 dBA for the With-Action condition compared to No-Action condition due to traffic generated by the Proposed Actions. Therefore, there would be no potential for significant adverse noise impacts due to mobile sources.

The residential property at 1 Vandalia Avenue, located southeast of the Development Site, includes a 10-story portion approximately 108 feet from the Development Site and the proposed rooftop basketball court. With-Action noise levels at this receptor including stationary and mobile sources would range from 58.0 to 67.6 dBA (L_{eq}). The Proposed Actions would result in an increase of up to 1.6 dBA (L_{eq}) in noise from the No-Action noise levels. Since noise levels would not increase by 3 dBA or more at these receptors, there would be no significant adverse impacts due to mobile and stationary noise sources.

The residential building at 1180 Pennsylvania Avenue is approximately 80 feet from the Development Site and proposed daycare recreational area (to be located at Proposed Building 4). With-Action noise levels at this receptor including stationary and mobile sources would range from 59.4 to 67.7 dBA (L_{eq}). The Proposed Actions would result in an increase of up to 6.5 dBA (L_{eq}) in noise from No-Action noise levels. While the detailed noise analysis concluded that the Proposed Actions could result in noise levels exceeding noise impact criteria for greater than 5 dBA, as this residential building would not experience noise levels in exceedance of 85 dBA, the Proposed Actions are not anticipated to cause excessively high chronic noise exposure and therefore, are not expected to result in a significant adverse public health impact related to operational noise.

As described in **Chapter 9, Natural Resources** and **Chapter 11, Water and Sewer Infrastructure**, the Proposed Actions would not result in significant adverse impacts. Therefore, no water quality impacts are anticipated as a consequence of the Proposed Actions.

In regard to construction impacts from the Proposed Project, with the aforementioned regulatory oversight on the Development Site through the BCP, BCA, and the (E) designation (E-679), the Proposed Actions would not result in any significant adverse impacts with respect to hazardous materials for the Development Site during the construction period. Furthermore, the Proposed Project would not result in significant adverse impacts on air quality during construction. The results of the quantitative on-site construction analysis indicate that the Proposed Project would not exceed NO_2, PM_{10}, and CO NAAQS. In addition, the maximum predicted 8-hour CO concentration would be well below and incremental concentrations of $PM_{2.5}$ would not exceed the City's de minimis criteria. Finally, comparison of intersection traffic under construction conditions with operational conditions

demonstrated no potential for significant adverse CO and PM impacts from construction-related traffic.

Construction activities would adhere to existing construction noise regulations and ~~the~~ implement a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot construction noise barrier, and while construction noise would be reduced, the Proposed Actions would result in the potential for significant adverse construction noise impacts. In total, ~~exterior~~ construction noise levels would exceed the ~~exterior increase~~ thresholds for exterior noise increase and acceptable interior noise levels at ~~seven~~six buildings throughout the Development Site, including three existing buildings and ~~four~~three buildings that would be introduced by the Proposed Actions during the phased development. None of the existing or Proposed Buildings in the vicinity of the Development Site would experience elevated noise levels in exceedance of 85 dBA. Additionally, as described in **Chapter 19~~,~~ Construction,** the predicted noise levels due to construction are associated with specific pieces of equipment that operate intermittently during the construction period. The detailed noise analysis concluded that the Proposed Action could result in noise levels exceeding the acceptable interior noise impact criteria ~~of greater than 15~~and noise increases exceeding 15 dBA for 12 months or more or 20 dBA for 3 months or more. No analyzed noise receptors are expected to experience exterior noise levels in exceedance of the 85 dBA public health threshold. Therefore, there would not be significant adverse public health impacts due to construction of the Proposed Action.

Finally, all project work would be performed under a NYSDEC-approved Stormwater Pollution Prevention Plan (SWPPP) to be prepared in with the terms and conditions of the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001, January 2020). No project work or equipment and materials storage would occur within or adjacent to wetlands. Various project erosion and silt controls would be installed and maintained pursuant to the New York State Standards and Specifications for Erosion and Sediment Control (2016). Thus, significant adverse impacts to public health from construction activities are not anticipated.

Neighborhood Character

The Proposed Project would not result in significant adverse impacts to neighborhood character. With the exception of community facilities and services and transportation, the Proposed Actions would not result in significant adverse impacts in any of the technical areas that contribute to neighborhood character (i.e., the Proposed Actions would not result in significant adverse impacts to land use, zoning, and public policy; socioeconomic conditions; historic and cultural resources; urban design and visual resources; or shadows). While the Proposed Actions would result in significant adverse impacts to community facilities and services, the increased demand on early childhood programs and libraries could be mitigated by the introduction of a ~~12,230~~6,350-gsf childcare facility (implementation would occur in consultation with the ~~NYC~~ DOE) and the provision of computer labs that have free ~~services and programming~~ internet access within lounge spaces in each building within the Proposed Project for residents ~~typically offered~~and space within the PAC to be provided for use by ~~the Brooklyn Public Library in the common areas of~~BPL for programming and additional outdoor space within the ~~proposed residential buildings~~Central Quad to be made available for BPL programming, respectively. Regarding transportation, traffic impacts at

several intersections, pedestrian impacts at several crosswalks, and fare control and bus capacity impacts are all anticipated as a result of the Proposed Actions. Regarding noise, a significant adverse impact at one existing residential building is anticipated as a result of the Proposed Actions. However, ~~mitigation measures~~the existing window and through-wall air conditioners would ~~be implemented by~~provide enough attenuation to maintain an interior noise level of 45 dBA or below. Therefore, the Proposed Project ~~to eliminate or minimize the~~would not result in a significant adverse impact on neighborhood character due to effects ~~of these potential impacts.~~ on noise conditions.

The Proposed Actions would enhance the urban design and character of the neighborhood by redeveloping an underutilized lot and surface parking with pedestrian-oriented buildings constructed close to the lot line and oriented along a coherent grid that would surround a proposed central quad. These elements, together with new publicly accessible open spaces and anchor uses including the CCC and the PAC, would contribute to improved orientation and legibility in the area as compared to the No-Action condition. In addition, proposed street-fronting retail and commercial space, residential lobbies and maisonettes, and community facility space would serve to activate the Development Site and provide needed facilities and services to the surrounding community.

Overall, the Proposed Project would contribute to a more vibrant future for the neighborhood, contributing to the goals of increasing the city's affordable housing stock and introducing development that is well-integrated with the urban fabric through expanded community facilities, open space, and an internal street network.

Overall, the Proposed Project would not result in a significant change to the defining features of neighborhood character.

Construction

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility. Construction at the Development Site would be subject to government regulations and oversight described in **Chapter 19, Construction** in Construction Regulations and General Practices and would employ the general construction practices described in the construction chapter. The Proposed Project would also comply with the requirements of the New York City Noise Control Code.

Transportation

Traffic

The projected construction activities would yield less total traffic than the amount of traffic projected for the Proposed Project. However, significant traffic impacts could still occur at some of the study area locations during construction, similar to impacts identified in **Chapter 13, Transportation**. Construction activities would generate 184 construction worker auto trips and six construction truck trips during the AM construction peak hour, and 184 construction worker auto trips and two construction truck trips during the PM construction peak hour. Construction trucks would be required to use the New York City Department of Transportation (NYC DOT)-designated truck routes to get to the project area and would then use local streets to access the construction sites.

In addition to construction-related trips, trips generated by components of the Proposed Project that would be expected to be completed by the 2030 construction peak year. These operational trips were also incorporated into the construction traffic analysis.

Construction traffic impacts were identified at two of the seven intersections analyzed during the AM construction peak hour, and nine of the twelve intersections analyzed during the PM construction peak hour. Where impacts during construction may occur, measures similar to the ones recommended in **Chapter 20, Mitigation** could be implemented early to aid in alleviating congested traffic conditions. The two intersections that would be impacted during the AM peak hour could be fully mitigated with typical traffic improvement measures (i.e., signal timing modification and changing parking regulations to provide an additional travel lane). Significant impacts at the intersections of Pennsylvania Avenue with Flatlands Avenue, Stanley Avenue and Linden Boulevard, and Flatlands Avenue with Louisiana Avenue, East 108th Street, and Rockaway Parkway could not be fully mitigated during the PM peak hour. The PM construction peak hour findings are similar to operational With-Action conditions except for the intersections of Pennsylvania Avenue with Stanley Avenue, and the intersection of Flatlands Avenue and East 108th Street which could be mitigated under the operational With-Action conditions.

Parking

Construction workers would generate an estimated maximum daily parking demand of 285 spaces during the Q4 2025 peak construction quarter. This parking demand could be accommodated by the approximately 385 on-site surface spaces used by the church (these spaces are used by the CCC Tuesday evenings and Sundays during the morning/midday period) and would be mostly vacant during construction. The on-site surface spaces would be replaced with a 500-space above ground parking garage after it is completed in the third quarter of 2026; construction workers would park in this garage after it is completed. Therefore, construction for the Proposed Project would not result in a parking shortfall.

Transit and Pedestrians

Based on census data for the construction industry, it is anticipated that approximately 35 percent of construction workers would commute to the Development Site by public transportation. During the Q4 2025 quarter when construction worker volumes would be highest, construction would be expected to generate 442 daily construction workers (154 workers would be expected to use public transportation). It is expected that the majority of construction workers (80 percent) would arrive during the AM construction peak hour and depart during the PM construction peak hour, and they would generate approximately 123 construction worker trips by public transportation during the AM and PM construction peak hours. The worker pedestrian trips would be below the 200 pedestrian CEQR thresholds for detailed analysis, therefore construction activities are not expected to result in transit or pedestrian impacts.

Air Quality

As described in **Chapter 19**, Phase 1B was determined to be the peak period for construction air quality emissions. Based on the results of the emissions intensity and quantitative construction air quality analysis for on-site emissions (construction equipment,

trucks and fugitive dust from construction of foundations for building 3 and 4 (in phase 1B) and truck idling and moving on paved and unpaved roads) and based on a comparison to the operational mobile source impact analysis for off-site construction traffic, the Proposed Project would not result in significant adverse impacts on air quality during construction. The results of the quantitative on-site construction analysis indicate that the Proposed Project would not exceed NO_2 1-hour, PM_{10} 24-hour, and CO 1-hour and 8-hour NAAQS. In addition, the maximum predicted 8-hour CO concentration would be well below and incremental concentrations of $PM_{2.5}$ would not exceed the City's de minimis criteria. Finally, the emissions intensity analysis that compares conditions under construction conditions with operational conditions demonstrated no potential for significant adverse CO and $PM_{2.5}$ impacts from construction-related traffic.

Noise

Construction of the phased development would involve standard construction activities and practices for buildings in New York City. Foundation installation and superstructure phases of construction are typically when the noisiest activities occur. The exterior and interior fit-out phases of construction typically involve minimal exterior equipment and substantially quieter noise conditions. The Development Site is near existing residential, community facility, and commercial land uses, and the introduction of new residences would occur throughout construction of the phased development. Based on the proximity of these noise-sensitive land uses, there is the potential for construction to cause significant adverse noise impacts.

Construction noise from mobile sources has been evaluated from 6:00 AM to 7:00 AM, when construction traffic would be greatest since this is the period that most worker vehicles and trucks arrive at the Development Site. This is a period prior to construction activities and noise from stationary construction equipment would occur. Construction noise from mobile sources would not increase by 3 dBA or more and there would be no significant adverse noise impact due to construction mobile sources.

Construction noise from stationary sources has been evaluated for 16 different phases of construction. For each phase of the Proposed Development (i.e., Phase 1A, Phase 1B, Phase 2A, Phase 2B, and Phase 2C) there would be foundation, superstructure, elevators, exterior construction, and interior fit-out phases of construction of the proposed buildings (i.e., Buildings 1, 2, 3, 4, 5, 6, 7/8, 9/10 and the PAC). See *Construction Schedule* and *Construction Noise Assessment Methodology* sections for further details on the period and duration of the different phases of construction.

The potential for significant adverse construction noise impact depends on the intensity and duration of construction activities. As it relates to the Public Health, construction noise would be a significant adverse noise impact if noise levels exceed 85 dBA for a prolonged period of time. If construction noise levels would occur continuously for 24 months or more, a detailed construction noise analysis is warranted and there is a potential for significant adverse noise impact. Construction noise occurring for shorter durations would not typically result in significant adverse noise impact unless there is a higher intensity of noise. For example, construction may cause significant adverse impact if exterior noise levels would increase by 15 dBA or more for 12 months or more or 20 dBA or more for a period of 3 months or more. These criteria apply to residential, community facility, and commercial

office spaces, but do not apply to retail spaces. ~~When looking at identified~~Between Draft and Final EIS, consideration of interior noise level within or above the acceptable limits has been included as part of determination of significant adverse construction noise ~~impacts~~impact. Therefore, the chapter also investigates interior L_{10} noise levels to compare with the CEQR interior noise guideline of 45 dBA (L_{10}) ~~or~~for residential and community facility uses and interior noise guideline of 50 dBA (L_{10}) for commercial office uses in order to determine if a receptor would experience significant adverse construction noise impact and if potential mitigation at the receptor is needed.

In total, exterior and interior construction noise levels would exceed the ~~exterior increase~~ thresholds at ~~seven~~six buildings throughout the Development Site, including three existing buildings and ~~four~~three buildings that would be introduced by the Proposed Actions during the phased development. The following summarizes the results of the construction noise assessment at the closest receptors surrounding the Proposed Project.

- There would be a total of six buildings where construction noise levels would increase by 20 dBA or more over existing conditions for three months or longer ~~including:~~and where this level of noise increase would cause interior noise levels to exceed the acceptable threshold for at least three consecutive months including:
  - Proposed Building 2
  - Proposed Building 3
  - Proposed Building 4
  - 1180 Pennsylvania Avenue
  - 1170 Pennsylvania Avenue
  - 1 Vandalia Avenue
- There would be a total of ~~six~~five buildings where construction noise levels would increase between 15-20 dBA over existing conditions for 12 months or longer ~~including:~~and where this level of noise increase would cause interior noise levels to exceed the acceptable threshold for at least 12 consecutive months including:
  - ~~Proposed Building 1~~
  - Proposed Building 2
  - Proposed Building 3
  - Proposed Building 4
  - 1180 Pennsylvania Avenue
  - 1170 Pennsylvania Avenue

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot construction noise barrier, construction noise would be reduced but would still exceed the thresholds for significant construction noise impact prior to mitigation.

Vibration

Construction activities have the potential to generate ground-borne vibration that can potentially cause structural or architectural damage or annoy people in nearby vibration-sensitive spaces, such as residences. The most substantial sources of construction vibration

are equipment associated with the excavation and foundation phase, such as pile drivers, drill rigs, bulldozers, and jack hammers.

There are no buildings within the Project Area listed by the New York City Landmarks Preservation Commission (LPC) or the State and/or National Register of Historic Places (S/NR) which would require special protections from potential damage due to vibration. There is the potential for construction vibration from some construction equipment, such as pile drivers, to cause annoyance in nearby residences. However, these construction activities would only occur for limited periods of time at any particular location and there would be no significant adverse impact as a result of construction vibration.

Other Technical Areas

Land Use and Neighborhood Character

While construction of the new buildings under the Proposed Actions would cause temporary disruption, particularly related to noise, it is expected that such effects in any given area would be relatively short in duration, even under the worst-case construction sequencing and, therefore, would not create a neighborhood character impact. Therefore, no significant adverse construction impacts to land use and neighborhood character are expected.

Socioeconomic Conditions

Construction could, in some instances, temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the Development Site. Long-term lane and/or sidewalk closures are not expected during construction and therefore, would not restrict access to any existing or planned retail businesses. Utility service would also be maintained to all businesses, although there may be very short-term interruptions. Overall, construction resulting from the Proposed Actions is not expected to result in any significant adverse impacts on surrounding businesses.

Community Facilities

The construction site would be surrounded by construction fencing and barriers that would limit the potential for impacts of construction on nearby community facilities. Construction of the proposed buildings would not block or restrict access to any facilities in the area and would not affect emergency response times of the New York City Police Department (NYPD) and New York City Fire Department (FDNY) given the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, no construction impacts would be expected to community facilities as a result of the Proposed Actions.

Open Space

As described in **Chapter 5, Open Space** there are no existing publicly accessible open spaces on the Development Site. While Breukelen Ballfields is located near the site at the northwest corner of Flatlands Avenue and Louisiana Avenue, no access to this publicly accessible open space would be impeded during construction. In addition, measures would be implemented to control air emissions, dust, noise, and vibration on the construction site.

Historic and Cultural Resources

A request for an environmental review letter was sent to NYC LPC to determine if there were any architectural or archaeological resources on the Development Site or within an approximate 400-foot radius of the Project Area (coterminous with the rezoning area boundary). According to the response letter issued by LPC and dated September 6, 2019, the Development Site has no archeological significance and does not contain buildings or structures with architectural significance. In addition, no buildings or structures with architectural significance were identified within 400 feet of the Project Area. (Santucci September 6, 2019, **Appendix B**).

Hazardous Materials

As discussed in greater detail in **Chapter 10, Hazardous Materials**, the potential for significant adverse impacts related to hazardous materials resulting from the Proposed Actions would be precluded through the placement of institutional controls such as an (E) designation on the Development Site.

Mitigation

In accordance with the *CEQR Technical Manual*, where significant adverse impacts are identified, mitigation to reduce or eliminate the impacts to the fullest extent practicable is developed and evaluated. Where potential significant adverse impacts have been identified—in the areas of transportation, community facilities (indirect impacts on early childhood programs and libraries), noise and construction—measures are examined to mitigate the anticipated impacts. As described in **Chapter 20, Mitigation**, the potential open space impact would be temporary due to the sequencing of construction and there would be no open space impact at full buildout of the project.

In connection with approval of the Proposed Actions, a Restrictive Declaration would be recorded on the Development Site, subject to CPC approval. The Restrictive Declaration would codify commitments made in the FEIS related to the environmental review to ensure that project components related to the environment and mitigation measures are implemented.

Community Facilities

Early Childhood Programs

As the Proposed Project would be developed sequentially, the significant adverse impact would occur when the Proposed Project completed construction of approximately 530 non-senior, affordable units, which would introduce approximately 95 children eligible for publicly funded early childhood programs. Based on the proposed phasing schedule, it is therefore anticipated that the significant adverse impact to early childhood programs could first occur at Phase 1B of the Proposed Project's construction (to commence in 2025), and would increase as other phases are constructed and occupied.

Required mitigation measures to address the identified significant adverse impact to publicly funded early childhood programs ~~are being~~were explored in consultation with the ~~NYC~~ DOE and will be refined between the DEIS and FEIS. Such measures may include, but are not

limited to, the provision of suitable space on-site for an early childhood program, provision of a suitable location off-site and within a reasonable distance, or funding or making program or physical improvements to support additional capacity. If it is deemed appropriate by ~~the~~ DOE, the Proposed Project could include space that could be used for early childhood programming within certain building groups. In this case, the Proposed Project has allocated approximately 12,320-gsf for a childcare facility within the Project Area. ~~As discussed above,~~Approximately 128 childcare slots (or approximately 6,350 sf ~~feet~~assuming 50 sf per child) could be designated for publicly funded early childhood programming, which would fully mitigate the significant adverse impact if the designated spaces are tenanted by early childhood providers in consultation with DOE. If mitigation measures are not fully effective in addressing the significant adverse impact to early childhood programs, then the Proposed Actions would result in an unavoidable adverse impact to early childhood programs. The implementation of the mitigation measures would rely upon the direction of ~~the~~ DOE and the ongoing monitoring that ~~the~~ DOE must undertake to determine the appropriate mitigation measures.

Libraries

As the Proposed Project would be developed sequentially, the significant adverse impact first would occur (pass the threshold of a 5 percent increase in the catchment area population) when the Proposed Project completes construction of approximately 1,487 of the 2,050 units, which would introduce a population of approximately 3,480 residents to the catchment area. Based on the proposed phasing schedule, it is therefore anticipated that the significant adverse impact to public libraries would first occur during Phase 2A of the Proposed Project's construction, which is anticipated to commence in 2027.

Required mitigation measures to address the identified significant adverse impact to Libraries ~~are under development~~have been developed in consultation with the BPL. In order to address a significant adverse impact to library services resulting from the Large-Scale Development Project, the Applicant shall provide a computer lab space in each residential building and shall include free WiFi service in the main lounge areas in each residential building. The Applicant is proposing to provide project residents with computer labs that have free internet access within lounge spaces in each building within the Proposed Project. Furthermore, space within the PAC would be provided for use by BPL for programming and additional outdoor space within the Central Quad would be made available for BPL programming. The full range of mitigation measures ultimately implemented would rely upon input from BPL, which would undertake ongoing monitoring to determine the appropriate mitigation measures as the Proposed Project is occupied. The Applicant would consult and coordinate with BPL prior to the design of Phase 2A, when the significant adverse impact to public libraries is first expected to occur, to determine the need, practicality, and feasibility for the proposed mitigations described above. If mitigation measures are not fully effective in addressing the significant adverse impact to libraries, then the Proposed Actions would result in an unavoidable adverse impact to ~~Libraries~~libraries.

Open Space

Required mitigation measures to address the identified temporary indirect active open space impact ~~are being~~were explored with DCP and NYC Parks between the DEIS and FEIS. ~~If~~As no mitigation measures ~~are not~~were fully effective in addressing the temporary adverse impact

to active open space, the Proposed Actions would result in an unavoidable temporary adverse impact to active open space. During construction, it is anticipated that the active open space ratio (OSR) would exceed a 3 percent change (which is the relevant CEQR Technical Manual percent change threshold for active open space ratio) once the first 425 units are constructed and occupied (approximately 997 residents are anticipated) during Phase IA, the first phase of construction. With the Central Quad and the Entry Plaza and walkways constructed in the later phases of the project (within thirty-six months of the closing on the required financing and building permits for both Buildings 5 and 6), a temporary indirect active open space impact would result. As such, it is anticipated that up to approximately six years could elapse between the impact threshold and the full build-out of all of the proposed on-site open spaces.

Transportation

Traffic

Of the 13 intersections analyzed, the Proposed Project would result in significant adverse traffic impacts at nine intersections during the weekday AM peak hour, seven intersections during the weekday midday peak hour, nine intersections during the weekday PM peak hour, and seven intersections during the Saturday peak hour. A subset of seven intersections was analyzed during the Sunday peak hour and significant traffic impacts were identified at four of these intersections during this peak hour. The majority of the intersections analyzed would either not be significantly impacted or could be fully mitigated with readily implementable traffic improvement measures described in **Chapter 20, Mitigation**. Six of the 13 intersections would remain unmitigated during the weekday AM peak hour, two intersections during the weekday midday peak hour, five intersections during the weekday PM peak hour (three of the five intersections could be partially mitigated), and four intersections during the Saturday peak hour. During the Sunday peak hour, four of the seven intersections would remain unmitigated. Mitigation measures identified later in the chapter, such as signal timing changes, parking regulation changes to gain a travel lane at key intersections, and lane restriping, are standard traffic capacity improvements that are typically implemented by NYC DOT.

Subway

Subway station elements at the Rockaway Parkway L subway station were analyzed during the AM and PM commuter peak hours and significant impacts were identified at the Glenwood Avenue fare control area during the AM peak hour. ~~There would be no significant impacts on subways during the PM peak hour. Measures to mitigate this impact could potentially include the installation of additional turnstiles. The practicability of implementing this measure, as well as measures to prevent prevalent fare evasion at this fare control area, will be evaluated in consultation with NYCT between the Draft EIS and Final EIS~~There would be no significant impacts on subways during the PM peak hour As part of the recent station renovations, there is no fence or barrier behind the Glenwood Road fare control and the majority of subway riders were observed to evade the fare control. The subway station analysis assumed that all subway riders would use the fare control and not evade the fare. The analysis at this fare control, which consists of one high entry/exit turnstile (HEET) and one high exit turnstile (HXT), determined that the fare control would operate at over-

capacity conditions during the AM peak hour under existing conditions and a minimal increase in subway riders would result in a significant impact. Between the Draft EIS and the Final EIS, mitigation measures were studied in conjunction with NYCT and it was determined that this impact could be mitigated with the installation of an additional HEET at this fare control. As a practical matter, the additional HEET would not be implemented in the absence of any measures taken by NYCT to deter the ongoing fare evasion. Therefore, until any measures are taken by NYCT to deter fare evasion at this location, the significant adverse impact would be unmitigated. Thereafter, the significant impact would be fully mitigated upon the implementation of one additional HEET.

Buses

The Proposed Project would result in a capacity shortfall for the B82 bus route during the AM peak hour (93 spaces in the westbound direction), B82 SBS bus route during the AM peak hour (two spaces in the westbound direction) and PM peak hour (56 spaces in the eastbound direction), and B83 bus route during the AM peak hour (107 spaces in the northbound direction, 12 spaces in the southbound direction) and PM peak hour (64 spaces in the northbound direction, 75 spaces in the southbound direction).

Impacts to the B82 bus route could be mitigated with the addition of two standard buses in the westbound direction during the AM peak hour. Impacts to the B82 SBS bus route could be mitigated with the addition of one standard bus in the westbound direction during the AM peak hour, and two standard buses in the eastbound direction during the PM peak hour. Impacts to the B83 bus route could be mitigated with the addition of three standard buses in the northbound direction and one standard bus in the southbound direction during the AM peak hour, and two standard buses in each direction during the PM peak hour. The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

Pedestrians

Of the 36 pedestrian elements analyzed, the Proposed Project would result in significant adverse pedestrian impacts at one pedestrian element (one ~~crosswalks~~crosswalk) during the weekday AM and midday peak hours, two pedestrian elements (two crosswalks) during the weekday PM peak hour, and four pedestrian elements (three crosswalks and one sidewalk) during the Saturday peak hour. A subset of 14 pedestrian elements along the Development Site frontages was analyzed for the Sunday peak hour. Twelve pedestrian elements (five crosswalks, three sidewalks, and four corners) would be impacted during this peak hour. Potential improvements that could mitigate the significant impacts were reviewed and it was determined that the pedestrian impacts could not be mitigated with typical improvement measures.

Noise

As described in **Chapter 20, Mitigation**, the Proposed Actions would result in the potential for significant adverse impacts to one existing residential building, located at 1180 Pennsylvania Avenue, due to the introduction of new stationary and mobile noise sources. As described in **Chapter 16, Noise**, With-Action sound levels would range from 59.4 to 67.7 dBA (L_{eq}), an increase of up to 6.5 dBA from the No-Action condition. While the detailed

noise analysis concluded that the Proposed Actions could result in noise levels exceeding noise impact criteria for greater than 5 dBA, primarily resulting from the proposed childcare facility playground at proposed Building 4, there would be significant adverse noise impacts at 1180 Pennsylvania Avenue due to the Proposed Action. The ~~introduction of a solid~~ existing window and through-wall ~~along~~air conditioners used by the ~~southern perimeter of the daycare playground facility~~adjacent buildings would ~~be expected to~~ provide ~~5 dBA of~~enough attenuation to maintain an interior noise ~~reduction, thereby mitigating~~level of 45 dBA or below. Therefore, interior noise ~~to~~would be at an acceptable level and would result in a finding of no unavoidable significant adverse noise impacts at this location~~.~~..

With the inclusion of (E) Designations for new buildings on the Development Site which specify window-wall attenuation requirements, the project would not result in any on-site noise impacts requiring mitigation.

Construction

Construction Noise

Since noise levels during construction would exceed the thresholds for exterior increases in noise, there would be potential for the project to result in significant adverse construction noise impacts at new buildings that would be introduced with the phased development and at existing residential buildings located immediately south of the Development Site. As described in **Chapter 19, Construction**, interior noise levels would exceed the interior impact criterion for residential receptors during certain phases of construction.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot-tall construction noise barrier, construction noise would be reduced but would still exceed the thresholds for significant construction noise impact prior to mitigation.

As discussed in **Chapter 20, Mitigation**, no feasible mitigation measures were identified to mitigate the potential construction noise impact. While additional mitigation measures ~~will be~~were explored in consultation with the lead agency between Draft EIS and Final EIS, no feasible mitigation measures were identified and, as such, the Proposed Actions ~~have the potential to~~would result in a significant adverse noise impact that would remain unmitigated. See **Chapter 22, Unavoidable Adverse Impacts**.

Construction Transportation

As discussed in **Chapter 19, Construction**, seven intersections were analyzed for potential significant traffic impacts during the AM construction traffic peak hour and twelve intersections were analyzed during the PM construction traffic peak hour. Significant impacts were identified at two analysis intersections during the AM peak hour and at nine intersections during the PM peak hour. Where impacts during construction may occur, measures similar to the ones recommended in the operational traffic analysis could be implemented early to aid in alleviating congested traffic conditions. The two intersections that would be impacted during the AM peak hour could be fully mitigated with typical traffic improvement measures (i.e., signal timing modification and changing parking regulations to provide an additional travel lane). Significant impacts at the intersections of Pennsylvania Avenue with Flatlands Avenue, Stanley Avenue and Linden Boulevard, and Flatlands Avenue

with Louisiana Avenue, East 108th Street, and Rockaway Parkway could not be fully mitigated during the PM peak hour. The PM construction peak hour findings are similar to operational With-Action conditions except for the intersections of Pennsylvania Avenue with Stanley Avenue, and the intersection of Flatlands Avenue and East 108th Street which could be mitigated under the operational With-Action conditions.

Alternatives

No-Action Alternative

The No-Action Alternative examines future conditions in 2031 absent the Proposed Actions. In simplest terms, the No-Action Alternative is the No-Action condition identified, described, and assessed in the preceding chapters of this ~~EIS~~FEIS. In the No-Action Alternative, the Development Site would remain in its existing condition, with only the existing CCC operational on the site (approximately 92,784-gross-square-foot (gsf) of community facility space and 385 striped accessory parking spaces).

As discussed in greater detail in **Chapter 21, Alternatives**, the significant adverse impacts associated with the Proposed Actions would not occur under the No-Action Alternative. However, the No-Action Alternative would not meet the project goals, and as compared to the Proposed Actions, the intended benefits—the introduction of affordable housing units and an array of community facility uses, economic activity introduced by local retail, and public open spaces—would be eliminated with the No-Action Alternative.

The No-Action Alternative would not result in any significant adverse impacts as no development would occur in the absence of the Proposed Actions.

Modified Application Before the City Planning Commission

Since issuance of the Draft EIS, the Proposed Development has been updated by the Applicant in response to feedback received throughout the public review process to refine the landscaping and amenities for the public access areas on the Development Site and to change the maximum number of stories of four of the buildings. The City Planning Commission is reviewing, and in some cases modifying, the Applicant-proposed modifications. In particular, changes to the public access areas include relocation of certain signs, consolidation and relocation of a number of trash receptacles, a decrease in the number of benches along certain portions of the public access areas, and the addition of new benches adjacent to the east of the Building 5 arcade. Building 1 has been reduced from 15 stories to 14 stories and Buildings 3, 5, and 6 have been reduced from 14 stories to 13 stories. Additionally, the maisonettes would be allowed to be located between the ground floor and second story of the primary portions of the buildings, including Buildings 1 and 3. The effect of these changes may be a loss of between 0 and 75 dwelling units. No change to the permitted heights of buildings or zoning floor area of the Proposed Development included in the Draft EIS would occur as a result of the Large-Scale General Development refinements. In addition, the location, intended use, and overall amount of public access area would be unchanged from that considered in the Draft EIS.

As these project modifications would not change overall building height or massing, none of the technical analyses related to building bulk or massing would have to be adjusted to

reflect the changes to the project. Similarly, as the density-based analyses evaluate a worst-case development scenario for the project, they represent a conservative analysis for the project and disclose the environmental impacts associated with the maximum number of dwelling units that could be constructed on-site. A reduction in the proposed number of dwelling units by up to 75 units would create a nominal reduction in demand for services, but would not substantively change the findings of the EIS related to socioeconomic conditions, community facilities and services, open space resources, water and sewer infrastructure, solid waste and sanitation services, transportation, air quality, greenhouse gas emissions and climate change, noise, public health, neighborhood character, construction, mitigation, or unavoidable significant adverse impacts. The significant adverse impacts and mitigation under this alternative would remain the same as under the Proposed Project, and the following technical areas would require mitigation under either alternative: community facilities, open space, transportation, noise, and construction (see **Chapter 20, Mitigation**).

No Unmitigated Significant Adverse Impacts Alternative

The No Unmitigated Significant Adverse Impacts Alternative examines a scenario in which the projected density increase, and other components of the Proposed Actions are changed specifically to avoid the unmitigated significant adverse impacts associated with the Proposed Actions. The Proposed Actions would result in significant adverse impacts to community facilities, specifically early childhood programs and libraries, and transportation specifically to traffic, subway, and pedestrian conditions. A temporary impact to active open space would also occur during the construction period of the With-Action condition. ~~Sensitivity~~As discussed below, sensitivity analyses were conducted for those technical analyses that have the potential to result in significant adverse impacts and it was determined that ~~any new~~significant reductions in the proposed development ~~on the site~~program would be ~~expected~~required in order to result in no unmitigated significant adverse impacts~~. However, leaving~~, as follows:

- To avoid impacts to early childhood programs, the number of non-senior residential units would need to be reduced from 1,338 units to 530 units.
- To avoid impacts to libraries, the number of residential units would need to be reduced from 2,050 units to 1,486 units.
- To avoid the temporary open space impact, the on-site open spaces would need to be constructed during an earlier phase (i.e., after the completion of Phase IA); however, this would not be feasible due to the space requirements associated with construction phasing.
- To avoid unmitigated traffic impacts the development would need to be reduced to eight percent of the Proposed Project (165 residential units).
- A development of any size would result in unmitigable pedestrian impacts due to the effect of the 500-space parking garage on church-related traffic.
- To avoid unmitigated subway impacts the development would need to be reduced to nine percent of the Proposed Project (185 residential units)

In order to avoid impacts, the project either would have to be reduced below the thresholds described above or the site would remain in its existing condition. However, neither option

would ~~not~~ meet the project's goals of creating a sustainable, affordable neighborhood and address the economic, social, educational and cultural needs of the neighborhood.

The project is projected to result in unmitigated ~~traffic and noise impacts during construction.~~operational traffic, pedestrian, subway and construction noise impacts. As described below, mitigation has been identified for the community facilities (early childhood programs and libraries) that is expected to adequately mitigate the projected impacts. It was determined that any new construction on the Development Site would involve the use of construction equipment such as drill rigs and concrete mixer trucks and, as such, would be expected to result in unmitigated construction noise impacts. In order to avoid impacts to construction, the project would have to be reduced to such a degree that the proposal would not meet the goals and objectives of the Applicant's development program, which features a 100 percent affordable housing development, community facility, local retail, a trade school, a performing arts center (PAC), and publicly accessible open spaces. Therefore, to avoid these impacts, construction would need to be avoided, and the project and the applicant's intended benefits would not be realized.

Unavoidable Significant Adverse Impacts

As described in **Chapter 20, Mitigation**, the Proposed Actions have the potential to result in significant adverse community facilities, transportation, and construction impacts. The Proposed Actions would also result in a temporary active open space impact during the construction period. To the extent practicable, mitigation has been proposed for these identified significant adverse impacts. However, in some instances no practicable mitigation has been identified to fully mitigate the significant adverse impacts, and there are no reasonable alternatives to the Proposed Actions that would meet the purpose and need, eliminate potential impacts, and not cause other or similar significant adverse impacts.

Growth-Inducing Aspects of the Proposed Project

The Proposed Actions would permit an increase in the maximum floor area ratio, commercial uses, mandatory inclusionary housing, a parking garage, and modifications to certain regulations related to the large-scale general development in order to facilitate the development of a new mixed-use community on the campus of the CCC. Approval of the Proposed Actions would allow for more dense development on the Development Site that is contextual with its surroundings, the provision of affordable housing on site, and a parking scheme that will best serve the needs of visitors and residents. It is intended to further the City's development goals for affordable housing, create a sustainable, affordable neighborhood anchored by the presence of the CCC, and targeted at addressing a number of economic, social, educational and cultural needs of the neighborhood.

The requested discretionary approvals include a zoning map amendment that would apply to the entire Project Area, which in addition to the Development Site includes de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100, and extends to the centerlines of Flatlands Avenue, Louisiana Avenue and Pennsylvania Avenue. However, as there are existing buildings on these lots, including affordable housing developments, it is unlikely that the Proposed Actions would induce any new development.

These goals would be realized in connection with the development of approximately 2,050 units of affordable housing, approximately 100,904 gross square feet (gsf) of community facility space, and approximately 110,570 gsf of retail space. Additional space would be included for parking. All of this would be built upon underutilized space currently used for surface parking. As described in **Chapter 2, Land Use, Zoning, and Public Policy**, there are several existing developments that create a residential and mixed-use character of the neighborhood surrounding the Development Site, which are independent of the Proposed Project. Existing developments such as the Spring Creek Towers/Starrett City, Vandalia Avenue, Breukelen Houses, and Linden House developments provide affordable housing options alongside community facility uses such as senior centers and schools to residents in the neighborhood. Commercial uses are also located throughout the neighborhood. Overall, the study area is well developed with a mix of uses near good transportation options.

As discussed in **Chapter 3, Socioeconomic Conditions**, the Proposed Project would comply with and exceed the requirements of Option 1 of the City's MIH program. Sitewide, the Proposed Project would include 50 percent of units at 60 percent of AMI or less, with the majority of these units rented at 40 or 50 percent of AMI and senior housing capped at 60 percent AMI. An additional 25 percent of units would be affordable at 80 percent of AMI or less and the remaining 25 percent of units would be affordable at 100 percent of AMI or less. In all, it is expected that the first 1,000 homes to be constructed would not include any rents above 80 percent AMI.

The non-MIH units would be income-based affordable housing through various city and state programs for low, moderate, and middle income. The income bands for the affordable housing units in excess of the MIH requirement, as well as the applicable programs for the senior~~/supportive~~ housing units, would remain subject to the availability of capital subsidy and other public capital sources at the time of construction.

The Proposed Project would result in an alternative housing option in the neighborhood because 75 percent of the proposed units would be available for households earning 80 percent or less of AMI. It is also noted that many existing renters in the area rely on Section 8 vouchers. Section 8 vouchers would be accepted at the Proposed Development, creating another housing option for low-income renters in the area. The proposed affordable ownership or condominium units would also provide a path for area low-income renters looking to own their home. The detailed assessment in **Chapter 3, Socioeconomic Conditions** indicates that real estate market condition in the study area is not expected to change significantly and concludes that the Proposed Project is not expected to result in significant adverse impacts due to indirect residential displacement.

Furthermore, as discussed in **Chapter 11, Water and Sewer Infrastructure**, the infrastructure in the study area is already well developed such that improvements associated with the Proposed Actions would not induce additional growth or overburden the existing system.

Although the Proposed Actions would result in increased development, it is not anticipated that the Proposed Actions would result in substantial new development in nearby areas that would generate significant secondary impacts. Additionally, the zoning changes introduced by the Proposed Actions are limited to the boundaries of the Project Area and would not extend beyond the Project Area.

Therefore, the Proposed Actions would not induce significant new growth in the surrounding area.

Irreversible and Irretrievable Commitments of Resources

The Proposed Project constitutes a long-term commitment of land resources, thereby rendering land use for other purposes highly unlikely in the foreseeable future; however, the Development Site does not possess any natural resource of significant value, and the site has been previously developed. Furthermore, funds committed by the Applicant to the design, construction/renovation, and operation of developments under the Proposed Actions are not available for other projects.

These commitments of resources and materials are weighed against the benefits of the Proposed Project. As described in **Chapter 1, Project Description,** the Proposed Actions would facilitate the construction of a new, mixed-use development surrounding the existing CCC with affordable housing, a mix of community facility uses, and commercial uses. The Proposed Project would also provide significant improvements to the public realm, including a publicly accessible street network and new public open space. Through the development of this new mixed-use development that is integrated into the urban fabric, the Proposed Actions seek to provide needed services, business opportunities, and affordable housing to the community.

The Proposed Actions would facilitate the development of market rate and affordable housing, the latter of which would add to the City's affordable housing stock and support the goals outlined in the City's affordable housing plan, "Housing New York: A Five-Borough Ten-Year Plan" of producing 200,000 affordable homes two years ahead of schedule, by 2022, and generating an additional 100,000 homes over the following four years. Additionally, the trade school, PAC, neighborhood retail, and publicly accessible open space would provide needed services and amenities to the neighborhood. The Proposed Actions would work in concert to leverage investments in local public infrastructure and housing.

1

Project Description

This chapter provides descriptive information about the requested discretionary land use action(s) and the development project that could be facilitated by the requested actions. The purpose of this chapter is to convey project information relevant to the environmental review.

Introduction

The Applicant, Innovative Urban Living, LLC, is seeking discretionary approvals from the City Planning Commission (CPC) to facilitate the proposed large-scale development of a site located on Brooklyn Block 4430, Lot 1; and Block 4434, Lots 1 and 10 in the East New York neighborhood of Brooklyn, Community District 5 (the Development Site). These approvals include a zoning map amendment that would apply to the entire Project Area, which in addition to the Development Site includes *de minimis* portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100, and extends to the centerlines of Flatlands Avenue, Louisiana Avenue and Pennsylvania Avenue. Additional approvals include zoning text amendments to establish the Project Area as a Mandatory Inclusionary Housing (MIH) area and to expand the boundary of the Transit Zone to include the Rezoning Area, a large-scale general development special permit, and a special permit for a public parking garage (the Proposed Actions). A portion of the site is currently occupied by the 92,784-gross-square-foot (gsf) Christian Cultural Center (CCC) facility, which would remain on the site as part of the project.

The Proposed Actions would facilitate the development of a mixed-use, purpose-built development on the site of the CCC, which would be comprised of income-based affordable housing; a Performing Arts Center (PAC); a grocery store; local retail; new publicly accessible open space; and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood (the Proposed Project). Overall, the Proposed Project would include a total approximate 2,200,538-gsf development to be constructed in phases over a planned 10-year period, with ten buildings ranging from two to 15 stories.[1] The proposed building program for the site would include approximately 1,645,820 gsf of residential space accommodating approximately 2,050 residential units; approximately 100,904 gsf of community facility space, including general community facility space to include a day care (approximately 12,320 gsf), other community facility uses such as a senior center or medical clinic (approximately 9,900 gsf), and the existing CCC facility (78,684 gsf); approximately 110,570 gsf of commercial space that includes a grocery store (approximately 14,300 gsf) and local retail space (approximately 65,670 gsf), a trade school (approximately 14,100 gsf) to be located in one wing of the existing CCC building (thereby reclassifying approximately 14,100 gsf of existing community facility space to commercial space) and a PAC (approximately 16,500 gsf); and approximately 343,244 gsf of parking, including 145,684 gsf of below grade parking and a 197,560-gsf public parking garage that would accommodate accessory parking for the retail and community facility uses.[2]

The Applicant intends to develop a total of approximately 2,050 income-based residential units, including approximately 200 units of affordable senior ~~or supportive~~ housing units and up to 100 residential units offering affordable home ownership opportunities, including affordable condominiums and approximately 30 maisonettes under affordable homeownership that would be within four of the residential buildings. The Proposed Project would also include approximately 84,950 square feet (sf) of publicly accessible passive open space, approximately 36,000 sf of private passive open space, and approximately 29,400 sf of private active open space.[3]

The Proposed Actions are subject to City Environmental Quality Review (CEQR). The New York City Department of City Planning (DCP), acting on behalf of the CPC, is the lead agency for the environmental review.

This chapter provides a summary and description of the Proposed Actions, the Project Area's location, existing conditions, project purpose and need, Proposed Project, reasonable worst-case development scenario (RWCDS) under the No-Action and With-Action conditions, and public review process required for approval of the Proposed Actions. The analyses following this chapter examine the potential for the Proposed Actions to result in significant adverse

[1] As shown in **Figure 1-2** below, the ten buildings include eight residential buildings, the above grade parking garage, and the PAC. Residential buildings 7 and 8 would be connected as one building and Buildings 9 and 10 would be connected as one building, though they would have separate residential lobbies.

[2] The 197,560-gsf public parking garage includes 18,400 sf of flex space that would be provided on the roof to allow for increased parking capacity during the church's peak parking periods (Sundays and Tuesday evenings). At all other times, this space would be reserved for recreational space.

[3] The proposed private active open space would also be accessible to the public. The rooftop recreation space, considered private active open space, would be accessible to the public with the exception of peak church parking demand periods on Tuesday evenings and Sundays and within the hours posted per the public access agreement (PAA). The playground would be available to the public outside of day care operating hours. However, as these spaces are considered private, they are not included in the quantitative analysis in the Open Space chapter.

environmental impacts in accordance with the appropriate guidance provided in the *2021 New York City Environmental Quality Review Technical Manual (2021 CEQR Technical Manual)* and the *Final Scope of Work*.

Project Area and Context

Development Site

The Development Site, as indicated above, encompasses the northern portion of the block bounded by Flatlands Avenue, Pennsylvania Avenue, Louisiana Avenue, and Vandalia Avenue and consists only of Block 4430, Lot 1 and Block 4434, Lots 1 and 10.

The Project Area, which is coterminous with the proposed Rezoning Area and the proposed Transit Zone expansion, contains the Development Site as well as de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100 and is bounded by the centerlines of Flatlands Avenue (a wide street with a width of approximately 110 feet) to the north, Pennsylvania Avenue (a wide street with a width of approximately 120 feet) to the east, and Louisiana Avenue (a narrow street with a width of approximately 70 feet) to the west (see **Figure 1-1**).

The Development Site runs along the full length of Flatlands Avenue from Louisiana Avenue to Pennsylvania Avenue to a depth as measured from Flatlands Avenue of up to approximately 597 feet, 6 inches along Louisiana, a depth of approximately 369 feet, 6 inches in the midblock, and a depth of approximately 291 feet along Pennsylvania Avenue. Overall, the Development Site has a lot area of approximately 10.32 acres, or approximately 449,653 sf. Approximately 562,066.25 zoning sf (zsf) of residential floor area is permitted at the Development Site under the present zoning controls, and approximately 899,306 zsf is permitted for community facility uses.

The Development Site is currently improved with the one-story (with mezzanine), 92,784-gsf CCC—a large, non-denominational house of worship constructed in 1997. Situated on the western portion of the Development Site and surrounded by a surface parking lot containing approximately 385 striped accessory parking spaces,[4] the CCC has a footprint of approximately 56,050 sf and is set back approximately 90 feet, 6 inches from Louisiana Avenue at its closest point and 129 feet from Flatlands Avenue. It is accessed via a curb cut along Flatlands Avenue immediately opposite of Alabama Avenue and via two existing curb cuts along Louisiana Avenue. The eastern portion of the Development Site is unimproved land, serving as a location for overflow parking during church services and other events at the CCC and otherwise not used.

The CCC serves as a "third place" for people to gather in worship, prayer, learning, and community service, with approximately 12,000 members attending in-person[5] on a regular basis and over 60,000 individuals attending virtually at different times. The primary space in the CCC building is a large worship center which currently has a capacity of approximately 3,800 persons. Other spaces in the building are used for the CCC's youth ministry, children's ministry, and kindergarten. In addition to the main worship center, the CCC building

[4] Parking spaces estimated based on an aerial of the Development Site and counts conducted during a site visit.

[5] Prior to COVID.

includes a lobby space, which can double as a banquet space, a chapel, a number of classrooms and conference rooms, a café space which is used as a public gathering space, and a meditation space. Throughout the CCC building are a number of religious historical artifacts and works of art and architecture which highlight Christian history as well as showcase symbols of faith and tradition of other religions.

All of these spaces are made available to the public, community groups, city agencies, and businesses in the area on a regular basis and for a wide range of purposes consistent with the values of the CCC, including for worship, weddings, funerals, baby dedications, counseling, graduations (e.g., for the FDNY), banquets (e.g., an interfaith meeting of 150 clergy), organization meetings (e.g., Alcoholics Anonymous), organizational needs (e.g., large training orientations, employment application screening center), and vocational training (construction, electrical, plumbing, and culinary). The CCC also uses its capacity virtually, through its administration and virtual teachings for the New School of Biblical Theology.

The CCC serves as a center to the surrounding community not only through its gospel and by providing a physical gathering space, but also through its support of the community at large. In particular, the CCC's largest community impact is through its food assistance program, which fed over 100,000 people per year in the last two years, including through home delivery to seniors and emergency response to disasters such as Hurricane Sandy, where the CCC provided food and also blankets and generators to those in need. Among its many community service accomplishments, the CCC has provided a computer lab to a local school, provided backpacks of school supplies to children in the neighborhood, and rebuilt homes in New Orleans. The CCC also leverages its capacity, including its roughly 1,500 volunteers, to assist smaller churches in their ministries, by raising money through corporate sponsorships, and by joining forces with other existing organizations to provide community services locally and abroad. The Proposed Development would increase the CCC's capacity to respond to the needs of the community and further these efforts.

Project Area

The Project Area contains the Development Site as well as de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100. The Project Area is located within East New York in Brooklyn Community District 5. The East New York neighborhood extends to the north, east, and south and the Canarsie neighborhood is located to the southwest and west. Louisiana Avenue comprises the eastern boundary of Brooklyn Community District 18.

Flatlands Avenue and Pennsylvania Avenue are the two major thoroughfares that abut the Project Area along the north and east, respectively. Flatlands Avenue runs east-west and provides access to Flatbush Avenue, Utica Avenue, Ralph Avenue, Remsen Avenue, and Rockaway Parkway. Pennsylvania Avenue runs north-south and includes an access point to the Shore Parkway (also known as Belt Parkway), an arterial highway to the south of the Project Area.

The Project Area is well-served by mass transit, including the following bus lines:

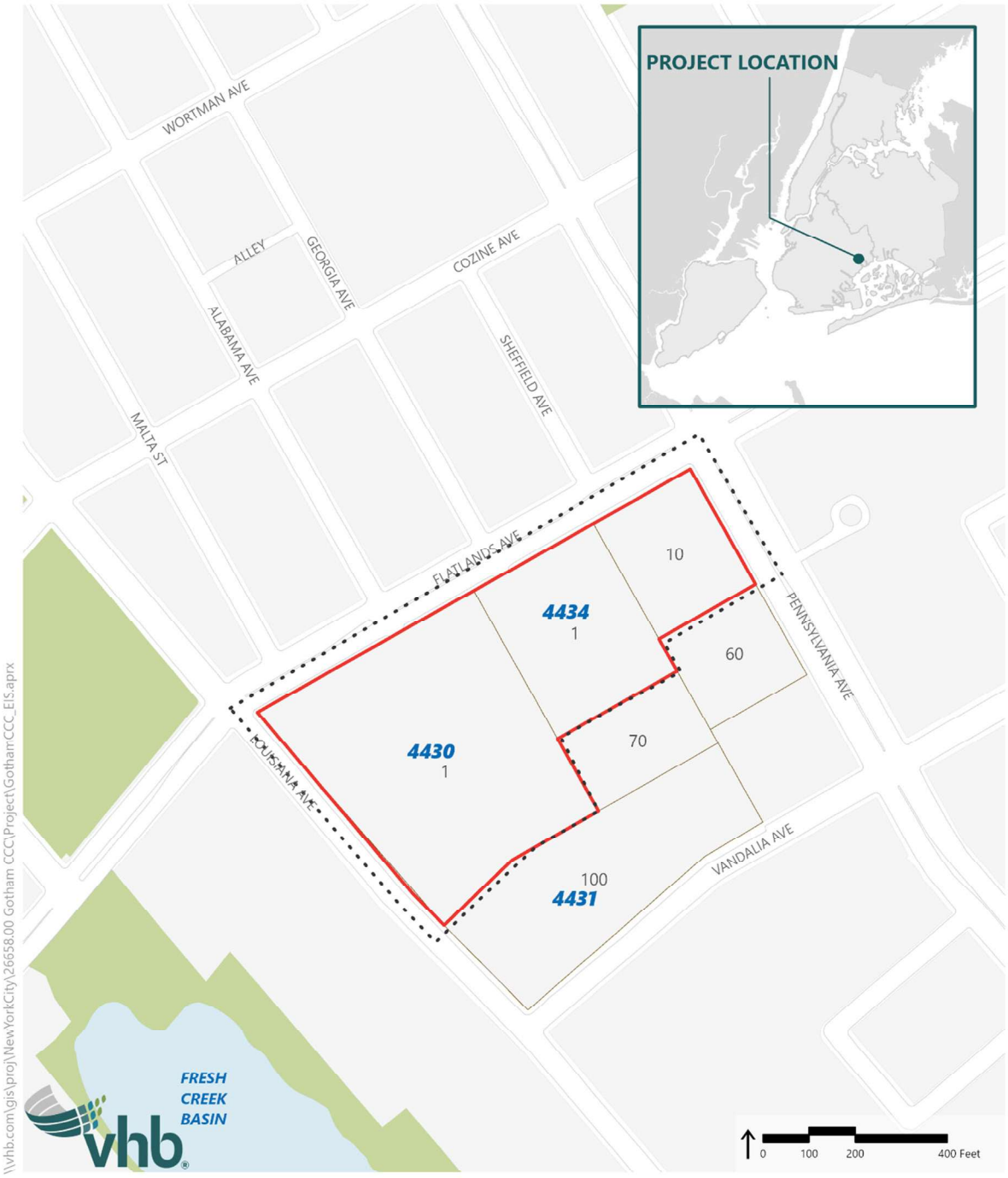
› BM2 Express and BM5 Express, which are express routes that commence at Starrett City and end in Manhattan. The BM2 provides access to Downtown Manhattan while the BM5 provides access to Midtown Manhattan.

- B6, which extends from East New York to Coney Island, and provides access to the Rockaway Parkway L subway station).
- B60, which extends from East New York (starting a block from the Project Area) to Williamsburg and provides access to the Rockaway Parkway L subway station).
- B82 and B82 Select Bus Service (SBS) (which extend from Starrett City to Coney Island and provide access door-to-door connection to the Rockaway Parkway L subway station (five stops away for B82, two stops for the B82 SBS). The B82 SBS only runs on weekdays.
- B83, which extends from Gateway Shopping Center to the Broadway Junction subway station (served by the A, C, J, L, and Z subway lines). The B83 bus line also provides access door-to-door connection to the Pennsylvania Avenue 3 subway station (an approximately 20-minute ride).
- B103 limited bus lines, which provides access to Downtown Brooklyn.

The East 105th Street and the Canarsie - Rockaway stations on the L Subway line are located an approximately 15- and 20-minute walk northwest from the Project Area, respectively. The Canarsie - Rockaway station is directly accessible from the B82 and B82 SBS bus lines and also the B6 and B60 lines. The Pennsylvania Avenue station on the 3 Subway line is located to the north of the Project Area.

The area located to the north of Flatlands Avenue is located within a Transit Zone, as set forth in Transit Zone Map 12 in Appendix I of the Zoning Resolution. Car ownership in the Surrounding Area is approximately 0.3 cars per household, based on census tract data for the Project Area (census tract 1058.04) and Starrett City (tract 1058.01). Across the Brooklyn transit zone, there is an average of 0.47 vehicles per household, and the overall average vehicle ownership rate for the entire borough of Brooklyn is 0.57 vehicles per household.

Figure 1-1 Site Location Map



*The Project Area boundary is coterminous with the Transit Zone expansion

The Project Area is currently mapped within an R5 zoning district. R5 districts are widely mapped in certain neighborhoods in the outer reaches of Brooklyn, Queens, and the Bronx, and permit residential and community facility uses listed in Use Groups 1 through 4. Commercial and manufacturing uses are not allowed in absence of a commercial overlay. R5 districts allow for a maximum FAR of 1.25 for most residential uses and 2.0 for community facility uses.

Overall, approximately 562,067.16 sf of residential floor area is permitted at the Development Site under the present zoning controls, and 899,307.46 sf is allowed for community facility uses. Lot coverage is limited to 55 percent for residential uses and limited to 60 percent for corner lots and 55 percent for interior lots for community facility uses.

Background and Surrounding Context

The Project Area is located at the northwestern end of the peninsula between Fresh Creek and Hendrix Creek—both inlets of Jamaica Bay. Much of the peninsula, including the areas south and east of the Project Area, is occupied by Spring Creek Towers (formerly known as Starrett City), a 140-acre affordable housing complex opened in 1974 that contains over 5,800 residential units in 46 buildings. The complex includes a community center and two schools. To the east of Spring Creek Towers/Starrett City, along Hendrix Creek, is the New York City Department of Environmental Protection's (NYC DEP) 26th Ward Wastewater Treatment Plant.

In addition to Spring Creek Towers/Starrett City, the area includes a number of other affordable housing properties. Immediately south of the Project Area are the New York City Housing Authority's (NYCHA) Vandalia Avenue complex and Council Towers, an assisted living facility for low-income seniors[6]. Northwest of the Project Area is the 65-acre, 1,600-unit Breukelen Houses complex, which extends from East 103rd Street to Louisiana Avenue, and the Breukelen Ballfields, which are located northwest of Flatlands Avenue between Williams and Louisiana Avenues. To the northeast is NYCHA's 21-building Linden House complex. These surrounding NYCHA housing developments were generally built between the 1950s and 1970s.

Across Flatlands Avenue to the north of the Project Area is a mapped M1-1 zoning district, an area that includes low-rise buildings constructed in the 1950s and 1960s. Businesses in this area include used car sales, auto repair, auto parts stores, transportation and busing businesses, and self-storage, along with mixed retail and commercial businesses. A 1980s low-rise commercial complex with restaurants, a bank, and a supermarket is located just west of the Project Area across Louisiana Avenue. The Fresh Creek Nature Preserve borders the creek's east and west sides; the area west of the creek consists mainly of single-family development that is part of the Canarsie neighborhood.

The Project Area was zoned R3-2 dating back to 1961, during which time the Project Area was configured as separate blocks bisected by Malta Street and Alabama, Georgia, and Sheffield Avenues. In 1966, the superblock to the east of the Project Area was rezoned to C4-2 and R5 (CP-18730). In 1967, the C4-2 portion of the Project Area was rezoned to R5 (CP-

[6] A narrow strip of this development with varying widths up to approximately 15 feet is located within the Project Area.

19815), and later that year the block to the south of Vandalia Avenue was likewise rezoned to R5 (CP-20066). The Spring Creek Towers/Starrett City complex was developed in the early 1970s in these locations.

Other rezonings surrounding the Project Area included the mapping of commercial overlays, with two blocks to the northeast of the Project Area along Pennsylvania Avenue being mapped with a C2-2 overlay in 1973 (CP-22531) and the block immediately west of the Project Area along Louisiana Avenue being mapped with a C2-2 overlay in 1979 (M 770445A ZMK). In 1980, the southern portion of the project block, immediately south of the Project Area, was rezoned to R5 to facilitate the development of the Vandalia Avenue housing complex (C 800248 ZMK).

The remainder of the project block, including the Project Area, was rezoned to R5 in 1992 to facilitate a proposed large-scale residential development known as Fresh Creek Estates (C 900891 ZMK). Related actions included demapping of Alabama, Georgia, and Sheffield Avenues within the Project Area (C 900890 MMK). The Fresh Creek Estates proposal included 477 affordable housing units to be developed within three-story townhouse apartment buildings, with on-site accessory parking and interior roadways. However, the project was never realized, and the Project Area remained undeveloped until 1997 when the CCC was constructed. The Project Area has remained in its current condition since that time.

Proposed Actions

The Proposed Actions include the following discretionary actions:

Zoning Map Amendment

The Applicant is seeking a zoning map amendment to change the existing R5 district within the Project Area to an R7-2 district with a C2-4 commercial overlay. The existing R5 zoning does not allow for commercial uses, limiting possibilities for local retail and economic opportunity for small business owners. The C2-4 commercial overlay would address this need by allowing for a range of commercial uses at the Development Site, including a grocery store and local retail to serve residents of the Proposed Development and the surrounding neighborhoods. In addition, the R5 zoning does not allow for sufficient density to create the integrated residential, local retail, and community facility development at the proposed affordable income levels envisioned for the Development Site. The rezoning from an R5 district to an R7-2 district would allow for an increase in the development potential in the Development Site from 1.25 FAR for residential to 4.6 FAR in an MIH district, and from 2.0 for community facility use to 6.5 FAR. The Proposed Development contemplates an FAR of 4.29 including the parking garage[7], and floor area allowed by the R7-2 zoning aligns with the Proposed Development in a manner appropriate to the area. The Project Area is immediately adjacent to two wide streets, including one providing direct access to the Shore Parkway, and has good access to mass transit and is an appropriate area for the additional density being proposed, and without resulting in additional development potential that would occur with a higher density zone, such as an R8 district.

[7] FAR exclusive of the parking garage would be 3.86.

The proposed Zoning Map Amendment would also modify height and setback and yards controls in the Project Area to establish a dynamic street wall presence within the Project Area in buildings with heights reflective of other residential buildings in the surrounding area. In particular, under Quality Housing and MIH controls and in absence of the additional land use actions being proposed, the proposed R7-2 zoning would require that (i) buildings be located at the street rather than separated from the streets by a front yard, (ii) buildings have a minimum base height of 40 feet and a maximum height of 75 feet before setback rather than a maximum street wall height of 30 feet; and (iii) a maximum building height of 135 feet and 13 stories where affordable is provided on site, instead of a maximum height of 40 feet.[8] While the other land use actions seek some adjustment to these street wall controls to make the building configuration even more dynamic, the general bulk controls for R7-2 districts are appropriate for the area by bringing uses and building heights already in the area out to the street line, lending to their accessibility, providing more activity and eyes on the streets, and promoting a more pedestrian-friendly environment.

Zoning Text Amendment

The Applicant is seeking two zoning text amendments:

- An amendment to Appendix F of the Zoning Resolution (ZR) (Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas) to establish the Project Area as an MIH area, Option 1.
- An amendment to Appendix I of the ZR (Transit Zone) to expand the boundary of the existing Transit Zone that is currently mapped north of Flatlands Avenue to include the Project Area.

Special Permits

The Applicant is seeking two special permits:

1. A special permit pursuant to ZR 74-743(a)(2) to locate buildings within a large-scale general development without regard to yard, distance between buildings, and height and setback regulations to allow for the centralized community-centered core and street-oriented residential buildings envisioned by the Proposed Project.

   Yards:

   - The Development Site is comprised of a series of corner lot, through lot, and interior lot areas and would require a series of yards adjacent to the common lot line with the neighboring property, even though a significant setback exists between the common lot line and the adjoining buildings. In particular, waivers are being requested for ZR 35-54 and ZR 23-51, which require a side yard along the common side lot line to the south with a minimum depth of 8 feet; of ZR 33-303 which requires a rear yard of 20 feet for commercial uses; and ZR 23-471 and 23-543, which require a rear yard of 30 feet for residential uses. Waiving side and rear year requirements along the common property line allows for the

[8] Within 25 feet of an adjoining R5 district, buildings are limited to a maximum height of 55 feet within 100 feet of a wide street and 45 feet beyond 100 feet of a wide street.

location of the PAC in the center of the Proposed Project and the introduction of the central quadrangle as a significant community open space. The yard waivers would also allow for the location of the public parking garage in proximity to the PAC and the CCC. Accordingly, the Applicant requests a modification of the rear yard requirements of Zoning Resolution Section 23-47 (Minimum Required Rear Yards) and the special side yard requirements of Section 23-51 (Special Provisions for Yards Adjacent to R1 Through R5 Districts) to eliminate yard requirements along portions of the southern boundary of the Development Site.

Distance between buildings:

- In order to introduce a residential presence along Louisiana Avenue and at the same time maintain the CCC in its existing location, limited modifications to the requirements of Zoning Resolution Section 23-711 (Standard minimum distance between buildings) are requested between Building 7 and 8 and the CCC building. At the closest point, there would be a separation of 30 feet 6 inches between the two buildings; the amount of separation quickly expands in the areas where the modification is requested. A modification is also requested between Building 5, Building 6, Building 9 and 10, and the CCC. These modifications would allow the large-scale general development (LSGD) to improve the streetscape by introducing a residential and retail presence along Louisiana Avenue and Flatlands Avenue and at the same time maintain the CCC in its existing location. Because the CCC building is only 36.6 feet tall, this condition is limited to the lowest floors of the residential buildings. A modification is also requested between Building 4 and the PAC to allow the PAC to be situated at the core of the LSGD and adjacent to the central quadrangle and public parking garage, resulting in a better site plan.

Height and Setback:

- While the proposed R7-2 district provides an appropriate density for the Project Area and the Proposed Project, R7-2 MIH developments are subject to height and setback controls that do not allow for the strong street wall presence and variation in heights envisioned for the Proposed Project. In particular, MIH developments are limited to a height of 75 feet within 10 feet of a wide street and 15 feet of a narrow street and an overall building height of the lesser of 135 feet or 13 stories, and a minimum base height of 40 feet is required. Additionally, within 25 feet of an adjoining R5 district, buildings are limited to a maximum height of 55 feet within 100 feet of a wide street and 45 feet beyond 100 feet of a wide street. While much of the Proposed Project would comply with the minimum and maximum height limitations, the height of portions of the Proposed Project's street wall would exceed the 75-foot height. In addition, portions of the Proposed Project would exceed the 135-foot and 13-story height limitation by one story for Buildings 3, 5, and 6 (to a height of up to approximately 154.84 feet plus bulkhead) and by two stories for Building 1 (to a height of approximately 160.87 feet plus bulkhead). Building 2 would not exceed

the maximum number of stories permitted but would exceed the maximum permitted height and rise to a height of approximately 139.77 feet plus bulkhead. Within 25 feet of the southern boundary of the Development Site, portions of Buildings 2, 4, 9 and 10, the PAC, and the garage would exceed the maximum permitted height within 25 feet of an R5 district. Portions of the street wall of Buildings 1, 3, 5, 6, and 7 and 8 would be set back at a height lower than the minimum base height but no higher than above the second story. The modification of height and setback controls allows for buildings with a dynamic and varied profile with building elements ranging from six to fifteen stories creating visual interest throughout the project. The higher elements also allow for the introduction of the central quadrangle to the middle of the Project Area surrounded by the lower scale core anchored by the CCC and the PAC, which is anticipated to have a maximum height of approximately 50 feet. Accordingly, a modification to Zoning Resolution Sections 23-693 (Special provisions applying adjacent to R1 through R6B Districts), 23-951 (Height and Setback for compensated developments in Inclusionary Housing designated areas), 23-952 (Height and setback in Mandatory Inclusionary Housing areas), and 23-66 (Height and Setback Requirements for Quality Housing Buildings), 35-65 (Height and Setback Requirements for Quality Housing Buildings), and 23-693 (Special provisions applying adjacent to R1 through R6B Districts) is requested to permit modifications of minimum and maximum base height before setback and maximum building height controls.

2. A special permit pursuant to ZR 74-512 to permit a public parking garage with more than 150 spaces some of which would be located on the roof of the public parking garage during periods of peak parking demand for the church (Sundays and Tuesday evenings). This special permit would allow for a public parking garage that would be a sufficient size to serve the congregants of the CCC, visitors to the PAC and other community facility and commercial uses that are part of the Proposed Project and would consolidate the existing surface parking into an enclosed facility allowing for the productive use of the Development Site for the Proposed Project.

The Applicant also intends to seek public funds and/or financing from various City and New York State agencies and/or programs related to affordable housing development. The discretionary CPC actions listed above, along with the discretionary public funds that may be sought by the Applicant, are collectively referred to as the Proposed Actions.

The project approvals would also include recordation of an (E) Designation (E-679) on the Development Site (Brooklyn Block 4430, Lot 1 and Block 4434, Lots 1 and 10), as well as a Restrictive Declaration to codify commitments made in the FEIS related to the environmental review. The Restrictive Declaration would be recorded against the Development Site to ensure project components related to the environment and mitigation measures are implemented.

Proposed Project

The Applicant is proposing to replace the underutilized portions of the Development Site with a vibrant mixture of community facility, commercial, and residential uses targeted at creating a sustainable, affordable neighborhood anchored by the presence of the CCC and targeted at addressing a number of economic, social, educational and cultural needs of the neighborhood. Overall, the Proposed Project would incorporate ten new buildings on the Development Site, including eight predominately residential buildings[9] ranging in height from two to 15 stories, with a total of approximately 2,050 units affordable to households with a range of incomes between 30 percent and 100 percent of the area median income (AMI). The CCC building would remain as the dominant feature of the Development Site. Serving its parishioners and the surrounding community, the CCC would be part of a multi-faceted community facility core that includes the PAC, a trade school, a day care facility, a senior center, and a central green space.

Ground floor retail and a grocery store providing opportunities for local businesses would be introduced along the public and private street frontages, creating economic opportunity and responding to the dearth of walkable local retail in the neighborhood. A privately-owned, publicly accessible street system would be introduced into the Development Site aligned with the adjoining street grid to invite people into the Proposed Project and create a more walkable environment. Finally, a seven-story public parking garage, accommodating up to approximately 500 parking spaces for these uses, would be located near Louisiana Avenue and would serve as a replacement to the surface parking that exists today. Overall, the Proposed Project would include approximately 84,950 sf of publicly accessible open space, consisting of a public plaza on the corner of Flatlands Avenue and Louisiana Avenue, a public arcade and entry plaza and a central quadrangle. The Proposed project would also include an 11,000-sf playground adjacent to the child care center which would also serve residents, a 18,400 sf private recreational space to be located on the roof of the parking garage which would be flexible to accommodate parking for vehicles during peak church hours (Sunday and Tuesday evenings only), and approximately 36,000 sf of private passive open space including residential building courtyards and rooftop areas. The Proposed Project would include pedestrian paths and a private street network that would run through the Development Site. Construction of the Proposed Project would be phased over a ten-year period, with completion anticipated in 2031.

It is the Applicant's intention that the Proposed Project would comply with and exceed the requirements of Option 1 of the City's MIH program. Option 1 has the following requirements:

- 25 percent of new housing units must be set aside for families making an average of 60 percent or less of AMI.
- Of this set-aside, at least 10 percent must be for families making an average of 40 percent or less of AMI.

Further, the Proposed Development is focused on meeting the needs of a significant portion of the population in East New York and in Brooklyn at large by providing workforce housing at the very low-, low-, and moderate-income housing brackets. According to the U.S. Census

[9] As shown in **Figure 1-2** below, the ten buildings include eight residential buildings, the above grade parking garage, and the PAC. Residential buildings 7 and 8 are connected as one building and Buildings 9 and 10 are connected as one building, though they would have separate residential lobbies.

Bureau's 2019 American Community Survey (ACS) data, a three-person household in Brooklyn Community District 5 (East New York and Starrett City) has a median income of $51,648,[10] approximate to the 50 percent AMI band set by the NYC Department of Housing Preservation and Development (HPD). Utilizing this datapoint as a reference, the Proposed Development would fill the need for affordable housing in the area by providing housing within the 30 percent to 100 percent AMI band, with 50 percent of units at 60 percent of AMI or less. 25 percent of units would be provided at 80 percent of AMI or less and 25 percent of units would be provided at 100 percent of AMI or less.

In addition, up to 100 homeownership units would be provided through the HPD Open Door program at the moderate-income band. In total the Proposed Development would include approximately 2,050 units of 100 percent rent-stabilized, intergenerational, income-based housing. The units provided would be a diverse mix of unit types, including 2-bedroom and 3-bedroom residences and would be coupled with requisite resources to allow members of the community to thrive.

The Proposed Development would be consistent with Housing New York 2.0's goal of creating more homes for seniors by providing up to 200 units for seniors. In addition, the Proposed Development would further the plan's goal of building protections against displacement in fast-changing neighborhoods by providing mixed-income dwelling units at a range of income bands, allowing residents to remain in the community, even if their economic health changes. Finally, the Proposed Development would be constructed on the currently vacant and underutilized lots on the eastern portion of the Development Site, furthering the plan's goal of unlocking the potential of vacant lots.

The Proposed Development would support several of the initiatives outlined in OneNYC 2050 as well, including the initiative to ensure all New Yorkers have access to safe, secure, and affordable housing.

In total, the Proposed Project would result in approximately 2,200,538 gsf of development. This would include approximately 100,904 gsf of community facility space, including general community facility space to include a day care (approximately 12,320 gsf), other community facility uses such as a senior center or medical clinic (approximately 9,900 gsf), and the existing CCC facility (78,684 gsf); approximately 110,570 gsf of commercial space that includes a grocery store (approximately 14,300 gsf) and local retail space (approximately 65,670 gsf), a trade school (approximately 14,100 gsf) to be located in one wing of the existing CCC building[11]; a new PAC (approximately 16,500 gsf); and approximately 343,244 gsf of parking including a total of approximately 886 parking spaces within subgrade parking (approximately 386 parking spaces) and an approximately 7-story, 500-space public parking garage for the retail and community facility uses. During peak parking periods for the church (Sundays and Tuesday evenings), approximately 21,889 sf of parking (of the approximately 182,277 gsf public parking garage) would be provided on the roof of the proposed public parking garage. **Table 1-1** summarizes the total development projected for the Development Site.

[10] 2019 ACS 5-Year Estimates Detailed Tables; Table B19019, "Median Household Income in the Past 12 Months (In 2019 Inflation-Adjusted Dollars) by Household Size" for NYC-Brooklyn Community District 5 – East New York and Starrett City.

[11] The proposed trade school is geared towards providing vocational training and career trajectory counseling for adults and would not be adding public school seats towards primary and secondary school education. Thus, the approximately 16,500 gsf would not be included in the public schools analysis as detailed in **Chapter 4, Community Facilities and Services**.

Table 1-1 Overview of Projected Development

Use	Total GSF[1]
Residential	**1,645,820**
Community Facility	**100,904**
Day Care	*12,320*
General Community Facility (Senior Center and/or Medical Office)	*9,900*
Existing CCC Facility	*78,684*
Commercial	**110,570**
Local Retail	*65,670*
Grocery Store	*14,300*
Trade School	*14,100*
Performing Arts Center	*16,500*
Community Facility/Commercial Parking	**197,560**
Residential Parking	**145,684**
TOTAL GSF	**2,200,538**
Total ZSF	**1,928,868 zsf**
FAR	**4.29**
FAR (excluding Parking)	**3.86**
Residential Units	**2,050**

[1] All GSF numbers are approximate

The new buildings would be arranged around the existing CCC building to create a community facility core anchored by the CCC, with residential uses surrounding and adjacent to this core. Similar to its current configuration, the CCC would be accessed by pedestrians through a courtyard plaza leading from Louisiana and Flatlands Avenues to the building's front door, with a second entrance leading from Flatlands Avenue. Adjacent to the CCC, in the interior of the Development Site, would be an open quadrangle and the PAC, creating a central gathering space for community facility visitors, churchgoers, occupants of the residential buildings, and the general public. The central quadrangle and the PAC would be visible from Flatlands Avenue, with views highlighted by an approximately 20-foot-tall arcade within Building 5 connecting Flatlands Avenue to the central quadrangle. The proposed public parking garage would be located adjacent to the PAC and CCC along Louisiana Avenue, limiting the visibility of this use and placing it in close proximity to the intended users of the facility. It is anticipated that private[12] basketball courts or other recreation space would be located on the roof of the proposed public parking garage as an additional amenity for residents.

Vehicular access to the Development Site would include proposed entrances from Pennsylvania Avenue and Louisiana Avenue and a right-turn-in/right-turn-out access on Flatlands Avenue at Sheffield Avenue. Interior vehicular circulation would be facilitated via extensions of Sheffield Avenue and Georgia Avenue through the northern portion of

[12] The proposed private active open space would also be accessible to the public. The rooftop recreation space, considered private active open space, would be accessible to the public at all times with the exception of peak church parking demand periods on Tuesday evenings and Sundays and within the hours posted per the public access agreement (PAA). However, as this space is considered private, it is not included in the quantitative analysis in the Open Space chapter.

Development Site, connecting with a proposed east-west interior roadway providing access to the proposed public parking garage, drop-off areas for the CCC, and the mixed-use buildings located on the western portion of the site. Site egress would be provided onto Flatlands Avenue from both Georgia Avenue and Sheffield Avenue. A signal warrant analysis will be conducted to determine if a new traffic signal can be installed at ~~this location.~~the Georgia Avenue/Flatlands Avenue intersection. **Figure 1-2** shows the Proposed Project axonometric diagram and **Figure 1-3** shows the program site plan.

Figure 1-2 Innovative Urban Village Site Axonometric Diagram



Figure 1-3 Innovative Urban Village Program Site Plan



In order to create strong street presence and allow for local retail in the base of the buildings, the proposed residential buildings would front on the perimeter avenues and the private streets. The residential buildings would range in height from approximately 129 to 161 feet—with street wall heights within 100 feet of Flatlands Avenue ranging between approximately 20 and 161 feet, and street wall heights beyond 100 feet of Flatlands Avenue of approximately 21 and 120 feet along Pennsylvania Avenue and ranging between approximately 25 feet and 134 feet along Louisiana Avenue.

The residential buildings would contain ground floor commercial and community facility uses facing outward, including a grocery store and local retail shops fronting on the perimeter avenues. Approximately 30 residential maisonette units with individual entrances and front stoops would be located on the newly created private inner streets. The proposed residential buildings would contain between approximately 179 and 315 dwelling units. Parking would be located below-grade in the cellars of various buildings, with a total approximate 386 parking spaces proposed.

Existing curb cuts on Louisiana and Pennsylvania Avenues would be relocated to facilitate the new internal private street network. On Flatlands Avenue, one existing curb cut that aligns with Georgia Avenue would be maintained, and a second would be relocated from its current alignment with Alabama Avenue to align with Sheffield Avenue.

In addition, the Proposed Project would facilitate better access to public transit options through the operation of a private shuttle service available to residents and the CCC (on Sundays) to and from the nearest subway stops (East 105th Street on the L line and Pennsylvania Avenue on the 3 line) during peak commuting hours. The shuttle is anticipated to commence operation upon full completion of the overall development.

It is anticipated that the Proposed Development would be constructed in several phases, during which time the CCC would remain operational. Phase 1A would consist of Buildings 1 and 2, located in the easternmost portion of the Development Site adjacent to Pennsylvania Avenue. Buildings 3 and 4, located just west of Phase 1A, and the Garage would be constructed in Phase 1B, which is currently contemplated to occur following Phase 1A. During this time, sufficient parking for CCC would be provided on the paved parking lot. Upon completion of the Garage, congregants and visitors to the CCC would be able to utilize the Garage for parking, with access provided via the existing paved parking lot, allowing for construction of the later phases while maintaining necessary parking for CCC services.

Phase ~~2A~~2A1 and Phase ~~2B~~2A2B, which may be constructed in any order or simultaneously, would include Building 5 and Building 6 located to the north of the CCC along Flatlands Avenue, and the PAC and quadrangle, respectively. Phase ~~2B~~2A2 would also include the final leg of the construction of the private streets providing permanent access between the parking garage and Louisiana and Flatlands Avenues. Building 7 and 8 (which is a single building with two portions) located to the west of the CCC along Louisiana Avenue would be constructed in Phase ~~3A~~2B and Building 9 and 10 (which is also a single building with two portions) at the southwestern corner of the Development Site adjacent to the parking garage would be constructed in Phase ~~3B~~2C.

Project Purpose and Need

The Proposed Actions are being requested to allow the bulk, uses, and density required to meet the Applicant's goals for the Proposed Project. As detailed above, the Project Area is located within an area densely developed with affordable housing. To the east and south, the Spring Creek Towers/Starrett City and Vandalia Avenue housing complexes are made up of 10- to 20-story towers, while the Breukelen Houses to the northwest are three to seven stories in height. Across Flatlands Avenue and Louisiana Avenue are low-rise industrial and commercial businesses. The CCC is located in the northwest corner of the Development Site, however the site overall is underutilized, and is otherwise occupied by paved and unpaved parking.

The Development Site's existing R5 zoning, with a maximum FAR of 1.25 and a height limit of 40 feet, typically produces three- and four-story attached houses and small apartment houses. However, demand for affordable housing in East New York continues to grow, and Brooklyn Community District 5 has identified needs for additional affordable housing and other amenities that cannot be met under the existing zoning. In addition, New York City's affordable housing plan, "Housing New York 2.0," aims to create and preserve 300,000 high-quality, affordable homes by 2026 to address the needs for affordable housing throughout the City. The Proposed Actions would address these needs as follows:

- The zoning map amendment is needed to facilitate the additional density required to provide a substantial amount of affordable housing and other desired uses in Community District 5. The existing R5 zoning does not allow for commercial uses, limiting opportunities for local retail and economic opportunity for small business owners. The C2-4 commercial overlay would address this need by allowing for a range of commercial uses on the Development Site, including a grocery store and local retail to serve residents of the Proposed Project and the surrounding neighborhoods. In addition, the R5 zoning does not allow for sufficient density to create the integrated residential, local retail, and community facility program envisioned for the Development Site. The additional density would allow for a new public parking garage to replace the open parking which presently occupies the majority of the Development Site, in turn allowing for new development across the entirety of the Development Site. The rezoning from an R5 district to an R7-2 district would allow for an increase in the development potential on the Development Site from 1.25 FAR for residential to 4.6 FAR in an MIH district, and from 2.0 for community facility use to 6.5 FAR. The Proposed Project would be 4.29 FAR and would be consistent in scale with the existing affordable housing developments in the area, such as the Spring Creek Towers/Starrett City and Vandalia Avenue complexes.
- The zoning text amendment to designate the site as an MIH area would support community and citywide public policy goals by providing permanently affordable housing across a range of income levels, which otherwise would not be required if the Development Site were developed as-of-right.
- The zoning text amendment to include Project Area within the Transit Zone is needed to avoid unnecessary costs of building parking on the Development Site in excess of anticipated demand by residents. The Project Area is directly across Flatlands Avenue from the Transit Zone boundary to the north and has a range of transit options serving the Project Area, including the Subway (the East 105th Street stop on the L is located a six and a half block walk from the Development Site) and the BM2 Express, BM5 Express,

B6, B6 limited, B60, B82, B82 Select Bus Service (SBS), B83, and B103 limited bus lines, providing local and express service throughout Brooklyn, Manhattan, and Queens. For this reason, it is anticipated that most new residents would use public transit as the primary transportation method. Currently, approximately 62 percent of the residents, based on census data, commute to work via mass transit. The change in boundaries would reflect this fact and would promote more sustainable forms of transportation.

- The Special Permit for a large-scale general development is needed to accommodate the desired housing density and facilitate a superior site plan, including driveways for circulation, a pedestrian-friendly site, a centralized community-centered core, and to create visual interest with varied building heights and profiles throughout the Proposed Project.
- The Special Permit for a public parking garage with more than 150 spaces, some of which are to be located on the roof of the garage, would allow for a garage of sufficient size to serve the congregants of the CCC, who travel from across the City, as well as the visitors to the retail and community facility uses, and would consolidate the existing surface parking into an enclosed facility allowing for the productive use of the Development Site for the Proposed Project.

Analysis Framework and Reasonable Worst-Case Development Scenario

The *2021 CEQR Technical Manual* will serve as guidance on the methodologies and impact criteria for evaluating the potential environmental effects of the Proposed Project that would result from the Proposed Actions. As the Proposed Project would be complete and operational in 2031, the environmental setting for analysis is not the current environment, but the future environment. To the extent that the Proposed Actions would allow for a range of possible scenarios that are considered reasonable and likely, the scenario with the most severe environmental impacts will be chosen for CEQR analysis. This is considered to be the RWCDS, the use of which ensures that, regardless of which scenario actually occurs, its impacts would be no worse than those considered in the environmental review. The CEQR assessment examines the incremental differences between the Reasonable Worst-Case Development Scenario (RWCDS) of the future without the Proposed Actions in place (the No-Action condition) and the future with the Proposed Actions in place and the associated operation of the Proposed Project (the With-Action condition). The Proposed Project was determined to be the RWCDS because development pursuant to the Proposed Actions would be restricted to the bulk and density associated with the general large scale development special permit and shown on the special permit drawings.

For the purpose of the environmental analyses, the No-Action condition represents the future absent the Proposed Actions and serves as the baseline by which the Proposed Project (or With-Action condition) is compared to determine the potential for significant environmental impacts. The difference between the No-Action and With-Action conditions represents the increment to be analyzed in the CEQR process.

Future No-Action Condition

Under the baseline, or No-Action condition, it is assumed that the Development Site would remain in its existing condition, with only the existing CCC operational on the site. As relevant for each area of analysis, future growth in population and employment ~~will be~~has been considered in the development of the No-Action condition of that study area. This ~~will include~~included both background growth and growth generated by known projects (developments that are under construction, planned, or proposed). Inclusion of known developments ~~will be~~was based on, but not limited to, consideration of whether the project requires discretionary approvals, the status of that approval process, and the project size.

Future With-Action Condition

The With-Action condition within the Development Site reflects the Proposed Project, detailed above in **Table 1-1**. The With-Action condition would include approximately 2.18 million gsf of development (4.29 FAR). **Table 1-2** provides the increment for analysis.

Table 1-2 Future No-Action and With-Action Comparison

Use Group		Existing Condition	No-Action Condition	With-Action Condition	Increment
Residential	Dwelling Units	-	-	2,050	2,050
	Total Residential gsf	**-**	**-**	**1,645,820**	**1,645,820**
Commercial gsf	Local Retail	-	-	65,670	65,670
	Grocery	-	-	14,300	14,300
	Performing Arts Center	-	-	16,500	16,500
	Trade School	-	-	14,100	14,100
	Total Commercial	**-**	**-**	**110,570**	**110,570**
Community Facility gsf	Day Care	-	-	12,320	12,320
	Senior Center/Medical Office			9,900	9,900
	Existing CCC Facility	92,784	92,784	78,684	-14,100
	Total Community Facility	**92,784**	**92,784**	**100,904**	**8,120**
Parking[1]	Lot Spaces	385	385	-	- 385
	Public Parking Garage Spaces	-	-	500	500
	Public Parking Garage gsf	**-**	**-**	**197,560**	**197,560**
	Accessory Residential Parking Spaces	-	-	386	386
	Accessory Residential Parking gsf	-	-	**145,684**	**145,684**
	Total Parking gsf	**-**	**-**	**343,244**	**-**
	Total Development gsf	**92,784**	**92,784**	**2,200,538**	**2,082,344**
Open Space gsf	Public Open Space	-	-	84,950	84,950
	Private Open Space	-	-	65,400	65,400
	ZSF	91,700	91,700	1,928,868	1,812,520
	Residents[2]	0	0	4,797	4,797
	Employees[3]	130	130	610	480

[1] Of the total 197,560 gsf of public parking provided, 25,410 sf would include flex space provided on the roof of the proposed public parking garage to allow for increased parking capacity during the church's peak parking periods (Sundays and Tuesday evenings).

[2] The number of residents is based on an average household size of 2.34 persons per dwelling unit for the half-mile study area, including Census Tracts 982, 984, 986, 1016, 1058.01, 1058.04, 1104 and 1106 (2014-2018 ACS).

[3] Employee estimates were derived using ratios provided by the NYC Department of City Planning. The number of employees working in residential buildings was calculated by dividing the total residential units by 25 dwelling units (82 building employees). The number of retail and grocery workers was calculated by dividing the total commercial gsf by 333.3 sf (240 retail employees). The number of employees generated by the Performing Arts Center, Trade School, and general community facility space including a day care and senior center was calculated by dividing the total gsf by 333.3 sf (158 employees). The number of employees of the existing CCC Building was provided by the CCC (130 employees).

Analysis (Build Year)

Assuming a conservative build-out of approximately ten years, the Proposed Project is expected to be complete and operational by 2031.

Public Review Process

The Applicant requires the approval of the Proposed Actions to implement the Proposed Project. The Proposed Actions are subject to both ULURP (Uniform Land Use Review Procedure) and CEQR.

Uniform Land Use Review Procedure (ULURP)

The City's ULURP process, mandated by Sections 197-c and 197-d of the New York City Charter, is designed to allow public review of ULURP applications at four levels: Community Board, Borough President, the CPC, and the City Council. The procedure has mandated time limits for review at each stage to ensure a maximum review period of approximately seven months. The process begins with certification by DCP that the ULURP application is complete. The application is then referred to the relevant Community Board (in this case Brooklyn Community Board 5). The Community Board has up to 60 days to review and discuss the proposal, hold a public hearing, and adopt an advisory resolution on the ULURP application. The Borough President then has up to 30 days to review the application. CPC then has up to 60 days, during which time a public hearing is held on the ULURP application. If approved by the CPC, the application is then forwarded to the City Council, which has 50 days to review the ULURP application, during which time a ULURP/CEQR public hearing is held. Comments made at the Draft EIS (DEIS) public hearing and subsequent comment period (the record for commenting remains open for ten days after the hearing to receive written comments) are incorporated into a Final EIS (FEIS). The FEIS must be completed at least ten days before CPC makes its decision on the application. The CPC may approve, approve with modifications, or deny the application. If the ULURP application is approved, or approved with modifications, it moves forward to the City Council for review. The City Council has 50 days to review the application and during this time will hold a public hearing on the Proposed Actions. The Council may approve, approve with modifications, or deny the application. If the Council proposes a modification to the Proposed Actions, the ULURP review process is extended for 15 days, providing time for a CPC determination on whether the proposed modification is within the scope of the environmental review and ULURP review. If it is, then the Council may proceed with the modification; if not, then the Council may only vote on the actions as approved by the CPC. Following the Council's vote, the Mayor has five days in which to veto the Council's actions. The City Council may override the mayoral veto within ten days.

City Environmental Quality Review (CEQR)

CEQR is a process by which agencies review discretionary actions for the purpose of identifying the impacts those actions may have on the environment. The City of New York established CEQR regulations in accordance with SEQRA. Pursuant to the SEQRA (Article 8 of the Environmental Conservation Law) and its implementing regulations found at 6 NYCRR

Part 617, New York City has established rules for its own environmental quality review in Executive Order 91 of 1977, as amended, and 62 RCNY Chapter 5, the Rules of Procedure for CEQR. The environmental review process provides a means for decision-makers to systematically consider environmental effects along with other aspects of project planning and design, to propose reasonable alternatives, and to identify, and when practicable mitigate, significant adverse environmental impacts. CEQR rules guide environmental review, as follows:

- *Establish a Lead Agency*. Under CEQR, the "lead agency" is the public entity responsible for conducting environmental review. In accordance with CEQR rules (62 RCNY §5-03), DCP, acting on behalf of the CPC, is serving as the CEQR lead agency for environmental review.
- *Environmental Review and Determination of Significance*. The lead agency determines whether a proposed action(s) may have a significant impact on the environment. To do so, DCP, in this case, evaluated an Environmental Assessment Statement (EAS) dated January 31, 2020 for the Proposed Actions. Based on information contained in the EAS, and as the Proposed Action is classified as a "Type I Action," DCP determined that the Proposed Actions may have a significant adverse impact on the environment, as defined by statute, and issued a Positive Declaration requiring that an EIS be prepared in public open conformance with all applicable laws and regulations.
- *Scoping*. Along with its issuance of a Positive Declaration, DCP issued a Draft Scope of Work for the EIS, dated January 31, 2020, marking the beginning of the comment period on the Draft Scope. "Scoping," or creating the scope of work, is the process of identifying the environmental impact analysis areas, the methodologies to be used, the key issues to be studied, and creating an opportunity for others to comment on the study areas, methodologies, and areas of analysis presented in the scoping document. CEQR requires a public scoping meeting as part of the process. A public scoping meeting was held on Tuesday, March 3, 2020 at 3:30 pm. The public review period for agencies and the public to review and comment on the Draft Scope of Work was open through March 13, 2020. Modifications to the Draft Scope of Work for the project's EIS were made as a result of public and interested agency input during the scoping process. A Final Scope of Work document for the Proposed Project was issued on May 6, 2022.
- *Draft Environmental Impact Statement (DEIS)*. ~~This~~The DEIS was prepared in accordance with the Final Scope of Work and followed the methodologies and criteria for determining significant adverse impacts in the *CEQR Technical Manual*. The lead agency reviewed all aspects of the document, calling on other City and state agencies to participate where the agency's expertise is relevant. Once the lead agency was satisfied that the DEIS was complete, it issued a Notice of Completion and circulated the DEIS for public review.
- *Public Review*. Publication of the DEIS and issuance of the Notice of Completion signals the start of the public review period. During this time, the public has the opportunity to review and comment on the DEIS either in writing or at a public hearing convened for the purpose of receiving such comments. When the CEQR process is coordinated with the ULURP process, the public hearings are held jointly. All substantive comments received at the hearing become part of the CEQR record and must be summarized and responded to in the FEIS.

- *Final Environmental Impact Statement (FEIS).* After the close of the public comment period for the DEIS, the FEIS is prepared. The FEIS must address relevant comments on the DEIS, either in a separate chapter or in changes to the body of the text, graphics, and tables. Once the lead agency determines the FEIS is complete, it will issue the Notice of Completion and circulate the FEIS.
- *Findings.* To document that the responsible public decision-makers have taken a hard look at the environmental consequences of a proposed project, agencies taking discretionary actions regarding the project must adopt a formal set of written findings, reflecting their conclusions about the significant adverse environmental impacts of the project, potential alternatives, and potential mitigation measures. The findings may not be adopted until ten (10) days after the Notice of Completion has been issued for the FEIS. Once findings are adopted, the lead and involved agencies may take their actions. Accordingly, the CPC must wait at least ten days after the FEIS is complete to take action on the application.

2

Land Use, Zoning, and Public Policy

This chapter considers the potential for the Proposed Project to result in significant adverse impacts to land use, zoning, and public policy. Under the guidelines of the *2021 City Environmental Quality Review (CEQR) Technical Manual*, this analysis evaluates the uses in the area that may be affected by the Proposed Actions and determines whether the Proposed Project is compatible with land use, zoning, and public policy conditions, or may otherwise affect them. The analysis also considers the Proposed Project's compatibility with zoning regulations and other public policies applicable to the area.

Introduction

The Applicant, Innovative Urban Living, LLC, is seeking several discretionary approvals from the City Planning Commission (CPC), including a zoning map amendment, zoning text amendments, and various special permits collectively referred to as the "Proposed Actions."

The Proposed Actions would facilitate the development of a mixed-use, purpose-built community on the site of the Christian Cultural Center (CCC), which would be comprised of income-based affordable housing; a performing arts center (PAC); local retail; and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood (the Proposed Project). The Proposed Project would be developed the East New York neighborhood of Brooklyn on Block 4430, Lot 1 and Block 4434, Lots 1 and 10 (the Development Site). These approvals include a zoning map amendment that

would apply to the Development Site in addition to de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100, and would extend to the centerlines of Flatlands Avenue, Louisiana Avenue, and Pennsylvania Avenue (the Project Area). In comparison to the No-Action condition, the Proposed Actions would result in an incremental increase of 2,050 affordable residential units, approximately 110,570 gross square feet (gsf) of commercial uses, 8,120 gsf of community facility uses, public and private open space, and accessory and public parking related to the proposed on-site uses.

This chapter provides an assessment of existing and future conditions with and without the Proposed Actions for the Development Site, Project Area, and quarter mile study area, which are described in detail below.

Principal Conclusions

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts on land use, zoning, or public policy.

Land Use and Zoning

The Proposed Actions would result in new land uses and greater bulk and density than what currently exists on the Development Site. New uses to the Development Site—including residential, commercial space, and open space—would be compatible with surrounding land uses. Additionally, the increased bulk and density on the Development Site facilitated by the Proposed Actions would be comparable to existing developments in the East New York neighborhood, as exhibited by the Spring Creek Towers/Starrett City complex and New York City Housing Authority's (NYCHA's) Breukelen Houses, both of which are located within close proximity to the Development Site. The requested discretionary actions would not conflict with the current surrounding zoning. Rather, the Proposed Actions would facilitate development that is well-integrated with current built conditions and the existing zoning framework within the study area. Therefore, the Proposed Project would not adversely affect surrounding land uses or zoning.

Public Policy

The Proposed Project would be supportive of several city policies, including Housing New York 2.0, OneNYC 2050, the Waterfront Revitalization Program (WRP), and Zoning for Coastal Flood Resiliency. The Proposed Project would expand the City's current affordable housing stock by introducing 2,050 affordable units across ten new mixed-use buildings. Moreover, the Proposed Project would expand facilities currently serving study area residents through the construction of the PAC, a trade school, and a daycare. A small portion of the Project Area falls within the 500-year floodplain, a moderate risk flood area (see **Appendix A**). As described below, the proposed buildings would be designed to withstand future flood events and mitigate potential flood-related damages pursuant to the City's Building Code requirements, consistent with Policy 6 of the WRP and the goals set forth by the Zoning for Coastal Flood Resiliency. Therefore, the Proposed Project would directly support relevant City policies.

Methodology

This analysis of land use, zoning, and public policy follows the guidelines set forth in the *CEQR Technical Manual* for a preliminary assessment (Section 320). According to the *CEQR Technical Manual*, a preliminary land use and zoning assessment:

- Describes existing and future land uses and zoning information, and describes any changes in zoning that could cause changes in land use;
- Characterizes the land use development trends in the area surrounding the Project Area that might be affected by the Proposed Actions; and
- Determines whether the Proposed Project is compatible with those trends or may alter them.

The following assessment method was used to determine the potential for the Proposed Project to result in significant adverse impacts on land use, zoning, and public policy:

1. Establish a "study area," a geographic area surrounding the Project Area to determine how the Proposed Project may affect the immediate surrounding area. For this assessment, a study area of a quarter mile surrounding the Project Area was used.
2. Identify data sources, including any public policies (formal plans, published reports) to be used to describe the existing and No-Action conditions related to land use, zoning, and/or public policy.
3. Assess the Proposed Actions' potential effects on land use, zoning, and public policy to determine whether the Proposed Project is consistent with or conflicts with area land uses, zoning, or the identified policies.
   - If a proposed project could conflict with the identified policies, a detailed assessment would be conducted; or
   - If the proposed project is found to not conflict with the identified policies, no further assessment is needed.

Study Area Definition

According to the *CEQR Technical Manual*, the appropriate study area for land use, zoning, and public policy is related to the type and size of a proposed project, as well as the location and context of the area that could be affected by the project. Study area radii vary according to these factors, with suggested study areas ranging from 200 feet for a small project to 0.5 miles for a very large project. In accordance with CEQR guidelines, for the Proposed Project, land use, zoning, and public policy are described and analyzed within the study area of a quarter mile from the Project Area. For the purposes of this assessment, the study area is generally bounded by Wortman Avenue to the north, East 107th Street to the west, Van Siclen Avenue to the east, and Twinpines Drive to the south (see **Figure 2-1**).

Assessment

Existing Conditions

Land Use

Development Site and Project Area

As detailed above, the Development Site consists of Brooklyn Block 4430, Lot 1 and Block 4434, Lots 1 and 10. It is currently improved with the CCC, a two-story, 92,784-gsf church building which sits on the western portion of the Development Site and is surrounded by 383 surface parking spaces. The eastern half of the Development Site (Block 4434, Lots 1 and 10) is unpaved and vacant but used for overflow parking during church services. The proposed rezoning area, contains the Development Site as well as de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100 and is bounded by the centerlines of Flatlands Avenue (a wide street with a width of approximately 110 feet) to the north, Pennsylvania Avenue (a wide street with a width of approximately 120 feet) to the east, and Louisiana Avenue (a narrow street with a width of approximately 70 feet) to the west.

Study Area

The study area is located in East New York. As shown in **Figure 2-1** and **Table 2-1**, the neighborhood surrounding the Project Area contains a mix of uses, including residential, commercial, public facilities, open space, and industrial and manufacturing. A majority of the lot area within the study area comprises multi-family residential uses.

There are several multi-family apartment buildings and residential complexes to the south and east of the Project Area. The NYCHA Vandalia Senior Center is located directly south of the Project Area and features a complex of three ten-story affordable housing buildings. Spring Creek Towers/Starrett City is a large 140-acre affordable housing complex located to the south and east of the Project Area; it contains over 5,800 residential units in 46 buildings, with the residential towers rising up to 20 stories. The complex also includes a community center and two schools.

Other multi-family uses within the study area include the Brekeulen Houses, another NYCHA property, located to the northwest of the Project Area. This residential development extends across five blocks between Williams Avenue and East 103rd Street. The 28-building complex ranges from three to seven stories. In addition, a portion of the study area to the south of the Project Area and immediately west of Louisiana Avenue contains a complex of three-story, two-family houses as well as three-story multi-family walkup apartment buildings, both with accessory surface parking lots for residents.

Commercial uses within the study area include two shopping centers located west of Louisiana Avenue, which contain retail uses including restaurants, fast food chains, clothing stores, nail salons, and other local retail with accessory parking lots. North of the Project Area, along Flatlands Avenue, are car dealerships, an auto parts store, gas stations, and medical offices. Commercial uses are located to the north of the Project Area along

Pennsylvania Avenue; they include offices and a retail shopping center with restaurants, supermarkets, pharmacies, and surface accessory parking.

Manufacturing uses are concentrated to the north of the commercial corridor along Flatlands Avenue, between Louisiana Avenue and Pennsylvania Avenue. These uses generally include one- to two-story warehouses, self-storage facilities, an apparel distribution center, a NYC Department of Sanitation garage, and other factory and industrial facilities. These buildings are located within an M1-1 zoning district (discussed below) and are part of the Flatlands/Fairfield Industrial Business Zone (IBZ). An IBZ is a designated area established to protect existing manufacturing districts and encourage industrial business growth. IBZs seek to foster traditional New York City industries like design, fashion, and food manufacturing as well as emerging sectors like bio-engineering and urban technology. This designation is intended to foster high-performing business districts by creating competitive advantages over locating in areas outside of New York City.

In addition to the CCC, there are a mix of existing public facilities/institutions within the study area. To the west of the Project Area is an adult health care center and the Science and Medicine Middle School. Another school, P.S. 306, is located north of Cozine Avenue east of New Jersey Avenue. The Spring Creek Branch of the Brooklyn Public Library is located at the intersection of Flatlands Avenue and New Jersey Avenue.

Several open spaces are located within the study area, including the Breukelen Playground and Ballfields, which is located to the northwest of the Project Area between Louisiana Avenue and Williams Avenue. This open space includes a playground, handball courts, spray showers, and baseball fields. In addition, Fresh Creek Nature Preserve is a 42-acre salt marsh located to the west of the Project Area.

Table 2-1 Study Area Generalized Land Uses

Land Use	Number of Tax Lots[2]	Percentage of Total Lots (%)	Lot Area (sf)	Percentage of Total Lot Area (%)
One & Two Family Residential	65	40	132,837	1
Multi-Family Walkup Residential	5	3	1,672,395	14
Multi-Family Elevator Residential	14	9	4,952,875	40
Mixed Commercial/Residential	1	1	915,855	7
Commercial/Office	21	13	704,703	6
Industrial & Manufacturing	15	9	930,720	8
Transportation & Utility	4	2	63,465	1
Public Facilities and Institutions	8	5	453,163	4
Open Space	13	8	1,668,220	14
Parking Facilities	9	6	691,116	6
Vacant Land	6	4	171,429	1
Total	**161**	**100%[1]**	**12,356,778**	**100%[1]**

Source: Map PLUTO 21v1

[1] Numbers may not add up to 100 percent due to rounding

[2] All Lots intersecting the quarter-mile radius study area were included in analysis

Zoning

Development Site and Project Area

As shown in **Figure 2-2**, the entirety of the Project Area, including the Development Site, is mapped with an R5 zoning district. R5 zoning districts allow for a variety of housing types, with a maximum floor area ratio (FAR) of 1.25 for most residential uses and 2.0 for community facility uses. R5 zoning typically produces three- and four-story attached houses and small apartment houses. With a height limit of 40 feet, R5 districts provide a transition between lower- and higher-density neighborhoods. The maximum street wall height of a new building is 30 feet, with a required setback of 15 feet after the base height. Detached houses must have two side yards that total at least 13 feet, each with a minimum width of five feet. One eight-foot-wide side yard is required for semi-detached houses in this district. Apartment houses must provide two side yards, each at least eight feet wide. Front yards must be a minimum of 10 feet and rear yards must be a minimum of 30 feet. Off-street parking is required for 85 percent of the dwelling units in the building, but requirements are lower for income-restricted housing units (IRHU) and are further modified within the Transit Zone.

Figure 2-1 Land Use Map

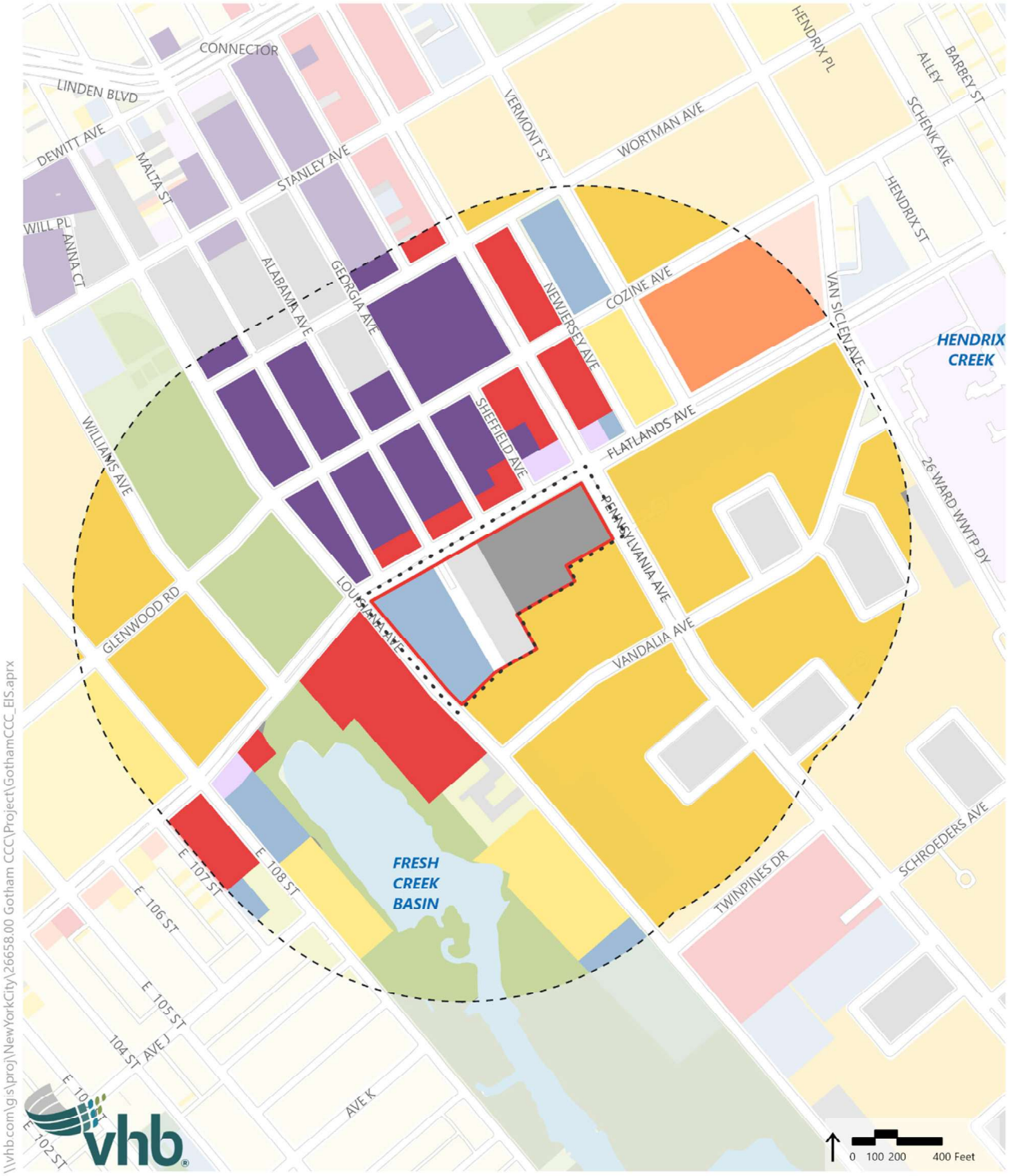
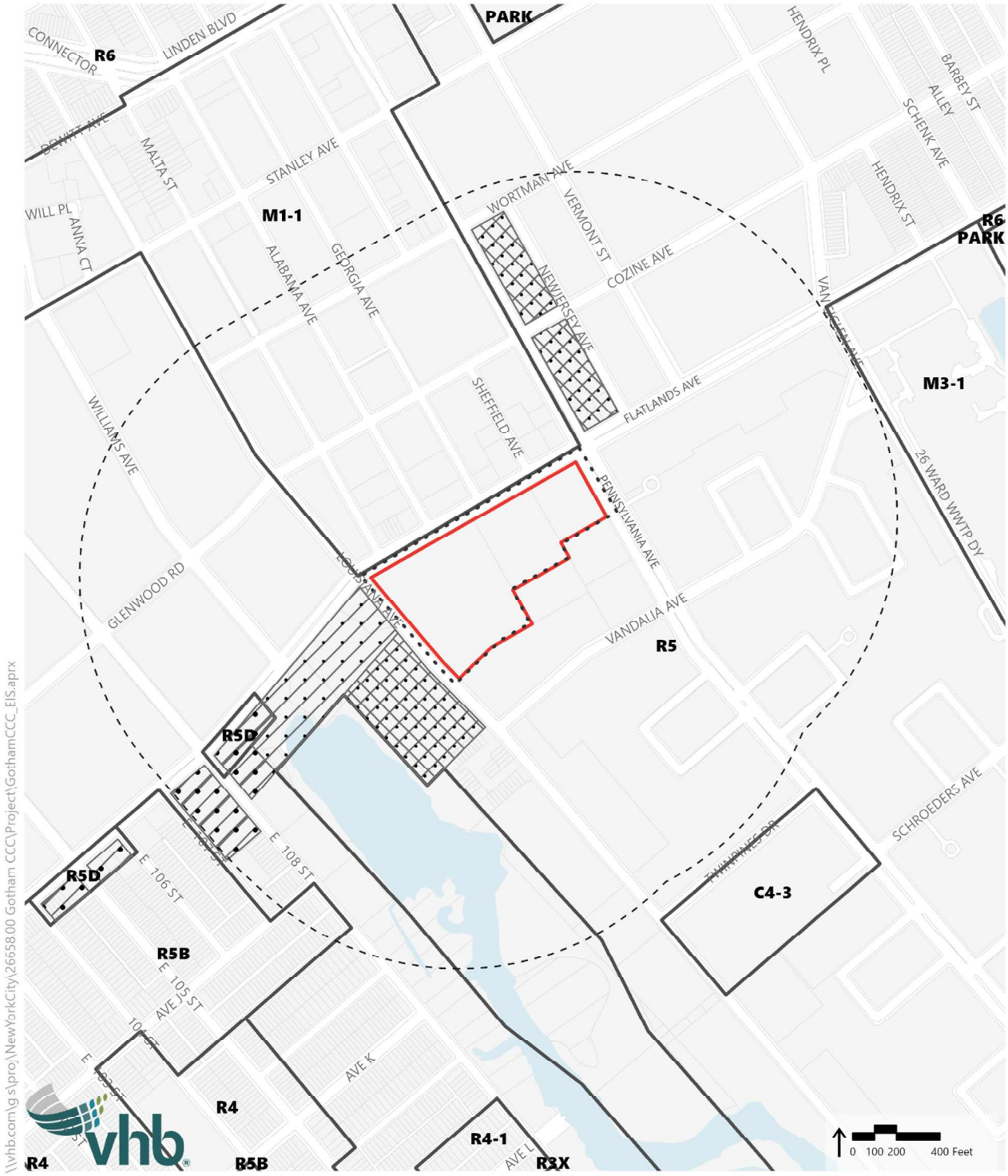


Figure 2-2 Existing Zoning Map



Study Area

The R5 zoning district is mapped on a majority of the study area, including the area generally to the south, east, and west of the Project Area. In addition to the R5 zoning, R5D and M1-1 zoning districts are also mapped within the study area. C2-2 commercial overlays are mapped along the east side of Pennsylvania Avenue north of Flatlands Avenue and along the west side of Louisiana Avenue south of Flatlands Avenue (see **Figure 2-2**). C2-1 and C2-3 commercial overlays are mapped along Flatlands Avenue west of Louisiana Avenue.

A small portion of the study area along the south side of Flatlands Avenue, just east of East 108th Street, is zoned R5D. R5D contextual districts are designed to encourage residential growth along major corridors in auto-dependent areas of the City. Characterized by moderate density, multi-family housing, R5D districts have a maximum FAR of 2.0, a height limitation of 40 feet (45 feet with a qualifying ground floor), and a significant amount of required off-street parking at 66 percent of all dwelling units. This reflects the overall reliance on automobiles.

Despite the building height limitations set forth in R5 and R5D zoning districts, it should be noted that there are existing large-scale residential developments located in the study area—including the Vandalia Senior Center, the Spring Creek Towers/Starrett City complex, and Breukelen Houses (discussed above)—that feature building heights at least 20 feet greater than the current height limitation of 40 feet. Similarly, although located just outside of the quarter-mile study area to the northeast of the Project Area, the Linden Boulevard Rezoning on Block 4496 rezoned the existing R4 and R4/C1-2 zoning districts to R8A/C2-4, R7A, and R6A zoning districts to facilitate the development of four new buildings, ranging in height from eight to twelve stories and containing approximately 521 affordable dwelling units as well as retail and community facility uses[1]. Further, the Ebenezer Plaza Rezoning, located to the north of the Project Area, rezoned an existing M1-1 zoning district to R7A/C2-4 and R7D/C2-4 zoning districts on Blocks 3860, 3861, and 3862. This action facilitated the development of two new 11-story mixed use buildings, containing approximately 531 affordable dwelling units[2]. The Applicant feels that it is important to note that these recent rezoning applications were approved within the area to allow for new residential developments that are greater in height than what was allowed by the previous zoning designation.

M1-1 zoning is mapped to the north of Flatlands Avenue between Louisiana Avenue and Pennsylvania Avenue. M1 districts typically permit light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. Nearly all industrial uses are permitted in M1 districts, along with offices and most retail uses. Certain community facilities, such as hospitals, are permitted in M1 districts only by special permit, but houses of worship are allowed as-of-right. M1-1 districts have a maximum FAR of 1.0.

C2 commercial overlays mapped within the study area include C2-1, C2-2, and C2-3 districts. Specifically, a C2-1 district is mapped along the south side of Flatlands Avenue west of Louisiana Avenue and extending much of the length of the block toward East 108th Street. C2-2 overlays are mapped just south of the C2-1 district west of Louisiana Avenue, as well as on the blocks between Flatlands Avenue and Wortman Avenue between Pennsylvania

[1] City Planning Commission Report C 170430 ZMK, Linden Boulevard Rezoning, September 19, 2017.

[2] City Planning Commission Report C 170189 ZMK, Ebenezer Plaza Rezoning, July 12, 2017.

Avenue and New Jersey Avenue, to the north of the Project Area. C2-3 overlays are mapped at the southeast and southwest corners of the intersection between Flatlands Avenue and East 108th Street. C2 overlays are typically mapped within residence districts along streets that serve local retail needs. They are found extensively throughout the City's lower- and medium-density areas and occasionally in higher-density districts. Typical retail uses include neighborhood grocery stores, restaurants, and beauty parlors. C2 districts permit a slightly wider range of uses, such as funeral homes and repair services, compared with C1 districts. Within R5 zoning districts, the maximum FAR for C2 overlays is 1.0. C2-1 overlays require one parking space per 150 square feet (sf) of space; C2-2 overlays require one parking space per 300 sf; and C2-3 overlays require one parking space per 400 sf.

Public Policy

Officially adopted and promulgated public policies also describe the intended use applicable to an area or site(s) in the City. Some of these policies have the force of law, while others describe general goals. They can help define the existing and future context of the land use and zoning of an area. The public policies relevant to the Proposed Actions include Fresh Zones, Housing New York 2.0, OneNYC 2050, the Waterfront Revitalization Program, and Zoning for Coastal Flood Resiliency. Each of these policies is described below.

Housing New York 2.0

The City first released Mayor Bill de Blasio's affordable housing plan, "Housing New York: A Five-Borough Ten-Year Plan," in May 2014 to create and preserve 200,000 high-quality, affordable homes over ten years. To achieve this goal, the plan aimed to double the New York City Department of Housing Preservation and Development (HPD)'s capital budget, target vacant and underused land for new development, protect tenants in rent-regulated apartments, streamline rules and processes to unlock new development opportunities, contain costs, and accelerate affordable construction. An updated version of the plan titled "Housing New York 2.0" was unveiled in November 2017, which commits to completing the initial goal of 200,000 affordable homes two years ahead of schedule, by 2022, and generating an additional 100,000 homes over the following four years by 2026. The plan detailed the key policies and programs for implementation which would:

- Create more homes for seniors by dedicating underused public lots for new affordable senior housing, and make new and preserved affordable housing more accessible to seniors and people with disabilities;
- Help New Yorkers buy a piece of their neighborhoods through new programs to construct new condos and co-ops for first-time homebuyers and help existing homeowners make needed repairs;
- Build a firewall against displacement in fast-changing neighborhoods by helping non-profits purchase traditional rent-stabilized apartment buildings and keep them affordable to current residents;
- Protect affordability at Mitchell-Lama buildings, which represent some of the last already existing affordable homeownership opportunities;
- Capitalize on advances in technology and innovative design to expand modular building and micro-units that can lower the cost of construction, build new homes faster, and respond to the city's changing demographics;

› Unlock the potential of vacant lots long considered too small or irregular for traditional housing stock with innovative smaller homes, and develop more affordable housing on lots long used for parking at existing Mitchell-Lama and HUD-regulated complexes.

OneNYC 2050

In April 2015, the Mayor's Office of Sustainability and the Mayor's Office of Climate Resiliency released "OneNYC," a comprehensive plan for a sustainable and resilient city. OneNYC represents a reworking of the sustainability plan for the City, known as "PlaNYC: A Greener, Greater New York." Like PlaNYC, growth, sustainability, and resiliency remain at the core of OneNYC, but promoting economic equity is a guiding principle throughout the plan. OneNYC has since been updated to OneNYC 2050, which was released in 2019 and consists of eight goals and thirty initiatives.

The goals of the plan are:

› A Vibrant Democracy through empowering participation, welcoming immigrants, promoting justice and equal rights, and promoting democracy and civic innovation

› An Inclusive Economy through good paying jobs and job training, economic security through fair wages and benefits, expanded decision making power of workers and communities

› Thriving Neighborhoods through affordable housing, access to neighborhood open spaces and cultural resources, community safety, and place-based community planning

› Healthy Lives through high quality, accessible health care, addressing health and mental health needs of communities, making healthy lifestyles easier, and designing a healthy physical environment

› Equity and Excellence in Education through early childhood education, equity in K-12 opportunity, and increasing integration, diversity, and inclusion in NYC schools

› A Livable Climate through carbon neutrality and clean electricity, resilience, economic opportunities through climate action, and climate accountability and justice

› Efficient Mobility through modern mass transit, safe and accessible streets, reduced congestion and emissions, and regional and global connections

› Modern Infrastructure through investments in core physical infrastructure and hazard mitigation, digital infrastructure improvement, and best practices for asset maintenance and capital project delivery.

Waterfront Revitalization Program

The Project Area is located within the Coastal Zone Boundary. The WRP is the City's principal Coastal Zone management tool and establishes a broad range of public policies for the City's coastal areas. The guiding principle of the WRP is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing the conflicts among these objectives. The WRP was originally adopted in 1982. Subsequent revisions include incorporation of climate change and sea level rise considerations to increase the resiliency of the waterfront area, promotion of waterfront industrial development as well as commercial and recreational waterborne activities, increased restoration of ecologically significant areas, and best practices for the design of waterfront open spaces.

Zoning for Coastal Flood Resiliency

DCP has updated the Flood Resilience Zoning Text (the "2013 Flood Text") and Special Regulations for Neighborhood Recovery ("2015 Recovery Text"), which were adopted on an emergency basis after Hurricane Sandy. These zoning text amendments were adopted to advance the reconstruction of storm-damaged properties and enable new and existing buildings to comply with flood-resistant construction standards set forth in Appendix G of the New York City Building Code. These rules are set to expire and DCP updated and made them permanent. As set forth by DCP, the updated and permanent rules:

- Expand the geography where optional zoning rules apply to the 0.2 percent annual chance floodplain, in addition to the 1 percent annual chance floodplain, to facilitate investments in small resiliency improvements to buildings or otherwise proactively meet or exceed flood-resistant construction standards;
- Allow optional flexibility to measure the building envelope from a reference plane that can be placed anywhere between the Design Flood Elevation (DFE) and 10 feet above grade (for lots where at least a portion is located within the 1 percent annual chance floodplain) or a reference plane that can be placed anywhere between grade and 5 feet above grade (for lots where at least a portion is located within the 0.2 percent annual chance floodplain), so building owners can accommodate projected sea level rise when designing new buildings or retrofitting existing ones;
- Allow wet-floodproofed ground floors to be exempted from floor area, and a portion of dry floodproofed non-residential ground floors to be exempted from floor area under certain circumstances, to better create accessible and inviting streetscapes;
- Allow flexibility for existing non-compliant and/or non-conforming buildings to be retrofitted or reconstructed to meet or exceed flood-resistant construction standards, under certain circumstances;
- Allow more flexibility with permitted obstruction rules for buildings to locate mechanical, electrical and plumbing equipment above the DFE, including emergency generators, and allow flood protection measures as permitted obstructions on open areas;
- Create rules that facilitate the reconstruction of damaged buildings to allow the City to more quickly recover from future disasters.
- Limit the growth of nursing homes for residents who have negative health consequences if subject to mandatory evacuation.
- Require buildings utilizing the allowances in the text amendment to meet streetscape mitigation regulations to help alleviate the effects of elevated access and potential blank walls caused by resiliency needs;
- Modify provisions applying in the waterfront areas to ensure that existing waterfront regulations allow sites to incorporate flood risk and sea level by giving flexibility in grading and shoreline design.

Since these zoning changes would affect the Project Area, their relevant and applicable effects are analyzed below.

No-Action Condition

Under the baseline, or No-Action condition, it is assumed that the Development Site and the de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100 that comprise the Project Area would remain in its existing condition. On the Development Site, it is anticipated that the CCC would remain operational on the site, surrounded by surface parking and vacant land serving as overflow parking. No changes are anticipated to the adjacent properties that comprise the balance of the Project Area.

Land Use

In the future No-Action condition, land use would remain the same as the existing conditions on the Development Site and within the Project Area. There are no new developments anticipated within the quarter-mile study area under the future No-Action condition.

Zoning

There are no anticipated zoning changes on the Development Site and Project Area, or within the study area under the No-Action condition. The Development Site, Project Area, and study area would continue to be governed by the various zoning regulations in the area, as described in the existing conditions section above.

Public Policy

In the future No-Action condition, there are no known public policy changes that are anticipated to affect the Development Site, Project Area, or study area.

With-Action Condition

As detailed in **Chapter 1, Project Description**, the With-Action condition would include approximately 2,200,538 gsf of development (4.29 FAR) within eight new mixed-use buildings, an above grade parking garage, and the Performing Arts Center (PAC).[3] This would include approximately 100,904 gsf of community facility space, including general community facility space to include a day care (approximately 12,320 gsf), other community facility uses such as a senior center or medical clinic (approximately 9,900 gsf), and the existing CCC facility (78,684 gsf); approximately 110,570 gsf of commercial space that includes a grocery store (approximately 14,300 gsf), local retail space (approximately 65,670 gsf), a trade school (approximately 14,100 gsf) to be located in one wing of the existing CCC building, and a PAC (approximately 16,500 gsf); and approximately 343,244 gsf of parking.[4] The Proposed Project would also include approximately 84,950 sf of publicly accessible open space, consisting of a public piazza that would serve as a public facing entrance to the CCC, a public arcade and entry plaza to the central community facility core of the Proposed Project and a quad to serve as a central gathering space. Additionally, there would be approximately 36,000 sf of privately

[3] The ten buildings include eight residential buildings, the above grade parking garage, and the PAC. Residential buildings 7 and 8 are connected as one building and Buildings 9 and 10 are connected as one building, though they will have separate residential lobbies

[4] The 197,560-gsf public parking garage includes 18,400 sf of flexible space that would be provided on the roof to allow for increased parking capacity during the church's peak parking periods (Sundays and Tuesday evenings). At all other times, this space would be reserved for recreational space.

owned passive open space across the Development Site, including residential building courtyards and rooftop open areas. The Proposed Project would also include 29,400 sf of privately owned active open space, comprised of an 11,000-sf playground adjacent to the child-care facility that would be accessible to residents, and an 18,400-sf recreational space to be located on top of the public parking garage.[5]

Land Use

As detailed above, in the With-Action condition, the Applicant would redevelop the Development Site with 10 new buildings containing a mix of residential, community facility, retail, and open space uses; an above-grade parking garage; and the PAC. The Proposed Project would expand the existing community facility use within the Development Site with the addition of approximately 52,820 gsf in the form of the PAC, a trade school, a day care, and general community facility space. It would also introduce new land uses—including a total of 1,645,820 gsf of residential space, 110,570 gsf of commercial space, and 84,950 sf of new publicly-accessible open space (see **Table 1-2** in **Chapter 1, Project Description**).

The land uses under proposed With-Action conditions would be consistent with existing land uses in the study area, which as discussed above, are predominantly characterized by high-density residential uses as well as commercial uses and light manufacturing. The Proposed Project would be buffered from the light manufacturing uses to the north of Flatlands Avenue by the existing commercial uses along the north side of the roadway. The Proposed Project would also provide an extension of the existing commercial uses within the study area, including those located along Flatlands Avenue as well as Louisiana Avenue and Pennsylvania Avenue, by providing ground-floor commercial space along each of these perimeter roadways. This would support the overall integration of the Proposed Project within the existing land use context of the surrounding neighborhood.

In addition, the proposed mixed-use development would reflect a scale and bulk appropriate for an area characterized by large-scale residential complexes, including the high-density residential complexes to the east and south of the Development Site that are up to 20 stories tall. The Proposed Actions, which would facilitate development up to a maximum of 15 stories with a mix of uses, would provide a more natural land use transition from these existing uses to the south and east to the more mixed-use character to the north of Flatlands Avenue and east of Louisiana Avenue. The integration of high quality, publicly accessible open space in the form of a public piazza, a public arcade and entry plaza, and a central quad, is further aligned to the design of large-scale mixed-use developments within the study area that also provide open spaces; the added open spaces support the integration of the Proposed Project with surrounding open space and residential uses in the study area. In addition, in comparison to the No-Action condition—which would maintain surface parking as well as the vacant parcel at the eastern edge of the Development Site—the With-Action condition would provide a more active mix of uses that complement the surrounding area, and thus would represent an improvement over the No-Action condition. Overall, no significant adverse impacts to land use are anticipated.

[5] The rooftop recreation space would be accessible to the public except during peak church parking demand periods on Tuesday evenings and Sundays. The playground would be available to the public outside of day care operating hours.

Zoning

As described below, the Applicant is seeking approval for a zoning map amendment, two zoning text amendments, and special permits—including a special permit pursuant to Zoning Resolution (ZR) Section 74-743(a)(2) to locate buildings within a large-scale general development without regard to yard, distance between buildings, and height and setback regulations in order to allow for the centralized community-centered core and street-oriented residential buildings envisioned by the Proposed Project. These comprise the Proposed Actions; they would be mostly limited to the Project Area and would not alter any existing zoning districts within the surrounding area (see **Figure 2-3**).

The Proposed Actions are described below, followed by a discussion of each action.

Proposed Zoning Map Amendment

A zoning map amendment to Zoning Map 17d would rezone the Project Area from R5 to R7-2 with a C2-4 commercial overlay. As shown in **Figure 2-3**, the C2-4 overlay would be mapped on the entire Project Area.

Proposed Zoning Text Amendments

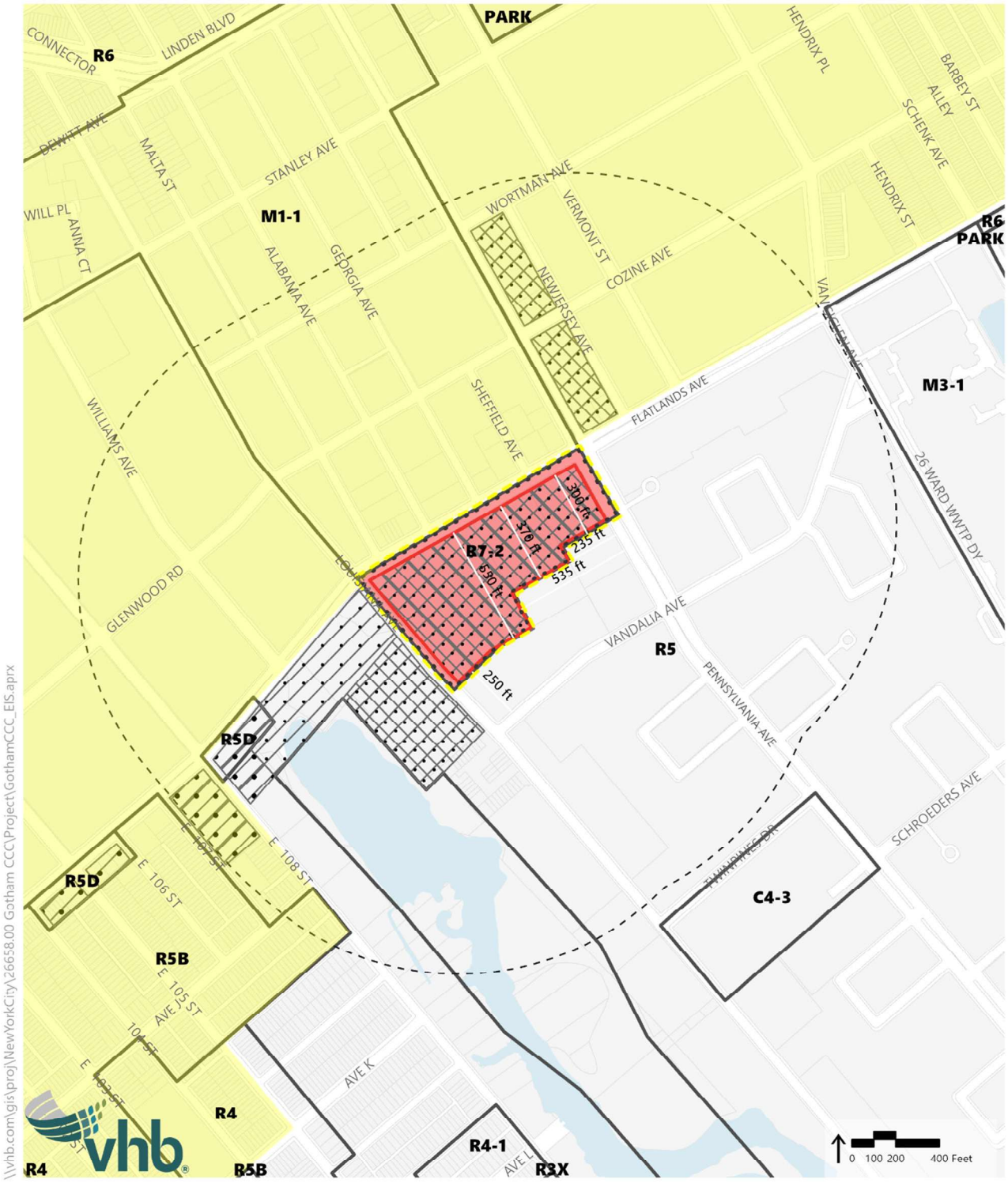
Appendix F

A zoning text amendment to Appendix F of the ~~Zoning Resolution (ZR),~~ZR, "Mandatory Inclusionary Housing Areas," would establish a Mandatory Inclusionary Housing (MIH) area that is coterminous with the Project Area. It is the Applicant's intention that the Proposed Project would comply with and exceed the requirements of the City's MIH program. Sitewide, the Proposed Project would include 50 percent of units at or below 60 percent of Area Median Income ~~("~~("AMI~~"),~~), 25 percent of units at or below 80 percent AMI, and 25 percent of units at or below 100 percent AMI. The non-MIH units would be income-based affordable housing through various city and state programs for low, moderate, and middle-income families.

Appendix I

A zoning text amendment to Appendix I would expand the boundary of the Transit Zone to include the Project Area. Currently, Transit Zone 12 is limited to the area to the north of Flatlands Avenue. Transit Zones are areas where special lower accessory parking requirements apply for various types of affordable housing, including income-restricted housing units. In general, these are areas of the City beyond the Manhattan Core within one-half mile of a subway station where auto ownership rates are among the lowest in the City.

Figure 2-3 Proposed Zoning Map



Special Permits

Special Permit Pursuant to ZR Section 74-743(a)(2)

The Applicant is requesting a special permit pursuant to ZR 74-743(a)(2) to locate buildings without regard for yard, court, distance between buildings, and height and setback regulations in general large-scale developments. This special permit would allow for the centralized community-centered core and street-oriented residential buildings envisioned by the Proposed Project.

Yards

The Development Site is comprised of a series of corner lot and interior lot areas and would require a series of yards adjacent to the common lot line with the neighboring property even though a significant setback exists between the common lot line and the adjoining buildings. Waiving side and rear year requirements in this area allows for the location of the PAC in the center of the Development Site and the introduction of a central quad as a new open space for the community. The yard waivers would also allow for the location of the parking garage in proximity to the PAC and the CCC. Accordingly, the Applicant is requesting a modification of the rear yard requirements of ZR Section 23-47 (Minimum Required Rear Yards) and the special side yard requirements of Section 23-51 (Special Provisions for Yards Adjacent to R1 Through R5 Districts) to eliminate yard requirements along the southern boundary of the Development Site.

Distance between buildings

In order to introduce a residential presence along Louisiana Avenue and at the same time maintain the CCC in its existing location, limited modifications to the requirements of ZR Section 23-711 (Standard minimum distance between buildings) are requested between the primary residential building along Louisiana Avenue and the CCC building. At the closest point, there would be a separation of 31 feet between the two buildings; the amount of separation quickly expands to 47 feet-6 inches in the areas where the modification is requested. In addition, because the CCC building is only 40 feet tall, this condition is limited to the lowest floors of the residential building and would be a window to wall condition as opposed to facing windows.

Height and Setback

While the proposed R7-2 district provides an appropriate density for the Project Area and the Proposed Project, R7-2 MIH developments are subject to height and setback controls that do not allow for the strong street wall presence and variation in heights envisioned for the Proposed Project. In particular, MIH developments are limited to a height of 75 feet within 10 feet of a wide street and 15 feet of a narrow street and an overall building height of the lesser of 135 feet or 13 stories. While much of the Proposed Project would comply with the maximum height limitation, the height of the Proposed Project's street wall would exceed the 75-foot height in several locations. In addition, portions of each of the buildings along Flatlands Avenue would exceed the 135-foot height limitation by one story for three buildings (to a height of 145 feet) and by two stories (to a height of 150 feet) for the building located at the intersection of Flatlands and Pennsylvania Avenues. The additional

heights allow for buildings with a dynamic and varied profile with building elements ranging from six to fifteen stories creating visual interest throughout the project. The higher elements also allow for the introduction of the quad to the center of the Development Site surrounded by the lower scale community facility core. Accordingly, a modification to ZR Sections 23-693 (Special provisions applying adjacent to R1 through R6B Districts), 23-951 (Height and Setback for Compensated Developments in Inclusionary Housing Designated Areas), 23-952 (Height and Setback in Mandatory Inclusionary Housing Areas), and 23-66 (Height and Setback Requirements for Quality Housing Buildings) is being requested by the Applicant to permit modifications of maximum base height before setback and maximum building height controls.

Special Permit Pursuant to ZR 74-512

The Applicant is requesting a special permit pursuant to ZR 74-512 to allow a public parking garage with more than 150 spaces with some spaces being located on the roof of the public parking garage for use during periods of peak demand at the church (Sundays and Tuesday evenings).

Assessment

The Proposed Actions would allow for higher-density residential development on the Development Site, consistent with the R7-2 zoning district regulations proposed for the Project Area, as well as expanded community facility space and new retail uses permitted by the C2-4 commercial overlay. It is the Applicant's belief that the Proposed Actions would allow the bulk, uses, and density that would be appropriate for and compatible with the existing zoning conditions within the study area and would facilitate a better site design for the Development Site, as detailed below.

The proposed zoning map amendment would establish an R7-2 zoning district with a C2-4 overlay. Compared with the R5 zoning, which would remain in place under the No-Action condition and would typically produce three- and four-story residential buildings, the R7-2 district would facilitate higher-density residential development more compatible with the existing built conditions to the east and south of the Project Area. The C2-4 commercial overlay would allow for local retail uses, including a grocery store, within the ground-floors of the proposed residential buildings, which would serve the existing and future residents in the study area.

As discussed above, the mixed-use building form would integrate the Development Site within the context of the largely multi-family residential study area as well as the existing commercial development across from the study area along Flatlands, Louisiana, and Pennsylvania Avenues. This represents an improvement over the No-Action condition, which would maintain a majority of the Development Site for surface parking and vacant land that is occasionally used as an overflow parking area for the church.

The proposed zoning text amendments would establish an MIH area in the Project Area and would extend the boundary of the Transit Zone 12 to include the Project Area. These text amendments would facilitate the development of affordable housing which has been identified as a significant need both in the East New York neighborhood and citywide, as discussed below. Moreover, the extension of the Transit Zone to include the Project Area would encourage the use of public transportation by future residents by reducing the

number of required accessory parking spaces. The Development Site is served by a range of transit options, including the subway (the East 105th Street stop on the L is located a six and a half block walk from the Project Area) and several bus lines, including the BM2 Express, BM5 Express, B6, B6 limited, B60, B82, B82 Select Bus Service (SBS), B83, and B103 limited bus lines, providing local and express service throughout Brooklyn, Manhattan, and Queens. The extension of the Transit Zone and would better reflect these various public transportation options available to the local community in this area.

The special permit to locate buildings without regard for yard, court, distance between buildings, and height and setback regulations in general large-scale developments would facilitate better site design, including private streets and sidewalks for circulation and a pedestrian-friendly Development Site centered around the central quad. As detailed above, the proposed increase in building heights would facilitate the development of buildings with a dynamic and varied profile, reflecting the range of building heights under the current built condition within the study area.

The special permit for a public parking garage with more than 150 spaces would allow for a garage of sufficient size to serve the congregants of the CCC and the visitors to the PAC. CCC congregants travel from areas outside of the study area and have different transportation needs than the future residents introduced by the Proposed Project. The special permit would consolidate the existing surface parking into an enclosed facility allowing for the productive use of the Development Site as compared to the No-Action condition.

Overall, the Proposed Actions would increase the density and building heights permitted on the Development Site, ensure that residential development on the Development Site contains affordable housing, and encourage the use of public transportation. While the Proposed Project would be of greater density and bulk than the No-Action condition on the Development Site, the proposed density would be comparable to multi-family developments located to the northwest, south, and east of the Development Site, including the NYCHA Breukelen Houses and Spring Creek Towers/Starrett City development as well as the large-scale residential development that resulted from rezonings at Linden Boulevard and Ebenezer Plaza (located outside of the study area). Such density is necessary to facilitate the provision of affordable housing and related amenities in the form of expanded community facility space, local retail, and open space. Therefore, the Proposed Actions would not result in a significant adverse impact to zoning.

Public Policy

The Proposed Actions would not result in any changes to public policies affecting the study area. As discussed below, the Proposed Actions would be consistent with, and supportive of, the public policies relevant to the study area.

Housing New York 2.0

The Proposed Actions would be consistent with the Housing New York 2.0 plan as follows:

Create more homes for seniors

The Proposed Project would provide approximately 2,050 affordable dwelling units of which up to 200 units would be exclusively for seniors.

Build a firewall against displacement

The Proposed Project involves funding from the City in partnership with the CCC, a faith-based community facility, to construct multi-family residential apartments. The new buildings would provide approximately 2,050 affordable mixed-income dwelling units. Sitewide, the Proposed Project would include 50 percent of units at 60 percent of AMI or less; 25 percent of units at 80 percent of AMI or less; and 25 percent of units at 100 percent of AMI or less. The non-MIH units would be income-based affordable housing through various city and state programs for low, moderate, and middle income. The income bands for the affordable housing units in excess of the MIH requirement, and the applicable programs for the senior~~/supportive~~ housing units, will remain subject to the availability of capital subsidy and other public capital sources at the time of construction.

Unlock the potential of vacant lots

The buildings proposed under the Proposed Project would be constructed on the currently vacant and underutilized lots that include: Block 4434, Lots 1 and 10.

Based on the foregoing, the Proposed Actions would contribute to achieving the City's goal of creating new affordable housing units in underutilized lots that are targeted towards senior and mixed-income populations and would be supportive of this public policy.

OneNYC 2050

The Proposed Project would support several of the initiatives outlined in OneNYC 2050, as detailed below.

Goal 3: Thriving Neighborhoods

Initiative 9: Ensure all New Yorkers have access to safe, secure, and affordable housing

This goal is focused around fostering communities that have safe and affordable housing and are well-served by parks, cultural resources, and shared spaces. As noted, the Proposed Actions would introduce 2,050 new affordable housing units to the East New York neighborhood, and would exceed the requirements of the City's MIH program. As such, the Proposed Actions would be in support of this initiative by expanding the City's affordable housing stock.

Initiative 10: Ensure all New Yorkers have access to neighborhood open spaces and cultural resources

This initiative seeks to increase the number of shared spaces throughout the City in the form of public open spaces, plazas, and cultural institutions such as art venues and libraries. The Proposed Project would include approximately 84,950 sf of publicly accessible open space consisting of: a piazza on the corner of Flatlands and Louisiana Avenues, providing a much more porous and public facing entrance to the Christian Cultural Center than the present condition. The piazza would have both passive space for sitting and mingling as well larger

areas of gently graded hardscape suitable for active programing and events; contemplative gardens flanking the piazza that would provide landscaped pedestrian connections to the rest of the site; a central quad, which would form the civic heart of the site, anchored by the PAC and bookended on either side by the trade school and childcare facility. The quadrangle would have planted areas, a lawn and a paved assembly space with a stage for events; and a public arcade and entry plaza lined with additional community facility space. The arcade and entry plaza would provide public access for the PAC and open up the quadrangle to Flatlands Avenue. The PAC would include up to 299 seats. These amenities would be supportive of the goal of increasing access to open spaces and cultural resources in the City.

Goal 4: Healthy Lives

Initiative 15: Make healthy lifestyles easier in all neighborhoods

This initiative is centered around providing access to nutritious foods across all communities in order to promote positive health outcomes. The Proposed Project would introduce 14,300 gsf of commercial space that would be allocated to a new grocery store on the Development Site. This would provide an opportunity for residents onsite and in the surrounding area to purchase healthy foods. As such, the Proposed Project supports this initiative by expanding healthy food options in the community.

Waterfront Revitalization Program

Because the Project Area is located within the New York City Coastal Zone, the Proposed Actions are subject to review for their consistency with the City's WRP. In accordance with the guidelines of the *CEQR Technical Manual*, a preliminary evaluation of the Proposed Actions' consistency with the WRP policies was undertaken. This preliminary evaluation requires completion of the WRP Consistency Assessment Form (CAF), which contains a series of questions designed to screen out those policies that would have no bearing on a consistency determination for a proposed action (see **Appendix A**). The CAF lists the WRP policies and indicates whether a proposed project would promote or hinder that policy, or if that policy would not be applicable. For any policies which may be affected, this section provides additional information and assessment. As detailed in **Appendix A**, the Proposed Actions would be consistent with WRP policies (WRP# 18-208).

Zoning for Coastal Flood Resiliency

The implementation of Zoning for Coastal Flood Resiliency (ZCFR) would allow developers to measure height from a reference plane up to five feet above the DFE for proposed developments in the 0.2 percent annual chance floodplain, which could result in buildings up to five feet taller. The lowest floor elevations of all of the proposed buildings would be above 10 feet BFE. Therefore, the Proposed Project is consistent with this policy.

3

Socioeconomic Conditions

This chapter considers the potential for the Proposed Actions to result in significant adverse impacts to the socioeconomic character of the surrounding area, which includes its population, housing, and economic activity.

Introduction

According to the *2021 CEQR Technical Manual*, an analysis of socioeconomic conditions may be necessary when a project would directly or indirectly change an area's socioeconomic character (population, housing, and economic activity); the assessment usually considers the socioeconomic conditions of area residents separately from those of area businesses, although projects may affect both in similar ways. An assessment of socioeconomic conditions is warranted when a project would result in:

- Direct displacement of residential population on a development site;
- Direct displacement of existing businesses or institutions on a development site;
- Indirect displacement of residential population in a study area;
- Indirect displacement of businesses or institutions in a study area;
- Indirect displacement of businesses due to retail market saturation; and/or,
- Adverse effects on specific industries.

Principal Conclusions

For the Proposed Project, preliminary and detailed analyses of indirect residential displacement were warranted.

The Proposed Project would comply with and exceed the requirements of Option 1 of the City's Mandatory Inclusionary Housing (MIH) program. Sitewide, the Proposed Project would include 50 percent of units at 60 percent of Area Median Income (AMI) or less, with the majority of these units rented at 40 or 50 percent of AMI and senior housing capped at 60 percent AMI. An additional 25 percent of units would be affordable at 80 percent of AMI or less and the remaining 25 percent of units would be affordable at 100 percent of AMI or less. In all, it is expected that the first 1,000 homes to be constructed would not include any rents above 80 percent AMI.

The non-MIH units would be income-based affordable housing through various city and state programs for low, moderate, and middle income. The income bands for the affordable housing units in excess of the MIH requirement, as well as the applicable programs for the senior~~/supportive~~ housing units, would remain subject to the availability of capital subsidy and other public capital sources at the time of construction.

The Proposed Project would result in an alternative housing option in the neighborhood because 75 percent of the proposed units would be available for households earning 80 percent or less of AMI. It is also noted that many renters in the area rely on Section 8 vouchers. Section 8 vouchers would be accepted at the Proposed Development, creating another housing option for low-income renters in the area. The proposed affordable ownership or condominium units would also provide a path for area low-income renters looking to own their home. The detailed assessment determined that the Proposed Actions would not result in significant adverse impacts to socioeconomic conditions.

Methodology

Under CEQR, the socioeconomic character of an area is defined by its population, housing and economic activities. The assessment of socioeconomic conditions usually distinguishes between the socioeconomic conditions of an area's residents and businesses. However, proposed action(s) may affect either or both segments in the same ways; they may directly displace residents or businesses, or they may alter one or more of the underlying forces that shape socioeconomic conditions in an area and thus may cause indirect displacement of residents or businesses.

Direct displacement is defined as the involuntary displacement of residents, businesses, or institutions from the actual site of (or sites directly affected by) a proposed project. Indirect or secondary displacement is defined as the involuntary displacement of residents, businesses or employees in an area adjacent or close to a development site that results from changes in socioeconomic conditions created by a proposed project. Examples include rising rents in an area that result from a new concentration of higher-income housing introduced by a project, which ultimately could make existing housing unaffordable to lower income residents.

The objective of the analysis is to disclose whether any potential changes created by the Proposed Actions would have a significant adverse impact compared with what would happen in the future without the Proposed Actions (i.e., the No-Action condition).

Analysis Format

Following *CEQR Technical Manual* guidelines, the analysis begins with an initial screening assessment that considers threshold circumstances identified in the *CEQR Technical Manual* that can lead to socioeconomic changes warranting further assessment. If the initial screen determines that further assessment is warranted, a preliminary assessment is then undertaken. The purpose of the preliminary assessment is to learn enough about the effects of the Proposed Actions to either rule out the possibility of significant adverse impacts or determine that a more detailed analysis is required.

Initial Screening Assessment

According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may be reasonably expected to create substantial socioeconomic changes within the area affected by the project that would not be expected to occur without the project. The following screening assessment considers threshold circumstances identified in the *CEQR Technical Manual* and enumerated below that can lead to socioeconomic changes warranting further assessment.

- Direct Residential Displacement: Would the project directly displace residential population to the extent that the socioeconomic character of the neighborhood would be substantially altered? Displacement of fewer than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood.

  The Project Area does not currently contain any residential uses; therefore, no direct residential displacement would occur.

- Direct Business Displacement: Would the project directly displace more than 100 employees, or would the project directly displace a business whose products or services are uniquely dependent on its location, are the subject of policies or plans aimed at its preservation or serve a population uniquely dependent on its services in its present location? If so, assessments of direct business displacement and indirect business displacement are appropriate.

  The only uses currently in the Project Area are surface parking and a church. The church would remain on the site as part of the Proposed Project; therefore, no direct business displacement would occur.

- Indirect Residential Displacement: Does the project have potential to change socioeconomic conditions that may indirectly displace a vulnerable population? Residential development of 200 units or less would typically not result in significant socioeconomic impacts. For projects exceeding this threshold, an assessment of indirect residential displacement is appropriate.

  The Proposed Project includes the development of 2,050 residential units within the Project Area. Therefore, an analysis of indirect residential displacement is warranted.

- Indirect Business Displacement: Would the project result in substantial new development that is markedly different from existing uses, development and activities within the neighborhood? Commercial development of 200,000 sf or less would typically not result in significant socioeconomic impacts.

  The Proposed Project includes commercial uses but does not meet the threshold of 200,000 sf and therefore is not expected to result in significant socioeconomic impacts related to indirect business displacement.

- Indirect Business Displacement due to Retail Market Saturation: Would the project result in a total of 200,000 sf or more of retail on a single development site or 200,000 sf or more of region-serving retail across multiple sites?

  The Proposed Project would result in approximately 110,570 sf of commercial use, therefore, analysis of indirect business displacement due to retail market saturation is not warranted.

- Adverse Effects on Specific Industries: Is the project expected to affect conditions within a specific industry?

  The Proposed Project would not be expected to affect conditions within a specific industry, affect a substantial number of workers or residents who depend on the goods or services provided by affected businesses, or result in the loss or substantial diminishment of a particularly important product or service within the City; therefore, an assessment of adverse effects on specific industries is not warranted.

Based on the screening assessment presented above, the Proposed Actions warrant an analysis of indirect residential displacement.

Indirect Residential Displacement Preliminary Assessment

Indirect Residential Displacement Methodology

Per *CEQR Technical Manual* guidelines, a preliminary assessment of a project's potential to cause indirect residential displacement is necessary to determine whether the project may either introduce a trend or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of a neighborhood would change.

The first step of the preliminary analysis is to determine if the Proposed Project would add new population with higher average incomes compared to the average incomes of the existing populations and any new population expected to reside in the study area without the project. If the Proposed Project would introduce a costlier type of housing compared to existing housing and the housing expected to be built in the future No-Action condition, then the new population may be expected to have higher incomes. If the expected average incomes of the new population would exceed the average incomes of the study area populations, then the next step of the analysis is conducted. This preliminary assessment follows the step-by-step preliminary assessment guidelines described in Section 322.1 of the *CEQR Technical Manual*.

Study Area Definition

The *CEQR Technical Manual* states that a quarter-mile socioeconomic study area is appropriate unless the project could increase the population by more than five percent as compared with the population expected to reside in a quarter-mile study area in the future No-Action condition.

The Project Area is located within Brooklyn Census Tract 1058.04. A quarter-mile study area would also encompass Census Tracts 982, 984, and 1058.01.[1] Combined, these Census Tracts have a population of 19,645[2] people, which is expected to remain approximately the same in the No-Action condition. Using the average household size of the eight census tracts within a half-mile radius of the Project Area, 2.29 people per household[3], the Proposed Actions would increase the quarter-mile area population by an estimated 4,695 residents resulting in a residential population increase of 23.9 percent. Per *CEQR Technical Manual* guidelines, a half-mile study area is appropriate for projects that would increase the population within a quarter mile by more than five percent. Therefore, a half-mile study area was used for this analysis. The half-mile study area encompasses Census Tracts 982, 984, 986, 1016, 1058.01, 1058.04, 1104, and 1106 (see **Figure 3-1**). The half-mile study area has a population of 33,636 people.

Data Sources

Information used in the socioeconomic analysis includes data from the U.S. Census Bureau's 2010 Census, 2020 Census, 2006-2010 American Community Survey (ACS) and 2015-2019 ACS, compiled through the NYC Population FactFinder. The 2015-2019 data reflects five-year averages of income distribution, mean income and median rent for the trailing 12 months in 2019 inflation-adjusted dollars. The mean income and median gross rent of each Census Tract were compiled by the NYC Population FactFinder. 2010 and 2020 Census data were used for population estimates.

Real estate property listing and trend data was obtained from a representative of Keller Williams Realty, a local real estate company, and StreetEasy. AMI for the New York City region was obtained from the U.S. Department of Housing and Urban Development (HUD).

Data sources for the indirect residential displacement detailed analysis include the New York City Housing Authority (NYCHA) Development Data Book 2021, New York State Housing and Community Renewal (NYS HCR), and the New York University (NYU) Furman Center.

Existing Conditions

The current population of the socioeconomic study area is 33,636 per the 2020 Census, an increase of 3.1 percent over the 2010 population of 32,632 people (see **Table 3-1**). The population of both Brooklyn and New York City, as a whole, have increased over the same time period by 9.2 percent and 7.7 percent, respectively.

[1] Census tracts that contain at least 50 percent of their area within the quarter-mile radius were included in the study area analysis.

[2] 2020 Census data through NYC Population FactFinder.

[3] 2020 Census data through NYC Population FactFinder.

Figure 3-1 Socioeconomic Study Area



Table 3-1 Population, 2020

Area	Population 2010	Population 2020	% Change
Study Area	32,632	33,636	3.1%
Brooklyn	2,504,700	2,736,074	9.2%
New York City	8,175,133	8,804,190	7.7%

Source: 2010 Census and 2020 Census

The study area contains 14,055 households. Based on 2015-2019 ACS 5-year Estimates, average household income in the study area is $47,163, a decrease from average household income in 2010. Based on 2015-2019 ACS 5-year Estimates, median household income is $31,802. Both average and median household incomes in the study area are substantially lower than the average and median household incomes in Brooklyn ($91,610 and $60,231 respectively) and New York City ($102,946 and $63,998 respectively). See **Table 3-2**.

Table 3-2 Average and Median Household Income

Area	2006-2010 Average Household Income	2015-2019 Average Household Income	Average Household Income Percent Change	2006-2010 Median Household Income	2015-2019 Median Household Income	Median Household Income Percent Change
Study Area[1]	$49,954	$47,163	N/A	$34,057	$31,802	N/A
Brooklyn Community District 5[2]	$52,086	$56,103	Increase	$39,199	$39,163	N/A
Brooklyn	$73,627	$91,610	24.4%	$51,196	$60,231	17.6%
New York City	$91,537	$102,946	12.5%	$59,090	$63,998	8.3%

Notes:

[1] Due to the Margin of Error (MOE) of the difference between 2006-2010 ACS 5-year Estimates and 2015-2019 ACS 5-year Estimates for average and median household income for the study area, a percentage change and directionality cannot be estimated with confidence

[2] Brooklyn Community District 5 data added for comparison purposes only. Due to the MOE of the difference between 2006-2010 ACS 5-year Estimates and 2015-2019 ACS 5-year Estimates, a percentage change cannot be estimated with confidence for average household income for the study area, and a percentage change and directionality cannot be estimated with confidence for median household income

Source: 2006-2010 ACS 5-year Estimate for Years 2006-2010 data and 2015-2019 ACS 5-year Estimate for Years 2015-2019 data

Table 3-3 and **Table 3-4** show household income distribution and the percentage of population living below the poverty level in the study area compared to Brooklyn and New York City. Consistent with lower average and median incomes, the percentage of households earning less than $25,000 and $25,000 to $49,999 in the study area is greater than in Brooklyn and New York City. Households earning less than $25,000 make up 41.5 percent of households in the study area. The percentage of population living below the poverty level is higher in the study area than both Brooklyn and New York City. The high percentage of low-income households is partly explained by the location of four NYCHA housing developments in the study area (Vandalia Avenue, Breukelen Houses, Pennsylvania Avenue-Wortman Avenue, and Linden Houses), as well as Spring Creek Towers and other developments which contain low- and middle-income eligible housing units.

Table 3-3 Household Income Distribution, 2019

Area	<$25,000	$25,000-$49,999	$50,000-$99,999	$100,000-$149,999	$150,000+
Study Area[1]	41.5%	25.0%	22.6%	7.1%	N/A
Brooklyn Community District 5[2]	35.4%	23.5%	25.2%	9.4%	6.4%
Brooklyn	24.8%	18.8%	25.3%	14.0%	17.0%
New York City	23.3%	18.1%	25.4%	14.3%	18.9%

Notes:

[1] The number of households in the Study Area with income of $200,000 or more could not be projected with confidence and is therefore, not reported

[2] Brooklyn Community District 5 data added for comparison purposes only

Source: 2015-2019 ACS 5-year Estimate for Years 2015-2019 data

Table 3-4 Population Below the Poverty Level

Area	2006-2010 Population Below Poverty Level	2006-2010 Percentage of Population Below Poverty Level	2015-2019 Population Below Poverty Level	2015-2019 Percentage of Population Below Poverty Level
Study Area	9,119	27.3%	8,554	26.6%
Brooklyn Community District 5[1]	53,992	29.8%	50,804	27.0%
Brooklyn	538,435	22.0%	511,631	20.0%
New York City	1,518,636	19.1%	1,485,784	17.9%

Notes:

[1] Brooklyn Community District 5 data added for comparison purposes only

Source: 2006-2010 ACS 5-year Estimate for Years 2006-2010 data and 2015-2019 ACS 5-year Estimate for Years 2015-2019 data

No-Action Condition

No significant residential development is currently planned or under construction in the half-mile study area, therefore, the No-Action condition is assumed to be the same as the Existing Condition.

With-Action Condition

In the With-Action condition, 2,050 housing units are proposed within the Development Site. All new housing units developed on the site would be income-based affordable housing ranging from 30 to 100 percent AMI.

The Proposed Project would comply with and exceed the requirements of Option 1 of the City's MIH program. Option 1 has the following requirements:

› 25 percent of new housing units must be set aside for families making an average of 60 percent or less of AMI.

› Of this set-aside, at least 10 percent must be for families making an average of 40 percent or less of AMI.

Sitewide, the Proposed Project would include 50 percent of units at 60 percent of AMI or less; 25 percent of units at 80 percent of AMI or less; and 25 percent of units at 100 percent of AMI or less. The non-MIH units would be income-based affordable housing through various city and state programs for low, moderate, and middle income. The income bands for the affordable housing units in excess of the MIH requirement, as well as the applicable programs for the senior~~/supportive~~ housing units, will remain subject to the availability of capital subsidy and other public capital sources at the time of construction.

Because the proposed housing units would all be income-based affordable, up to 100 percent of AMI, expected incomes would range depending on household size and affordability level, as shown in **Table 3-5**. For example, income limits at 40 percent AMI range from $33,440 for a family of one to $51,560 for a family of five. The 50 percent AMI income limit ranges from $41,800 for a family of one to $64,450 for a family of five. The 80 percent AMI income limit ranges from $66,880 for a family of one to $103,120 for a family of five. The 100 percent AMI income limit ranges from $83,600 for a family of one to $128,900 for a family of five.[4] Note that incomes could be lower depending on affordability level or higher depending on household size. The levels of affordability are established by HUD and are subject to change. As detailed above, per the 2015-2019 ACS 5-year Estimate, median household income in the study area is $34,057.

Table 3-5 New York City AMI, 2021

Family Size	30% AMI	40% AMI	50% AMI	60% AMI	80% AMI	100% AMI
1	$25,080	$33,440	$41,800	$50,160	$66,880	$83,600
2	$28,650	$38,200	$47,750	$57,300	$76,400	$95,500
3	$32,220	$42,960	$53,700	$64,440	$85,920	$107,400
4	$35,790	$47,720	$59,650	$71,580	$95,440	$119,300
5	$38,670	$51,560	$64,450	$77,340	$103,120	$128,900

Source: HUD, 2021 AMI for the New York City region. https://www1.nyc.gov/site/hpd/services-and-information/area-median-income.page, accessed May 2021

Using the average household size of 2.13 for the Study Area and weighing the AMI estimates outlined in **Table 3-5** for a family size of between 2 and 3, an average income of households occupying the proposed residential units is estimated, as follows:

› Average income of households occupying the units at 60 percent of AMI: $58,228

› Average income of households occupying the units at 80 percent of AMI: $77,638

› Average income of households occupying the units at 100 percent of AMI: $97,047

Using a weighted average based on the anticipated number of units to be provided at each AMI level (50 percent of units at 60 percent of AMI or less; 25 percent of units at 80 percent of AMI or less; and 25 percent of units at 100 percent of AMI or less), the average income of

[4] HUD, 2021 AMI for the New York City region (New York, NY HUD Metro FMR Area).

households occupying the proposed residential units is estimated to be approximately $72,785. This is greater than the median and average household income for the study area.

According to the *CEQR Technical Manual*, if the Proposed Project is expected to introduce new population with higher average incomes than the existing average income of the study area, Step 2 of the preliminary assessment should be conducted.

Step 2 of a preliminary assessment of indirect residential displacement, as outlined in the *CEQR Technical Manual,* is to determine the Proposed Project's projected increase in population relative to the study area. The Proposed Project would generate approximately 4,695 residents, resulting in a population increase of 14.0 percent in the study area, which has a population of 33,636 residents. The guidance set forth in the *CEQR Technical Manual* indicates that a population increase greater than 10 percent in the study area warrants a detailed assessment.

Indirect Residential Displacement Detailed Assessment

Per the *CEQR Technical Manual*, the purpose of the detailed assessment is to determine whether the population living within unprotected units in the study area would be at risk of indirect displacement due to incomes being too low to afford a potential increase in rents. The detailed assessment includes additional existing conditions data and an assessment of how the real estate market conditions in the study area would change in the With-Action condition.

Existing Conditions

The detailed assessment focuses on rental housing which is more likely to be affected by indirect displacement than owned housing. The study area contains 14,893 housing units, of which 14,055 (94.4 percent) are occupied. As shown in **Table 3-6**, 86.0 percent of occupied housing units in the study area are renter occupied (12,086 housing units), which is a higher percentage of renter occupied units than in both Brooklyn (69.9 percent) and New York City (67.3 percent). Using the study area's average household size for renter occupied units as a multiplier, there are an estimated 25,743 residents living in rental housing units in the study area.

Table 3-6 Renter-Occupied Units in Study Area, 2019

	Total Occupied Housing Units	Owner-Occupied Units	Renter-Occupied Units	% Renter Occupied Units	Average Household Size (Rental Units)	Estimated # of Residents Living in Renter-Occupied Units
Study Area	14,055	1,969	12,086	86.0%	2.13	25,743
CT 1058.04	3,167	N/A	3,096	97.8%	2.11	6,533
CT 982	1,735	N/A	1,727	99.5%	2.60	4,490
CT 984	660	397	263	39.8%	N/A	N/A
CT 986	968	465	503	52.0%	N/A	N/A
CT 1016	529	392	N/A	N/A	N/A	N/A
CT 1058.01	3,435	N/A	3,395	98.8%	1.68	5,704
CT 1104	1,746	583	1,163	66.6%	2.03	2,361
CT 1106	1,815	N/A	1,802	99.3%	2.31	4,163
Brooklyn	958,567	288,632	669,935	69.9%	2.52	1,688,236
New York City	3,167,034	1,034,637	2,132,397	67.3%	2.48	5,288,345

Source: 2015-2019 U.S. ACS 5-year Estimate

When broken down by census tract, the area to the west of the Development Site, consisting of Census Tracts 984, 986, and 1016, have lower rates of rental units than the remaining Census Tracts in the Study Area. Census Tracts 984, 986, and 1016 are primarily comprised of one- and two-family homes that are a mix of owned and rented units. The remaining Census Tracts are generally comprised of multi-family buildings, including four public housing developments and Spring Creek Towers.

Census Tract 982 is comprised entirely of the NYCHA Breukelen Houses which has 1,595 housing units and a population of 3,406[5]. Census Tract 1106 contains the NYCHA Linden Houses which has 1,586 housing units and a population of 3,462. Census Tract 1106 also contains Stanley Commons, a mixed-use development with 240 affordable rental units recently constructed on property that was formerly owned by NYCHA, and the Stanley Commons Senior Housing, a senior living building with 80 units.

All of Census Tract 1058.01 and a large portion of Census Tract 1058.04 is comprised of Spring Creek Towers (formerly Starrett City), a large 140-acre affordable housing complex located to the south and east of the Project Area; it contains 5,881 residential units in 46 buildings. The complex also includes a community center and two schools. Spring Creek Towers' affordability is maintained through various state and federal programs: approximately 60 percent of the units participate in HUD's Section 8 rental assistance

[5] NYCHA Development Data Book 2020, https://www1.nyc.gov/assets/nycha/downloads/pdf/pdb2020.pdf.

program, and the remaining 40 percent participate in HUD's Section 236 interest rate reduction program and the NYS HCR Mitchell-Lama program.[6]

Census Tract 1058.04 contains the Development Site, Spring Creek Towers (as described above), a multi-family residential development with condominiums, a residential development with one- and two-family owned homes, and NYCHA Vandalia Avenue. NYCHA Vandalia Avenue is a senior public housing development with 293 units and a population of 329. The Council Towers senior housing complex is located on the same block as the Project Area along Vandalia Avenue and Pennsylvania Avenue and contains three 12-story buildings with a total of 366 affordable apartments for low-income seniors.[7] The complex is run under the HUD Section 202 Program.

Residential uses in Census Tract 1104 include several one- and two-family homes at the northern portion of the census tract; the Meadow Wood at Gateway multi-family development which has approximately 1,152 condominium units, and NYCHA Pennsylvania Avenue-Wortman Avenue. NYCHA Pennsylvania Avenue-Wortman Avenue has 336 units and a population of 627.

Overall, the supply of rental housing within the study area is predominantly located within large apartment buildings, including the various NYCHA developments detailed above, as well as the Spring Creek Towers and Council Towers developments. According to data published by the NYU Furman Center, 17.3 percent of rental units in the East New York neighborhood are located in NYCHA housing, compared with eight percent for Brooklyn as a whole.[8] A modest number of additional rental units are available within the two-family homes concentrated to the east of Fresh Creek Basin or to the north of Linden Boulevard. Based on online listings and the high percentage of the rental inventory within NYCHA developments, the number of available market-rate rental properties is low in the study area. As of August 2021, there were no listed rental properties available in the study area on StreetEasy.

Rental Prices and Trends

Data indicates that market rents in the East New York neighborhood of Brooklyn where the Project Area is located increased from 2016 to 2020 and then decreased slightly between 2020 and 2021, with an overall increase of 10.5 percent over the past five years. See **Table 3-7** for the median asking rent for the past five years in East New York. A local real estate broker from Keller Williams Realty confirmed that this data is reflective of median rents in the neighborhood when rental units are available. Typically, one-bedroom units in East New York would be rented around $1,600 per month; two-bedroom units are rented between $1,800 and $2,000 per month; and three-bedroom units are rented at $2,400 or more per month.[9]

[6] https://www.globest.com/2018/05/09/starrett-city-sold-to-brooksville-and-rockpoint-for-905-million/

[7] https://www.metcouncil.org/elderly-housing-through-the-federal-section-202-program

[8] NYU Furman Center Neighborhood Data Profiles, East New York/Starrett City, Accessed June 2021

[9] Phone conversation with Keller Williams Realty on June 8, 2021.

Table 3-7 East New York Median Asking Rent, 2016 to 2021[1]

	2016	2017	2018	2019	2020	2021
East New York	$1,900	$2,000	$2,100	$2,125	$2,195	$2,100

Source: StreetEasy Data Dashboard, East New York

Notes:

[1] Median Asking Rent reported for the month of April in each year. Median Asking Rent reflects all rental listings available on StreetEasy

The real estate broker from Keller Williams Realty also confirmed the general trend toward increased rental prices in the area, prompted by general interest from residents that are priced out of Bedford-Stuyvesant and other nearby neighborhoods but are interested in staying in Brooklyn. In addition, recent nearby development has sparked increased interest in the neighborhood. The broker specifically cited the Gateway Center complex, also known as the Gateway Mall, which is located to the east of the study area and was expanded in 2014 to include over 35 retailers and restaurants, as a catalyst for recent nearby development.

However, according to data released by the NYU Furman Center, when accounting for inflation, real median gross rents (in 2020 dollars) over the past decade have remained relatively stagnant in East New York compared with Brooklyn as a whole, which has seen more significant increases in rental prices. Specifically, real median gross rent increased by 23.8 percent in Brooklyn between 2009 to 2019, compared with just 4.3 percent in East New York. Meanwhile, the homeownership rate in the neighborhood has increased by 2.9 percent since 2010, and the number of new certificates of occupancy issued by the Department of Buildings (DOB) more than doubled in one year, from 531 in 2019 to 1,273 in 2020, indicating more recent development interest and activity in the area.[10]

Estimate of Unregulated Housing

The *CEQR Technical Manual* specifies that an indirect residential displacement analysis is conducted to determine the potential impact that may be experienced by vulnerable populations that could be subject to displacement, generally defined as renters living in privately held units unprotected by rent control, rent stabilization, or other government regulations restricting rents, and whose income or poverty status indicates that they may not support substantial rent increases. The following analysis provides an estimate of the supply of unregulated rental housing within the Study Area to determine the proportion of Study Area residents who could be subject to indirect displacement.

Table 3-8 provides an inventory of the regulated housing units within the Study Area. As shown, there are a total of 10,563 units that are protected by various city, state, and federal government regulations that either restrict rising rents or provide financial assistance to support low-income tenants. These programs include Rent Stabilization; NYCHA Public Housing; Mitchell-Lama Housing; Project-Based Section 8; the Low-Income Affordable Marketplace Program (LAMP); Section 202; the Multifamily Housing Rehabilitation Loan Program (HRP); the Low-Income Housing Tax Credit (LIHTC) program; and the 420-c Tax Incentive program. These regulated housing units were identified using the NYS HCR Brooklyn Rent Stabilized Building List from 2018, the NYCHA Development Data Book from 2020, and the NYU Furman Center's CoreData.nyc Subsidized Housing Database. As

[10] NYU Furman Center, Neighborhood Profiles. East New York/Starrett City.

indicated in **Table 3-8**, more than half of the study area's rent regulated units are located within the Spring Creek Towers/Starrett City development, with the remainder of the units spread more evenly throughout the study area Census Tracts.

It should be noted that the information in **Table 3-8** does not account for study area residents who may be eligible for and make use of Section 8 rental assistance vouchers to subsidize their rental payments. During conversations with the local real estate broker from Keller Williams Realty, it was indicated that many renters in the area rely on rental assistance through Section 8 vouchers. Therefore, the analysis below represents a conservative estimate of the number of vulnerable renters in the study area.

Table 3-8 Inventory of Regulated Housing

Census Tract	Address	Program(s)	Units	Development
982	10835 Flatlands Avenue; 254 Stanley Avenue; 757 East 103 St; 10609 Flatlands Ave; 620 East 108 St	NYCHA	1,595	Breukelen Houses
1058.01/ 1058.04	1155 Pennsylvania Ave; 177 Vandalia Ave; 1266 Pennsylvania Ave; 1325 Pennsylvania Ave; 1426 Freeport Loop; 1506 Pennsylvania Ave; 180 Bethel Loop; Seaview Ave; 186 Vandalia Ave; 1279 Pennsylvania Ave; 1540 Van Siclen Ave; 1279 Pennsylvania Ave; 1260 Croton Loop	HUD Project Based Section 8 & NYS HCR Mitchell-Lama & LAMP-HDC & Other HPD Programs	5,881	Spring Creek Towers/Starrett City
1058.04	99 Vandalia Ave	HUD 202 & HPD Article 8A/HRP	122	Council Towers II
1058.04	1170 Pennsylvania Ave	HPD Article 8A/HRP	122	Council Towers III
1058.04	1180 Pennsylvania Ave	HUD 202 & HPD Article 8A/HRP	122	Council Towers IV
1058.04	1 Vandalia Ave	NYCHA	293	Vandalia Avenue
1058.04	1001 to 1031 E. 108th St	Rent Stabilization Program	75	
1058.04	959 to 999 E. 108th St	Rent Stabilization Program	75	
1104	437 De Witt Avenue	LIHTC (NYS HCR) & HPD programs	36	Dewitt Supportive Housing
1104	520 Stanley Ave	NYCHA	336	Pennsylvania Ave-Wortman Ave
1106	215 Wortman Ave; 195 Corzine Ave; 270 Wortman Ave	NYCHA	1,586	Linden Houses
1106	656 Stanley Ave	420-c tax incentive financing, other HUD financing, HPD multifamily program	240	Stanley Commons
1106	890 Schenck Ave	LIHTC (NYS HCR) & HUD Project Rental Assist/202 & 420-c tax	80	Stanley Commons Senior Housing
Total			**10,563**	

Source: NYS HCR Brooklyn Rent Stabilized Building List (2018),* NYCHA Development Data Book 2020, NYU Furman Center's CoreData.nyc.; http://www.springcreektowers.com/

* Data from HCR includes buildings with one or more units that are rent stabilized. For the purposes of this analysis, all units in buildings on the Rent Stabilized Buildings List are counted as non-income-restricted protected units

To determine the number of unregulated rental housing units in the study area, the number of regulated housing units is subtracted from the total number of rental housing units. As shown in **Table 3-9**, there are an estimated 1,523 unregulated rental housing units in the study area, representing 12.6 percent of the total number of rental units that are market-rate or unprotected.

Table 3-9 Study Area Regulated and Unregulated Rental Housing

	Rental Units (% of Total)
Total Renter-Occupied Units	12,086
Total Regulated Rental Units	10,563 (87.4%)
Total Unregulated Rental Units	1,523 (12.6%)

Source: New York City Housing Authority (NYCHA) Development Data Book 2021, New York State Housing and Community Renewal (NYS HCR), and the New York University (NYU) Furman Center

The housing units summarized in **Table 3-9** can be further classified into three categories: 1) those subject to rent regulations and income requirements; 2) those subject to rent regulations but not income requirements; and 3) those subject to neither rent regulation nor income requirements. Units that fall within these categories based on the applicable program requirements are detailed in **Table 3-10**.

Table 3-10 Regulated and Unregulated Housing Categories

Category	Applicable Programs	Total Units
Units subject to rent regulations and income requirements	NYCHA; Project Based Section 8; HPD Article 8A/HRP; LIHTC; HPD multifamily program	10,413
Units subject to rent regulations but not income requirements	Rent Stabilization Program	150
Units subject to neither rent regulation nor income requirements	Unregulated	1,523
Total		**12,086**

Source: New York City Housing Authority (NYCHA) Development Data Book 2021, New York State Housing and Community Renewal (NYS HCR), and the New York University (NYU) Furman Center

The next step in the detailed analysis is to estimate the number of rental units occupied by low-income households in the study area. For purposes of this analysis, low-income is defined as households earning 80 percent or less of AMI. This number is then compared to the estimated number of protected housing units in the study area to determine whether the low-income renter population exceeds the supply of protected rental units. Low-income households living in unprotected rentals may be vulnerable to displacement due to increasing rents. Comprehensive Housing Affordability Strategy (CHAS) data, which is ACS data that is customized for HUD, were used to estimate rental units occupied by low-income households, see **Table 3-11**.

Table 3-11 Renter-Occupied Units in Study Area, 2018

	Total Renter-Occupied Housing Units	Household Income ≤ 30% AMI	Household Income >30% to 50% AMI	Household Income >50% to 80% AMI	Total Household Income ≤ 80% AMI
Study Area	12,040	5,785	1,900	2,375	10,060

Source: 2014-2018 CHAS data

There are an estimated 10,060 low-income (earning ≤ 80 percent AMI) households living in rental units in the study area. Per **Table 3-10**, there are 10,413 regulated rental units in the study area subject to rent regulations and income requirements. Therefore, it is assumed that the study area does not have a significant vulnerable population that may be at risk of indirect displacement.

No-Action Condition

As identified in the preliminary assessment, no significant residential development is currently planned or in construction in the study area, therefore, the No-Action condition is assumed to be the same as the Existing Condition.

With-Action Condition

Proposed Project

The Proposed Actions would facilitate the development of a mixed-use, purpose-built development on the campus of the CCC. The mix of uses would include 2,050 income-based affordable housing units; a performing arts center (PAC); a grocery store; local retail; new publicly accessible open space; and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood. All new housing units developed on the site would be income-based affordable housing ranging from 30 to 100 percent AMI.

The Proposed Project would comply with and exceed the requirements of Option 1 of the City's MIH program. Option 1 has the following requirements:

- 25 percent of new housing units must be set aside for families making an average of 60 percent or less of AMI.
- Of this set-aside, at least 10 percent must be for families making an average of 40 percent or less of AMI.

Sitewide, the Proposed Project would include 50 percent of units at 60 percent of AMI or less, with the majority of these units rented at 40 or 50 percent of AMI and senior housing capped at 60 percent AMI. An additional 25 percent of units would be affordable at 80 percent of AMI or less and the remaining 25 percent of units would be affordable at 100 percent of AMI or less. In all, it is expected that that the first 1,000 homes to be constructed would not include any rents above 80 percent AMI.

The non-MIH units would be income-based affordable housing through various city and state programs for low, moderate, and middle income. The income bands for the affordable

housing units in excess of the MIH requirement, as well as the applicable programs for the senior~~/supportive~~ housing units, will remain subject to the availability of capital subsidy and other public capital sources at the time of construction.

With-Action Rental Market Conditions

In the With-Action Condition, the number of housing units in the study area would increase from 14,893 to 16,692 units. Of the 2,050 new housing units, approximately 1,950 units, or 95 percent, would be affordable rental units. No less than 100 residential units would be maisonettes under affordable home ownership or affordable condominiums.

Per the *CEQR Technical Manual*, the objective of the indirect residential displacement analysis is to determine whether a project may potentially result in displacement of vulnerable populations living in unregulated rental units. The Proposed Project would introduce approximately 1,950 rental units to the study area, increasing the number of occupied rental units from 12,086 occupied rental units to 14,036. Because all of the proposed units would be income-based affordable units, the number of occupied protected rental units in the study area would increase from 10,563 to 12,513 units. The data presented in **Table 3-11** do not indicate a significant vulnerable population living in unregulated rental housing. However, to the extent that a vulnerable population, defined as earning at or less than 80 percent AMI living in unregulated housing, does exist within the study area, the Proposed Project would result in an alternative housing option because 75 percent of the proposed units would be available for households earning 80 percent or less of AMI. It is also noted that, according to a local real estate broker, many renters in the area rely on Section 8 vouchers. Section 8 vouchers would be accepted at the Proposed Development, creating another housing option for low-income renters in the area. The proposed affordable ownership or condominium units would also provide a path for area low-income renters looking to own their home.

It is not expected that real estate market condition in the study area would change significantly or that the Proposed Project would result in significant adverse impacts due to indirect residential displacement.

4

Community Facilities and Services

This chapter assesses the potential impacts of the Proposed Actions on community facilities and services. The *2021 City Environmental Quality Review (CEQR) Technical Manual* defines community facilities as public or publicly funded facilities including schools, libraries, early childhood programs, healthcare facilities, and fire and police protection services.

Introduction

According to the *2021 CEQR Technical Manual*, a community facilities assessment should be conducted if a project would directly or indirectly affect existing community facilities, including publicly supported day care, libraries, public schools, healthcare facilities, and fire and police protection services. A project may affect community services when it physically displaces or alters a community facility or causes a change in population that may affect the services delivered by a community facility, as might happen if a facility is already over-utilized, or if a project is large enough to create a demand that could not be met by the existing facility.

While the Proposed Actions would not physically displace or alter an existing community facility, as described below they would introduce a substantial new residential population to the Project Area, resulting in increased demand for community facilities and services. New community facilities would also be incorporated into the Proposed Project, including a proposed child care facility. Therefore, an assessment was conducted to determine whether the Proposed Actions would result in any significant adverse impacts to community facilities.

Principal Conclusions

In accordance with *CEQR Technical Manual* guidelines, detailed analyses of potential indirect impacts on public elementary and intermediate schools, public libraries, and publicly funded early childhood programs were conducted for the Proposed Actions. A preliminary assessment of healthcare facilities and police and fire protective services identified that the Proposed Project would not introduce a sizeable new population to the neighborhood, nor would it displace or alter the existing healthcare facilities and police and fire protective services. Therefore, significant adverse impacts to healthcare facilities and police and fire protective services are not anticipated and further analysis is not warranted.

Indirect Effects on Public Schools

Following the methodologies in the *CEQR Technical Manual*, the study area for the analysis of elementary and intermediate schools is the school districts' "subdistrict" (also known as a "region" or "school planning zone") in which the Proposed Project is located, specifically Subdistrict 3 of Community School District (CSD) 19.

Under the With-Action condition, the utilization rate of elementary and intermediate schools would not exceed 100 percent. Therefore, based on *CEQR Technical Manual* guidelines, the Proposed Actions would not result in significant adverse impacts to elementary and intermediate schools.

Indirect Effects on Early Childhood Programs

In the With-Action condition, the Proposed Actions would result in the incremental development of approximately 2,050 dwelling units to the Project Area, of which 1,338 units are intended to be affordable for non-senior households with incomes up to 80 percent of Area Median Income (AMI), as compared to the No-Action condition. Based on the multipliers for estimating the number of children eligible for early childhood programs according to the New York City Department of Education (DOE), the Proposed Actions are anticipated to generate the need for approximately 238 childcare slots.

Based on a detailed analysis, early childhood programs would be over capacity with a shortfall of 665 slots in the With-Action condition. The utilization rate would be 141.3 percent and the change in utilization rate would be 14.8 percent. Since the collective utilization rate for early childhood programs would be greater than 100 percent and would increase more than five percent from the No-Action condition, the Proposed Actions would result in a significant adverse impact on publicly funded childcare and Head Start Centers, and would therefore require consideration of mitigation, as discussed in **Chapter 20, Mitigation**. As detailed, the Proposed Project would incorporate a new 12,320-gsf childcare facility within the Project Area.

Indirect Effects on Libraries

There is one library within 0.75 miles of the Project Area: the Brooklyn Public Library Spring Creek branch. As stated in the *CEQR Technical Manual*, a significant adverse impact would occur if a project would increase the population of the library catchment area by five percent or more, and this increase would impair the delivery of library services in the study area. The

catchment area population would increase by ~~seven~~6.9 percent from the No-Action to With-Action condition and the holdings per resident would decrease from 0.0714 in the No-Action condition to 0.0688 in the With-Action condition.

The analysis concludes that the Proposed Project could result in a significant adverse impact to public libraries. Based on the projected population change of 6.9 percent to the Spring Creek Library catchment area population. Per the guidance of the *CEQR Technical Manual*, a proposed project may result in a significant adverse impact to public libraries if the Proposed Project would increase a library catchment area population by 5 percent or more, compared to the conditions in the future without the Proposed Actions, and if this increase would be expected to impair the delivery of library services in the study area. Residents in the catchment area for the library also reside in the catchment areas for other nearby libraries (including Jamaica Bay Library, Canarsie Library, and New Lots Library) and would also be served by these libraries. Both the current and projected populations would also have access to the entire Brooklyn Public Library (BPL) and New York Public Library (NYPL) system through the interlibrary loan system and could have resources delivered to their nearest library branch. Finally, there are thousands of online resources available to card holders throughout the public library system. However, even if the Proposed Project would not affect the access to holdings, the Proposed Project could affect access to computer resources, programming space, and program staffing.

As the Spring Creek Library catchment area population is projected to increase by approximately 6.9 percent, exceeding the 5 percent threshold cited in the *CEQR Technical Manual*, and the Proposed Project could impair the delivery of library services, a significant adverse impact to public libraries could result from the Proposed Project. This impact requires consideration of mitigation, as discussed in **Chapter 20, Mitigation**.

Methodology

The Proposed Actions would not directly displace a community facility, nor would it displace or alter a service. Therefore, an analysis of direct effects to community facilities is not warranted.

The *CEQR Technical Manual* provides thresholds to make an initial determination of whether detailed studies are necessary to determine potential indirect effects on public schools, libraries, early childhood programs, healthcare facilities, and fire and police protection services. According to CEQR guidelines, a project would need to introduce a sizeable new neighborhood to trigger further analysis on police/fire services and healthcare facilities. A new residential development in Brooklyn introducing a minimum of 110 units affordable to residents earning not more than 80 percent of AMI would introduce 20 or more eligible children under age five and therefore would warrant further analysis on early childhood programs. A project generating more than 50 elementary and intermediate school aged children would warrant elementary and intermediate schools analyses, and a project generating more than 150 high school students would warrant a high school analysis. Finally, a project in Brooklyn introducing a minimum of 834 total units would warrant a detailed analysis on libraries.

Using the CEQR App, an analysis tool developed by the New York City Department of City Planning (DCP), the need for detailed analysis under each of these analysis areas was

assessed. As stated previously, the Proposed Actions would introduce approximately 2,050 dwelling units to the Project Area, of which 75 percent or approximately 1,538 are anticipated to be affordable units at or below 80 percent of AMI. In addition, of the approximately 1,538 affordable units, approximately 200 are anticipated to be senior units. Only non-senior units (approximately 1,850 units) are considered for the schools analysis and only affordable, non-senior units (approximately 1,338) are considered to generate eligible children for the early childhood programs analysis (see **Table 4-1** below).

Table 4-1 Residential Community Facilities Increment for Analysis

Land Use	Unit	Existing Condition	No-Action Condition	With-Action Condition	Increment
Residential	*Total Dwelling Units*	0	0	2,050	2,050
	Affordable Units (at or below 80% AMI)	0	0	1,538	1,538
	Senior Units	0	0	200	200
	Total Residential gsf	0	0	1,645,820	1,645,820
Residents[1]		0	0	4,797	4,797
Elementary Students[2]		0	0	334	334
Intermediate Students[2]		0	0	148	148
High School Students[2]		0	0	93	93
Early Childhood Program Eligible Children[3]		0	0	238	238

[1] The number of residents is based on an average household size of 2.43 for the half-mile study area, which is comprised of Census Tracts 982, 984, 986, 1016, 1058.01, 1058.04, 1104 and 1106 (2015-2019 ACS).

[2] The number of students generated is based on the 2019 School Multipliers provided by the SCA for Brooklyn District 19 as reflected in the CEQR App. The multipliers assume 0.18 elementary students per non-senior unit, 0.08 intermediate students per non-senior unit, and 0.05 high school students per non-senior unit.

[3] The number of early childhood program eligible children is determined by the Brooklyn multiplier of 0.178 eligible children per non-senior affordable housing unit at or below 80 percent AMI (*2021 CEQR Technical Manual* Table 6-1a). Note that while the *2021 CEQR Technical Manual* adjusted the eligible age to five years old, the multiplier remains for children under 6 years old.

Public Schools

In conformance with the *2021 CEQR Technical Manual* guidance, the public schools analysis uses the most recent DOE data on school capacity, enrollment, and utilization rates for elementary and intermediate schools in the subdistrict study area and New York City School Construction Authority (SCA) projections of future enrollment to determine indirect effects on public schools (the 2019-2020 SCA Enrollment, Capacity and Utilization Blue Book). The existing conditions of public schools within the study area are examined by assessing their enrollment, target capacity, and available seats to understand the percent utilization for the study area.

Future conditions are then predicted based on SCA enrollment projections and data obtained from the SCA Capital Planning Division on the number of new housing units and students expected at the subdistrict and borough levels. The future utilization rate for school facilities is calculated by adding the estimated enrollment from proposed residential developments in the study area to DOE's projected enrollment and then comparing the resulting projected total enrollment with projected school capacity. DOE does not include charter school enrollment in its projections. DOE's enrollment projections for the years 2019 through 2028, the most recent data currently available, is posted on the SCA website and accessed through the CEQR App[1]. The latest available enrollment projections to 2028 have been used in this analysis to project student enrollment to the 2031 analysis year. These enrollment projections are based on broad demographic trends and do not explicitly account for discrete new residential development projects expected to be completed within the study area. Therefore, the estimated student population from other new development projects expected to be completed within the study area have been obtained from the SCA Capital Planning Division and are added to the projected enrollment to ensure a more conservative prediction of future enrollment and utilization. In addition, any new school projects identified in the DOE Five-Year Capital Plan are included if construction has begun, or if deemed appropriate to include in the analysis by the lead agency and the SCA. This data together provides the basis of the No-Action condition analysis.

The number of students that would be generated by a proposed project are estimated by "Projected Public School Ratios" (i.e., the number of elementary, intermediate, and high school students that would be generated by each residential unit) and assessed under the With-Action condition. The With-Action condition is assessed against the No-Action condition by calculating the change in utilization rates.

Study Area

According to the guidelines presented in the *CEQR Technical Manual*, the study area for the analysis of public elementary and intermediate schools is the school district's "subdistrict" (also known as "regions" or "school planning zones") in which the Project Area is located. Therefore, the schools study area is Subdistrict 3 of CSD 19 (see **Figure 4-1**).

Data Sources

As discussed above, this analysis presents the most recent DOE data on school capacity, enrollment, and utilization rates for elementary and intermediate schools and the SCA projections of future enrollment in the study area as provided and guided by DCP and the CEQR App. The existing conditions analysis uses data provided in the DOE's *Utilization Profiles: Enrollment/Capacity/Utilization, 2019-2020 Edition*. Future conditions are predicted based on SCA enrollment and capacity projections for current schools and schools under construction as provided by the CEQR App. DOE's enrollment projections and projected new housing starts for years 2019-2028, the most recent data currently available, were also provided by DCP through the CEQR App.

[1] Consistent with CEQR methodology, the analysis focuses only on potential impacts on public schools operated by the DOE; private and parochial education facilities as well as charter schools are excluded from the analysis.

Impact Criteria

The effect of new students introduced by a proposed project on the capacity of schools within the study area is evaluated based on the methodology detailed above. According to the *CEQR Technical Manual*, a significant adverse impact may occur if a proposed project would result in both:

- A collective utilization rate of elementary schools or intermediate schools in the subdistrict study area equal to or greater than 100 percent in the future With-Action condition; and,
- For Elementary and middle schools, an increase of 100 or more new students generated from the Proposed Development past the 100 percent utilization rate.

Early Childhood Programs

Publicly financed early childhood education services under the DOE are available for eligible children five years old and younger (until the child is eligible to attend Kindergarten for a fall start date). Early childhood programs comprise EarlyLearn NYC (Child Care and Early Head Start), 3-K, and Pre-K for All. While 3-K and Pre-K programs are free for all three- and four-year-old children in New York City, there are financial and social eligibility requirements for children to enroll in EarlyLearn NYC Child Care and Early Head Start programs. For the purposes of CEQR analyses, the early childhood program analysis is limited to EarlyLearn.

The existing conditions analysis presents the most recent capacity and enrollment data of existing publicly funded early childhood programs within the study area using information from DOE. The early childhood program enrollment in the future No-Action condition is estimated by multiplying the number of new affordable housing units expected in the study area by the CEQR multiplier for estimating the number of children under the age of five eligible for publicly funded early childhood services. For Brooklyn, the multiplier estimates 0.178 eligible children per affordable housing unit (*CEQR Technical Manual* Table 6-1a).[2]

For purposes of this analysis, the early childhood program eligible population resulting from the number of housing units expected to be subsidized and targeted for incomes of 80 percent AMI or below are used as a proxy for eligibility. Therefore, the incremental 1,338 affordable, non-senior units under the With-Action condition is then added to the early childhood program enrollment calculated in the future No-Action condition above. In addition, any changes in capacity due to the introduction of space available as part of the Proposed Actions for use as an early childhood program facility are accounted for.

Study Area

According to the *CEQR Technical Manual*, the study area for the analysis of early childhood programs is typically defined as the area within 1.5 miles of the Project Area. Although there are no locational requirements for enrollment in early childhood programs and parents/guardians can choose an early childhood program close to their employment rather than their residence, centers closest to the Project Area are more likely to be subject to

[2] Note that the *2021 CEQR Technical Manual* Table 6-1a multiplier pertains to children under 6 years old. This multiplier was used for a conservative analysis.

increased demand. Therefore, a 1.5-mile radius around the Project Area was used as the study area for this analysis.

Data Sources

Consistent with the *CEQR Technical Manual,* the data obtained for this analysis is provided by DOE's Division of Early Childhood Education via DCP. DOE did not provide data on changes planned for early childhood programs or facilities in the Project Area under the No-Action condition. However, the Brooklyn Developmental Center FEIS identifies an impact and potential mitigation in the form of added capacity. The With-Action condition is assessed with and without this mitigation.

Impact Criteria

According to the *CEQR Technical Manual*, a significant adverse impact may occur if a proposed project would result in both:

- A collective utilization rate of the early childhood programs in the study area that is greater than 100 percent in the With-Action condition; and,
- An increase of five percent or more in the collective utilization rate between the future No-Action and the future With-Action conditions.

Libraries

Public libraries as analyzed under CEQR are branch libraries operated by the New York Public Library, the Queens Borough Public Library, and the Brooklyn Public Library systems. The analysis of libraries generally focuses on the resources available to the population within the service area(s) of the library or libraries nearest to the Project Area. Potential impacts on libraries can result from an increased user population.

A detailed analysis of libraries includes a description of existing libraries within the study area, their information services, and their user population. Branch holdings and circulation data are identified. Under the No-Action condition, the future population in the study area is determined, and any changes or planned new branches are integrated into the analysis. The With-Action condition is similarly established, and the change over the No-Action condition is assessed for effects on library access and services. Libraries analysis typically compares the population that would be generated by the Proposed Actions with the catchment area population for libraries located within an approximately 0.75-mile radius around the Project Area.

The 2019 American Community Survey (ACS) five-year estimates were assembled for all census tracts that fall primarily within 0.75 miles of a library to determine the existing population of a library's catchment area. The catchment area population in the No-Action condition was estimated by multiplying the number of new residential units in projects located within the 0.75-mile catchment area that are expected to be complete by 2031 by an average household size of 2.34 persons (the average household size for the half-mile study area, including Census Tracts 982, 984, 986, 1016, 1058.01, 1058.04, 1104 and 1106) according to the 2014-2018 ACS five-year estimates. The catchment area population in the With-Action condition was estimated by adding the anticipated population that would result

from the Proposed Actions to the catchment area population estimate in the No-Action condition.

The new population in the No-Action condition and With-Action condition is then added to the existing catchment area population to assess potential effects on public libraries.

Study Area

Library branch catchment areas are typically not more than 0.75 miles from the library branch, which is the distance that one might be expected to travel for such services. One Brooklyn Public Library branch—Spring Creek—is located within a 0.75-mile radius of the Project Area, meaning the Project Area is located within the catchment area of the library. Therefore, the 0.75-mile catchment area for the Spring Creek branch was used as the study area for the analysis.

Data Sources

As discussed above, the 2019 ACS five-year estimates were assembled for all census tracts that fall primarily within 0.75 miles of the library to determine the existing population of the library's catchment area. The Brooklyn Public Library was contacted for the latest data on circulation for the branch within the study area.

Impact Criteria

Generally, if a proposed project would increase the study area population by five percent or more over the No-Action condition population, and it is determined, in consultation with the appropriate library agency, that this increase would impair the delivery of library services in the study area, a significant impact may occur, warranting consideration of mitigation.

Detailed Analysis: Public Schools

Existing Conditions

As shown in **Table 4-2** and **Figure 4-1**, the subdistrict contains five elementary schools with a total enrollment of 1,719 students and a surplus of 958 seats, leading to a utilization rate of 64.2 percent.

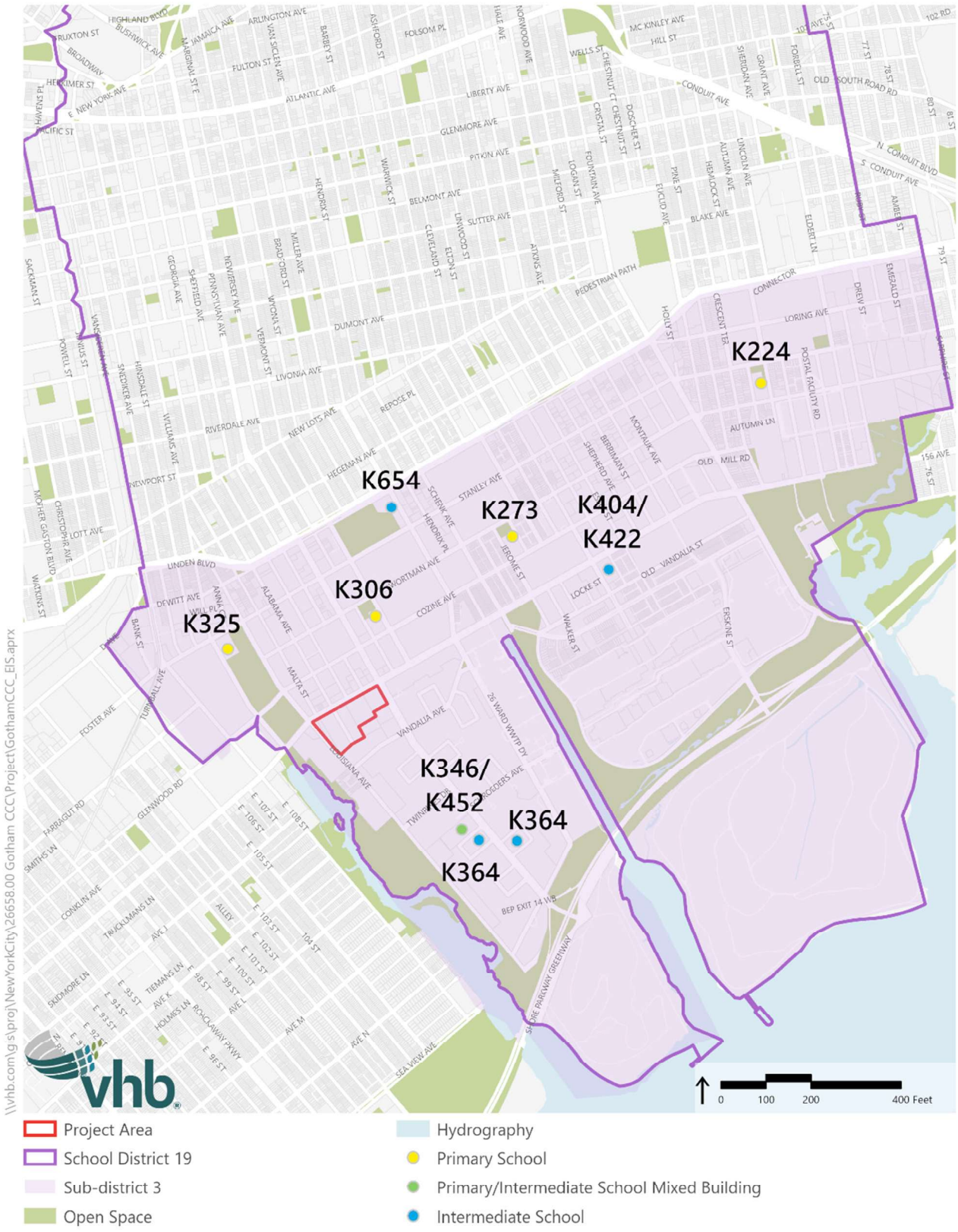
The subdistrict contains six intermediate schools that have an existing total enrollment of 1,934 students and a surplus of 439 seats, leading to an overall utilization rate of 81.5 percent.

Table 4-2 Public School Enrollment, Capacity, and Utilization for Existing Conditions, School District 19, Subdistrict 3

Org. ID	Bldg. ID	School Name	Address	Grades[1]	Enrollment	Target Capacity	Available Seats	Utilization
Elementary Schools								
K224	**K224**	P.S. 224 -Hale A. Woodruff	757 Wortman Avenue	PK-5	332	644	312	52%
K273	**K273**	P.S. 273 - Wortman	923 Jerome Street	PK-5	329	435	106	46%
K306	**K306**	P.S. 306 – Ethan Allen	970 Vermont Street	PK-5	310	510	200	61%
K325	**K260**	P.S. 260 – The Fresh Creek School	875 Williams Avenue	PK-5	190	338	148	56%
K346	**K346**	P.S. 346 – Abe Stark	1400 Pennsylvania Avenue	PK-5	558	750	192	74%
			Study Area Total		**1,719**	**2,677**	**958**	**64.2%**
Intermediate Schools								
K364	**K364**	I.S 364 - Gateway	1426 Freeport Loop	6-8	140	188	48	74%
K364	**K872**	I.S. 364- Gateway Annex	1461 Geneva Loop	6-8	125	307	182	41%
K404	**K422**	Academy for Young Writers- K	1065 Elton Street	6-12	542	571	29	95%
K422	**K422**	Spring Creek Community School - K	1065 Elton Street	6-12	530	467	-63	113%
K452	**K346**	P.S. 346 – Frederick Douglass Academy	1400 Pennsylvania Avenue	6-8	307	406	99	76%
K654	**K166**	I.S. 166 – Van Siclen Community	800 Van Siclen Avenue	6-8	290	434	144	67%
			Study Area Total		**1,934**	**2,373**	**439**	**81.5%**

Source: CEQR App, ~~NYC~~ DOE Enrollment, Capacity and Utilization Blue Book 2019-2020.
Note:
[1] Only Enrollment and capacity data for relevant grades were included for each elementary and intermediate school. Charter, citywide gifted and talented, D75 special education, and D79 alternative high school equivalency schools are not included in the analysis.

Figure 4-1 Public Schools District 19, Subdistrict 3



No-Action Condition

Enrollment Projections

Projected enrollment was determined for the future 2031 No-Action condition using SCA's *Enrollment Projections for the New York City Public Schools, 2019-2028*, which references DOE's projected New Housing Starts, as well as Panel for Educational Policy (PEP) proposals for changes in school utilization.[3] SCA enrollment projections are available at the school district level; they focus on the natural growth of New York City's student population (through births and grade retention) and do not base projections on individual future residential developments planned for the subdistrict study area (No-Action development projects). DCP provided a proportion of this projection that would be allocated to each of the subdistricts. These proportions equate to approximately 1,717 elementary students and 932 intermediate students that would be enrolled in the subdistrict in the future No-Action condition.

The future utilization rate for school facilities is calculated by adding the estimated enrollment from No-Action development projects from DOE's projected New Housing Starts (2019) and other projects not accounted for by DOE, to the SCA's projected enrollment, as noted above. Then the resulting enrollment estimate is compared with projected school capacity. The projected new housing starts data indicates that 424 elementary and 187 intermediate students are expected to be generated by No-Action residential development.[4]

For this analysis, proposed developments within Subdistrict 3 were accounted for in the No-Action condition for when not already included in SCA's Projected New Housing Starts.[5] See **Table 4-3** for the developments included in addition to the Projected New Housing Starts data and an estimate of how many elementary and intermediate school-aged children they would generate. In total, these developments would generate 541 elementary students and 239 intermediate students. With the addition of students expected from these No-Action developments and SCA's Projected New Housing Starts, No-Action enrollment would total 2,682 elementary students and 1,358 intermediate students.

Table 4-3 Public Schools No-Action Condition- Proposed Housing Developments

Project	Total Dwelling Units	Relevant Dwelling Units[1]	Elementary School Children[2]	Intermediate School Children[2]
Brooklyn Developmental Center	2,623	2,392	432	191
Gateway Fresh Creek URA Phase 5	560	560	101	45
Gateway Site 26A	192	0	0	0
East New York Projected Sites 58, 59, and 64[4]	42	42	8	3
Total	**3,417**	**2,994**	**541**	**239**

Notes:
Includes developments within CSD 19 Subdistrict 3 not included in the SCA Projected New Housing Starts as of January 13, 2022.
[1] Excludes senior units
[2] Generation rates of 0.18 elementary students and 0.08 intermediate students per non-senior dwelling unit

[3] SCA Enrollment Projections for the New York City Public Schools, 2019 – 2028.
[4] DOE, Projected New Housing Starts as Used in Enrollment Projections [2018-2027]
[5] As confirmed by DCP.

Projected Capacity Changes

There are two projected capacity changes to schools in the study area expected under the future No-Action condition. For elementary schools, K306 - Ethan Allen is expected to see an increased capacity that will take effect in the 2020-2021 School Year due to proposed re-siting, co-locations, and openings of organizations associated with the school.[6] This would result in a target capacity change from 510 seats to 1,020 seats for K306. The second capacity change is for elementary school K273 - P.S. 273 that is expected to see increased capacity that was projected to take effect in the 2019-2020 School Year due to re-siting and co-location of P.S. K004 to K273. This would result in a total target capacity of 705 students.[7] The resulting overall target capacity would be 3,457 for elementary schools in the study area under the No-Action condition.

Furthermore, the Brooklyn Development Center identified a significant adverse impact to public elementary schools due to a 13.32 percent increase in utilization in CSD 19, Subdistrict 3. The FEIS for the Brooklyn Development Center states that mitigation measures to address the identified significant adverse impact would be explored in consultation with ~~NYCDOE~~DOE and SCA and could include freeing up space, new school construction, or restructuring existing schools. Based on the results of the analysis, the Brooklyn Development Center would need to provide approximately 219 seats. However, since the mitigation has not been defined, it is unclear how it will impact capacity in the district, and therefore the conditions are reported with and without this potential mitigation.

No-Action Utilization

As shown in **Table 4-4**, elementary schools in CSD 19, Subdistrict 3 would operate within capacity, with a ~~72.2~~77.6 percent utilization rate and a surplus of ~~962~~775 seats. Intermediate schools would operate within capacity, with a ~~53.7~~57.2 percent utilization rate and a surplus of 1,~~098seats~~015 seats.

Table 4-4 Projected Public School Enrollment, Capacity, and Utilization for No-Action Condition, School District 19, Subdistrict 3

Projected 2028 Enrollment	Students Introduced by No-Action Residential Development	Total No-Action Enrollment	Capacity	Available Seats	Utilization (%)
Elementary Schools					
1,717	965	2,682	3,457	775	77.6%
Intermediate Schools					
932	426	1,358	2,373	1,015	57.2%

Source: CEQR App, SCA Enrollment Projections for New York City Public Schools by the Statistical Forecasting (2019-2028)

[6] The Proposed Re-siting and Co-location of the Middle School Grades of Achievement First Aspire Charter School (84K680) and the Proposed Opening and Temporary Co-location of Grade Five of Achievement First Linden Charter School (84K788) with P.S. 306 Ethan Allen (19K306) in Building K306 Beginning in the 2018-2019 School Year, October 12, 2017.

[7] The Proposed Re-Siting and Co-location of P.S. K004 (75K004) with P.S. 273 Wortman (19K273) in Building K273 Beginning in the 2019-2020 School Year, February 28, 2019.

With-Action Condition

As detailed above, the Proposed Actions are anticipated to result in the development of 1,850 non-senior dwelling units, which would introduce approximately 334 elementary students and 148 intermediate students to the subdistrict. The Proposed Project would include development of a trade school but is not anticipated to provide additional capacity within the Project Area for public schools.

As shown in **Table 4-5**, elementary schools in CSD 19, Subdistrict 3 would continue to operate within capacity in the With-Action condition. The subdistrict elementary schools would operate at 87.2 percent capacity with ~~800~~441 available seats. The collective utilization rate of elementary schools in the With-Action condition would increase by 9.7 percent from the No-Action condition. Intermediate schools would also continue to operate within capacity. Under the With-Action condition, the subdistrict intermediate schools would operate at approximately 63.4 percent capacity with 950 available seats, a 6.2-percent increase in utilization over the No-Action condition.

Table 4-5 Projected Public School Enrollment, Capacity, and Utilization for With-Action Condition, School District 19, Subdistrict 3

Total No-Action Enrollment	Students Generated by Project	Total With-Action Enrollment	Projected Capacity	Available Seats	Utilization (%) with Project	Change in Utilization (%) from No Action
Elementary Schools						
2,682	334	3,016	3,457	441	87.2%	9.7%
Intermediate Schools						
1,358	148	1,505	2,373	868	63.4%	6.2%

Source: CEQR App, SCA Enrollment Projections for New York City Public Schools by the Statistical Forecasting (2019-2028)

The collective utilization rate for public elementary and intermediate schools in the With-Action condition would not be greater than 100 percent. Therefore, the Proposed Actions would not result in a significant adverse impact to elementary or intermediate schools.

Detailed Analysis: Early Childhood Programs

Existing Conditions

There are 20 publicly funded early childhood programs within the 1.5-mile study area. These early childhood programs have a total capacity of 1,610 seats and have 167 available seats (89.6 percent utilization) (see **Table 4-6**). While family-based childcare facilities and informal care arrangements may provide additional seats in the study area, these seats are not included in the quantitative analysis for conservative analysis purposes.

Table 4-6 Publicly Funded Early Childhood Programs Serving the Study Area

ID	Program Name	Program Address	Borough	Capacity	Enrollment	Available Seats	Utilization Rate (%)
1	Boulevard Nursery School	2150 Linden Boulevard	BK	40	32	8	80%
2	Brooklyn Developmental Center	888 Fountain Avenue	BK	15	10	5	67%
3	Nat Azarow Children's Center	232 Powell St	BK	88	86	2	98%
4	Blake-Milford Day Care Center	334 Milford St.	BK	44	45	-1	102%
5	Sylvia Klein Child Care Center	720 Euclid Avenue	BK	29	17	12	59%
6	Friends of Crown Heights 16	668 Logan Street	BK	83	78	5	94%
7	Friends of Crown Heights 17	921 Hegeman Avenue	BK	80	63	17	79%
8	Friends of Crown Heights 19	370 New Lots Ave	BK	100	88	12	88%
9	Hebrew Educational Society	9502 Seaview Avenue	BK	50	48	2	96%
10	Help 1	515 Blake Avenue	BK	84	81	3	96%
11	Pal Arnold & Marie Schwartz	452 Pennsylvania Ave	BK	103	89	14	86%
12	Pal World Of Creative Experiences	280 Livonia Ave	BK	185	166	19	90%
13	Breukelen Head Start	715 East 105 St.	BK	34	34	0	100%
14	Breukelen Day Care Center	717 East 105th Street	BK	70	63	7	90%
15	FirstStepNYC @ P.S/I.S. 41	225 Newport Street	BK	65	65	0	100%
16	Salvation Army Brownsville	280 Riverdale Avenue	BK	63	55	8	87%
17	United Community Day Care Center	613 New Lots Avenue	BK	94	78	16	83%
18	Children's Corner Day Care Center	565 Livonia Ave	BK	174	140	34	80%
19	Urban Strategies Day Care Center 1	1091 Sutter Ave	BK	139	137	2	99%
20	Urban Strategies Day Care Center 3	1152 Elton Street	BK	70	68	2	97%
			Child Care Total	**1,610**	**1,443**	**167**	**89.6%**

Source: DOE EarlyLearn Contractor Centers Capacity and Enrollment as of 2021, obtained from the Department of City Planning

No-Action Condition

Planned or proposed No-Action development projects in the early childhood programs study area are anticipated to introduce approximately 3,334 new affordable housing units by the analysis year (see **Table 4-7**). Based on the CEQR generation rates for the projection of children eligible for publicly funded day care, these developments would introduce approximately 671 children under the age of six who would be eligible for publicly funded childcare services.

Accounting for the estimated 671 publicly funded childcare-eligible children that would be introduced by the No-Action development projects, it is estimated that early childhood programs in the study area would operate at 126.5 percent utilization with a deficit of 426 slots in the No-Action condition (see **Table 4-8**).

The Brooklyn Developmental Center Mixed-Use Project FEIS identified a significant adverse impact to publicly funded early childhood programs.[8] As mitigation, the Brooklyn Development Center project could include 14,500 sf of space for early childhood programming, and assuming 50 sf per slot, the DEIS estimated it could offer 290 slots for programming. However, the FEIS states that ~~NYCDOE~~DOE will determine the appropriate mitigation measures and therefore the extent of the mitigation and effects on study area capacity cannot be determined. However, if instituted as publicly funded early childhood programs, the study area capacity would be increased to 1,900 slots with a decreased capacity deficit of 136 seats under the No-Action condition. Accounting for this additional capacity, the utilization rate would be 107.2 percent under the No-Action condition.

[8] https://esd.ny.gov/brooklyn-developmental-center-mixed-use-project-final-environmental-impact-statement-feis

Table 4-7 Child-Care Eligible Children Anticipated in No-Action Development Projects

Project	Total Proposed Dwelling Units	Proposed Affordable Units[1]	Multiplier	Child-Care Eligible Children[2]
Schroeders Avenue Development	72	72	0.178	13
Brooklyn Developmental Center	2,623	1,958[3]		349[3]
169 Livonia Avenue	78	78		14
215 Livonia Avenue	96	96		18
449 Chester Street	174	122		22
96 New Lots Avenue	118	118		22
Gateway Fresh Creek URA Phase 5	560	560		100
Gateway Site 26A	192	0		0
Lincoln Wortman Development	207	207		37
East New York Projected Sites 58, 59, and 64[4]	42	21		4
679 Van Sinderen Avenue	102	102		19
Total	**4,624**	**3,334**		**671**

Notes:
[1] Proposed Affordable Units do not include affordable senior units or supportive units that would not generate child-care eligible children
[2] Rounded up to the nearest whole number
[3] The Brooklyn Developmental Center EIS indicates 1,958 non-senior and non-supportive affordable housing units would generate 349 children eligible for publicly funded programs
[4] The East New York Rezoning Proposal (15DCP102K) assumed that 50% of units across all projected development sites would be affordable units

Table 4-8 No-Action Condition Estimated Publicly Funded Child Care Center Enrollment, Capacity and Utilization

Enrollment	Capacity	Available Slots	Utilization Rate (%)	Change in Utilization (%)
2,036	1,610[1]	-426[1]	126.49[1]	36.9

Notes:
[1] If the mitigation identified in the Brooklyn Development Center DEIS is undertaken, the study area would operate with a capacity of 1,900 seats and a deficit of 136 seats. The utilization rate would be 107.2 percent.

Future With-Action Condition

As stated above, 1,338 affordable dwelling units would be provided as part of the Proposed Actions, resulting in an increment of 238 additional childcare-eligible children. This would increase the projected enrollment to 2,275 children, with a resulting utilization of 141.3 percent for early childhood program facilities (see **Table 4-9**). In comparison to the No-Action condition, the utilization rate within the study area would increase by 14.8 percent.

If the Brooklyn Development Center mitigates their impact as proposed in the FEIS, then the study area would operate with a capacity of 1,900 slots and a deficit of 375 slots in the With-Action condition. The resulting utilization rate with the Proposed Actions would be 119.7

percent, an increase in utilization of 12.5 percent over the 107.2 percent that would result in the No-Action condition.

Overall, the collective utilization rate for early childhood program facilities would be above 100 percent and the change in utilization between the No-Action and With-Action conditions would be above five percent regardless of whether No-Action projects mitigate their adverse impacts or not. Therefore, there would be a significant adverse impact on early childhood program facilities due to the Proposed Actions. See **Chapter 20, Mitigation** for potential measures to mitigate this impact. As detailed, the Proposed Project would incorporate a new 12,320-gsf childcare facility within the Project Area that would provide additional capacity in the study area. As discussed in **Chapter 20, Mitigation**, if ~~NYCDOE~~DOE approves of the public funding of this facility, it would mitigate the adverse impact.

Table 4-9 With Action Condition Estimated Publicly Funded Child Care Center Enrollment, Capacity and Utilization

Enrollment	Capacity	Available Slots	Utilization Rate (%)	Change in Utilization
2,275	1,610[1]	-665[1]	141.3[1]	14.8[1]

Notes:
[1] If the mitigation identified in the Brooklyn Development Center DEIS is undertaken, the study area would operate with a capacity of 1,900 seats and a 375-slot deficit. The utilization rate would be at 119.7 percent and the change in utilization would remain at 12.5 percent

Detailed Analysis: Libraries

Existing Conditions

The Project Area is served by the Brooklyn Public Library (BPL) system, which includes 59 neighborhood branches and houses approximately 3.1 million holdings and 2.9 million volumes. One BPL location (see **Figure 4-2**) is located within 0.75 miles of the Project Area. There are also three other nearby BPL Branches: the Canarsie branch is 0.76 miles from the Project Area; the New Lots Branch is 0.87 miles from the Project Area; and the Jamaica Bay Branch 1 mile from the Project Area. These libraries' catchment areas overlap with the Spring Creek Library Catchment area. Although these libraries are not accounted for in the quantitative analysis, they serve portions of the study area population, and thus there are additional library resources for study area residents that are not reflected in the analysis.

The BPL at Spring Creek is located on the corner of New Jersey Avenue and Flatlands Avenue (1143 Flatlands Avenue). **Table 4-10** below provides the number of holdings and total catchment area population served by the Spring Creek branch. Residents can visit and order books from any BPL branch, including the BPL for Teens, a New York Public Library branch, or order books from any of the other library branches. In 2019, the BPL system also provided over 400,000 books, magazines, audiobooks, and other digital assets with a library card, as well as other virtual programming.

The Spring Creek branch is one of the most recent branches added to the BPL system. The branch opened in 1977 and initially offered limited hours and shared its staff with Canarsie

Library. The single-story 7,500-square-foot facility was designed as a low-cost, energy-efficient building. The Spring Creek Library typically offers numerous programs, such as book talks, adult feature films, chess programs, teen gaming, and Story Play, where young children listen to stories while interacting with toys. Based on Fiscal Year 2019, the Spring Creek Library hosted approximately 715 programs attended by over 7,300 participants.[9] Four housing developments—including Starrett City, one of the largest federally-assisted rental properties in the country, with nearly 6,000 units—are located within the neighborhood served by the branch. The library has six public computers, free internet access, printers, and restrooms. The holdings at the Spring Creek branch include books, CD-Roms, DVDs, and videotapes. The branch serves a catchment area population of 68,033 and had average monthly holdings of 4,977 in 2019 (with a monthly range from 3,831 to 5,704 holdings), averaging approximately 0.0731 holdings per resident.

Table 4-10 Existing Conditions Public Library Catchment Area Population and Holdings

ID	Library Name	Address	Holdings[1]	Catchment Area Population[2]	Holdings per Resident
1	Spring Creek	1143 Flatlands Avenue	4,977	68,033	0.0731
		Total	**4,977**	**68,033**	**0.0731**

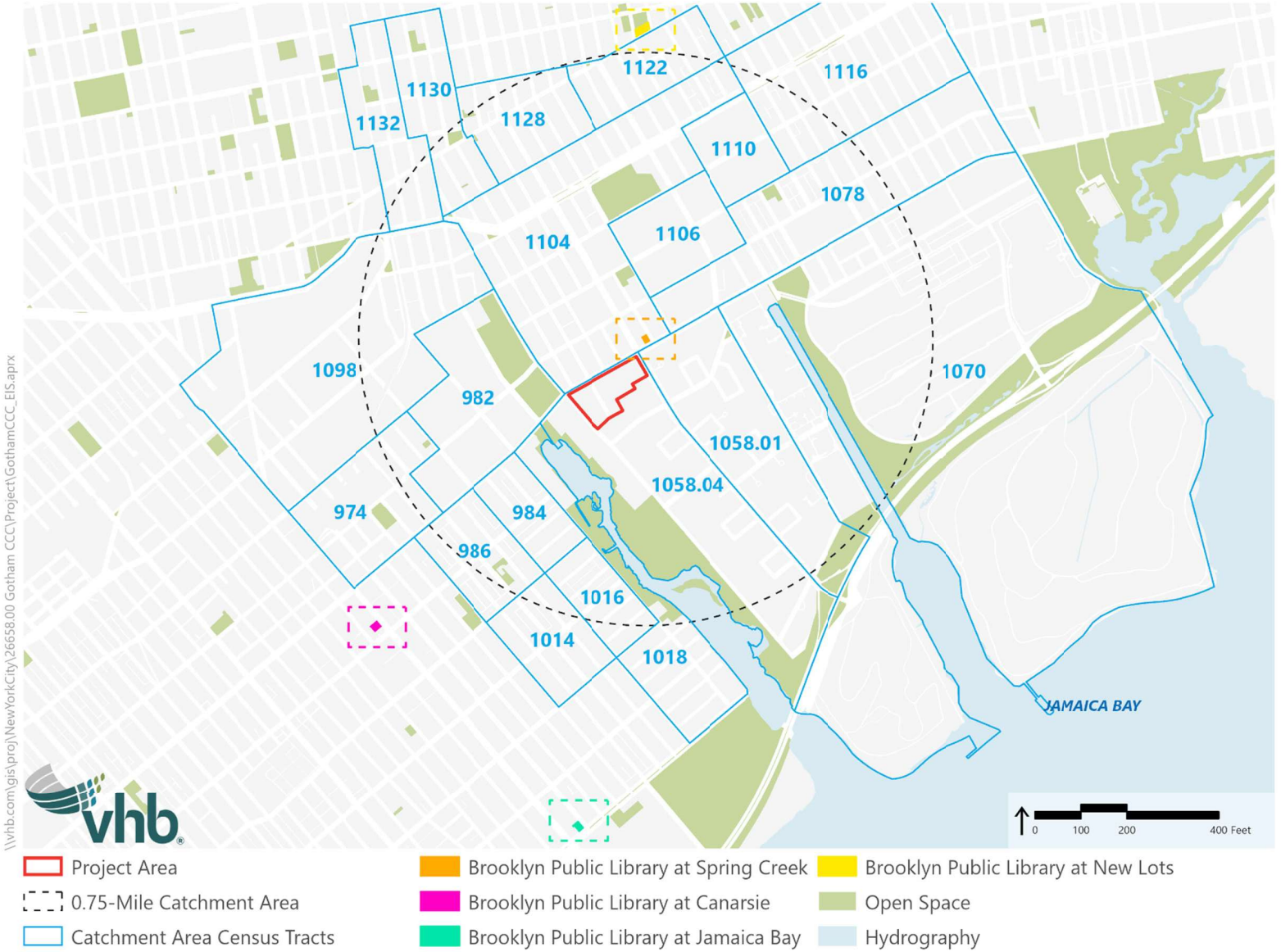
Source: BPL, 2018 ACS 5-year estimates, NYC Capital Planning Platform

[1] Approximate holdings which include books, CD-ROMs, DVDs, and videotapes. Number represents the average monthly holdings for 2019.

[2] 2018 ACS 5-year estimates for census tracts primarily within the library's three-quarter mile catchment area (Census Tracts 974, 982, 984, 986, 1014, 1016, 1018, 1058.01, 1058.04, 1070, 1078, 1098, 1104, 1106, 1110, 1116, 1122, 1128, 1130, 1132)

[9] Brooklyn Developmental Center FEIS

Figure 4-2 Libraries Study Area



No-Action Condition

In the No-Action condition, the existing library will continue to serve the study area. The catchment area population would increase due to planned No-Action development (see **Table 4-11**).

Table 4-11 No-Action Developments Within Library Catchment Area

Development Name	Build Year	Dwelling Units	Expected Population[1]
Schroeders Avenue	2021	72	181
379 Dewitt Avenue	2021	26	65
Gateway/Fresh Creek URA	2031[2]	560	1,406
Total		**658**	**1,652**

[1] This number was calculated by multiplying the number of dwelling units introduced by No-Action developments with the average household size of 2.51 for the study area census tracts defined in **Table 4-9.**

[2] Projects for which no build year is available are assumed to be completed and operational by the completion of the Proposed Project

As shown in **Table 4-12**, planned No-Action developments would introduce approximately ~~658~~1,652 residents in 658 dwelling units to the catchment area, increasing its population to 69,685. Assuming no increase in holdings in the No-Action condition, the holdings-per-resident ratio for the library would decrease from 0.0731 in existing conditions to 0.0714 in the No-Action condition.

Table 4-12 No-Action Condition Public Library Catchment Area Population and Holdings

Library Name	No-Action Holdings Total	No-Action Residents	No-Action Catchment Area Total Population	No-Action Holdings per Resident
Spring Creek	4,977	1,652	69,685	0.0714

It is important to note that the BDC development is not within the library catchment area and is therefore not accounted for in the No-Action development table. However, it is also served by the Spring Creek Library Branch. The FEIS determined that the BDC project "would increase the catchment area population and alter the demographics such that the Spring Creek Library's programming space and staffing could be impaired" and that, "mitigation measures could include providing indoor/outdoor space on the Project Site to accommodate BPL programming, creating programs to accommodate new users, or alleviating staffing constraints through funding one or more new program staff positions. In addition, the Developer has committed to provide Project residents with access to low-cost or free internet as well as computer lab/reading areas within the Proposed Project, a measure that BPL agreed would avoid impairment of its provision of public computer access at the Spring Creek Branch. The full range of mitigation measures ultimately implemented would rely upon input from BPL, which would undertake ongoing monitoring to determine the appropriate mitigation measures as the Proposed Project is occupied. As well as

providing internet access and computer lab/reading areas within the Proposed Project." Further coordination is committed to in the FEIS and could result in additional space on the BDC site to serve the library, programming, or staffing to mitigate the identified adverse impact.

With-Action Condition

As shown in **Table 4-13**, the Proposed Actions would result in an incremental increase of approximately 4,797 new residents (an approximately 6.9-percent increase over the No-Action catchment area population). With the Proposed Actions, the holdings-per-resident ratio for the Spring Creek Library catchment area would decrease from 0.0714 to 0.0668 (a decrease of approximately 0.005 holdings per resident).

Table 4-13 With-Action Condition Public Library Catchment Area Population and Holdings

Library Name	With-Action Holdings Total	Proposed Project Residents	With-Action Catchment Area Population	With-Action Holdings per Resident	Population Increase
Spring Creek	4,977	4,797	74,482	0.0688	6.9%

Per the guidance of the *CEQR Technical Manual*, a proposed project may result in a significant adverse impact to public libraries if the Proposed Project would increase a library catchment area population by 5 percent or more, compared to the conditions in the future without the Proposed Actions, and if this increase would be expected to impair the delivery of library services in the study area.

Residents of the Spring Creek Library catchment area also reside in catchment areas for other nearby libraries, including the Jamaica Bay Library, Canarsie Library, and New Lots Library as described above, and therefore would also be served by these libraries. Both the current and projected populations would also have access to the entire BPL and NYPL system through the interlibrary loan system and could have resources delivered to their nearest library branch. Finally, there are thousands of online resources available to card holders throughout the system.

However, it is possible that although the Proposed Project may not affect the study area population's access to holdings due to widespread availability, that it could affect computer resources, because the Branch has a limited number of computers and tablets available for public use. Furthermore, since the Proposed Project would increase the catchment area population, it could alter the demographics such that the Spring Creek Library's programming space and staffing could be impaired.

Therefore, since the Spring Creek Library's catchment area population is projected to increase by approximately 6.9 percent, exceeding the 5 percent threshold cited in the *CEQR Technical Manual*, and the Proposed Project could impair the delivery of library services, the analysis concludes that a significant adverse impact to public libraries could result from the Proposed Project. This impact requires consideration of mitigation, as discussed in **Chapter 20, Mitigation**.

5

Open Space

This chapter assesses the potential impacts of the Proposed Actions on open space. The *2021 City Environmental Quality Review (CEQR) Technical Manual* defines open space as publicly or privately-owned land that is publicly accessible and available for leisure, play, or sport, or is set aside for the protection and/or enhancement of the natural environment.

Introduction

The Applicant, Innovative Urban Living, LLC, is seeking discretionary approvals from the City Planning Commission (CPC) to facilitate the proposed large-scale development of a site located on Block 4430, Lot 1 and Block 4434, Lots 1 and 10 in the East New York neighborhood of Brooklyn Community District 5 (the Development Site). These approvals include a zoning map amendment, zoning text amendments to establish the Project Area as a Mandatory Inclusionary Housing area and to expand the boundary of the Transit Zone to include the Project Area, a large-scale general development special permit, and a special permit for a public parking garage (the Proposed Actions).

The Proposed Actions would include approximately 84,950 square feet (sf) or approximately 1.95 acres of publicly accessible open space consisting of an entry plaza that would serve as a public facing entrance to the Christian Cultural Center (CCC), a public arcade connecting to the central community facility core of the Proposed Project, a quad to serve as a central gathering space, and interconnecting landscaped areas and pathways. The Proposed Actions would incorporate approximately 36,000 sf (approximately 0.83 acres) of privately owned

passive open space across the Project Area including residential building courtyards and rooftops. It would also incorporate approximately 29,400 sf (approximately 0.67 acres) of privately owned active open space including a playground for the childcare facility and residents and a recreational space to be located on top of the parking garage. Overall, the Proposed Project would consist of a mixed-use, purpose-built community on the site of the existing CCC, comprising income-based affordable housing, a performing arts center (PAC), local retail, and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood (the Proposed Project). This would include a total of approximately 2,200,538 gsf of development to be constructed in phases over a planned 10 years, with 10 buildings ranging from two to 15 stories.

Principal Conclusions

The Proposed Actions would not have a direct impact on open space resources in the study area. The Proposed Actions would not result in the physical loss of existing public open space resources, and would not result in any adverse shadow, air quality, noise, or other environmental impacts that would affect the usefulness of any study area open space. As the Proposed Actions are expected to introduce approximately 4,797 residents and 480 incremental workers in the future with the Proposed Actions, a detailed open space analysis for a residential (half-mile) study area was conducted to assess the potential for indirect effects, pursuant to the *CEQR Technical Manual*. The Proposed Project would not generate a net increase in workers above the 500-worker threshold. Therefore, a non-residential open space analysis is not warranted.

In the future with the Proposed Actions, within the half-mile residential study area, the passive open space ratio (OSR) would decrease by 5.30 percent to 0.652 acres per 1,000 residents; although this decrease is greater than the City's guideline of five percent, the passive OSR would remain higher than the benchmark ratio of 0.50 acres per 1,000 residents. The active and total OSRs would remain below the City's guideline ratios of 2.0 acres per 1,000 residents and 2.5 acres per 1,000 residents, respectively, in the future with the Proposed Actions. The active OSR would decrease by 12.97 percent to 1.140 acres per 1,000 residents and the total OSR would decrease by 10.33 percent to 1.792 acres per 1,000 residents. Although the project would result in percent increases that exceed the DCP Guidelines, it is anticipated that any potential for adverse open space impacts would be alleviated by qualitative factors, including the introduction of approximately 0.67 acres of private active open space and approximately 0.83 acres of private passive open space as part of the Proposed Project and the open space resources available to the thousands of residents of the adjacent Spring Creek Towers (formerly Starrett City).

As described below, there would be a temporary indirect active open space impact during construction related to the phasing of the project as new demand for open space resources would materialize from residents prior to the completion of all of the planned on-site open spaces. Therefore, a discussion of mitigation is warranted, see **Chapter 20, Mitigation**. This temporary impact would be eliminated upon full build-out of the project when all proposed open spaces are constructed.

Furthermore, the Spring Creek Towers/Starrett City open space resources are for residents only and are therefore not accounted for in the open space calculations; however, it is anticipated that the residents would continue to use these on-site open space amenities. Open spaces in the adjacent NYCHA Breukelen and Linden Houses such as basketball courts and playgrounds are available for use by residents of those housing developments, though not considered in the quantitative analysis. In addition, the 400-acre Shirley Chisholm State Park is located just outside of the study area, which could be reasonably assumed to be utilized by study area residents and residents introduced by the Proposed Actions. Further, the residential study area has a higher median age and a greater percentage of senior citizens than Kings County or New York City as a whole, which would reflect a higher demand for passive open space resources and less demand for active open space amenities. Therefore, the Proposed Project would not result in any permanent open space impacts.

Methodology

Per guidance in the *CEQR Technical Manual*, an open space analysis is generally conducted if a proposed project would generate more than 200 new residents or 500 new employees. As shown in **Table 5-1**, the With-Action condition would result in a net increase of approximately 4,797 residents and approximately 480 workers compared with the No-Action condition.

Table 5-1 Future No-Action and With-Action Population/Employment Summary

Use	Existing Conditions	Future No-Action Condition	Future With-Action Condition	Increment
Residential Units	0	0	2,050 units	2,050 units
Commercial (Local Retail, Trade School, Performing Arts Center and Grocery Store)	0	0	110,570 gsf	110,570 gsf
Community Facility (CCC, Day Care/Senior Center/Medical Office)	92,784 gsf	92,784 gsf	100,904 gsf	8,120 gsf
Population/Employment				
Residents[1]	0	0	4,797	4,797
Workers[2]	130	130	610	480

Notes:

[1] Based on the Average Household Size for the eight census tracts that comprise the residential study area of 2.34 (2018 5-yr ACS)

[2] Worker estimates were derived using ratios provided by the NYC Department of City Planning. The number of employees working in residential buildings was calculated by dividing the total residential units by 25 dwelling units. The number of retail and grocery workers was calculated by dividing the total commercial gsf by 333.3 sf. The Performing Arts Center, Trade School, and general community facility space including a day care and senior center was calculated by dividing the total gsf by 333.3 sf. The number of employees of the existing CCC Building was provided by the CCC.

The open space analysis was conducted in accordance with the methodology outlined in the *CEQR Technical Manual*. The purpose of the analysis is to provide an evaluation of the study area's existing open space conditions relative to the open space needs of the study area's users, and to predict and compare conditions relative to open space needs in the future without and with the Proposed Actions. Since the Proposed Actions would introduce additional residents and workers to the area, which would place demands on the study area's

active and passive open space resources, the analysis examines the amount of active and passive open space available in the future with and without the Proposed Actions in order to quantify the potential impact from the Proposed Actions.

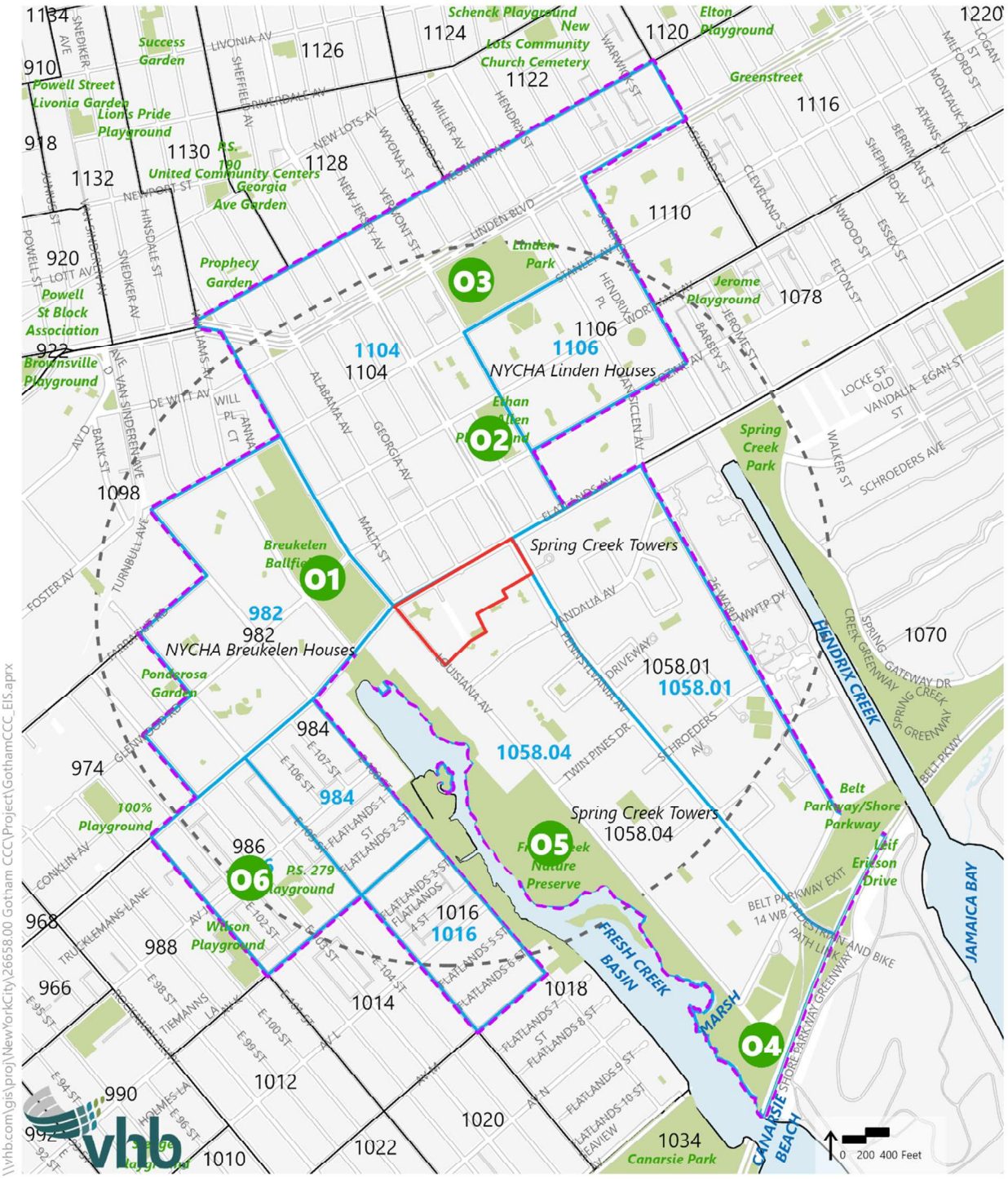
Open Space Study Area

According to the *CEQR Technical Manual*, the first step in an open space analysis is to define and map a study area to allow analysis of both the open spaces and the population using those open spaces within a specified distance of a project. The size of the study area is based on the distance a person may be reasonably assumed to walk to reach a local open space. Workers typically use passive open spaces within a quarter mile of their workplace, while residents use both passive and active open spaces and are more likely to travel farther—up to a half-mile from their places of residence—to reach open spaces. Because the Proposed Project would generate a net increase in residents above the 200-resident threshold compared to the future No-Action condition, a residential study area was defined. The Proposed Project would not generate a net increase in workers above the 500-worker threshold. Therefore, a non-residential open space analysis is not warranted.

Residential Study Area

Pursuant to *CEQR Technical Manual* guidance, the residential study area comprises all census tracts that have at least 50 percent of their area located within a half-mile radius of the Project Area. Eight census tracts have at least 50 percent of their area located within a half-mile of the Project Area, including 982, 984, 986, 1016, 1058.01, 1058.04, 1104 and 1106 (see **Figure 5-1**).

Figure 5-1 Half-Mile Open Space Study Area Map



Direct Effects Analysis

Consistent with the *CEQR Technical Manual*, a direct effects analysis should be performed if a proposed project would directly affect open space conditions by causing the loss of public open space; changing the use of an open space so that it no longer serves the same user population; limiting public access to an open space; or increasing noise or air pollutant emissions, odor, or shadows that would temporarily or permanently affect the usefulness of a public open space. A proposed project can also directly affect an open space by enhancing its design or increasing its accessibility to the public. The Proposed Actions would not result in any of the conditions described above; therefore, no direct effects analysis is warranted.

Indirect Effects Analysis

The *CEQR Technical Manual* states that indirect effects may occur when the population generated by a project would overtax the capacity of open spaces so that their service to the future population of the affected area would be substantially or noticeably diminished. The Proposed Actions would result in a net increase of approximately 4,797 residents compared to the future No-Action condition. Therefore, a residential analysis of indirect effects is required within an approximately half-mile radius study area. The purpose of the indirect effects analysis is to quantitatively assess the adequacy of open space in the study area for existing and potential future users based on an inventory of open space resources and the effect the residential population increase anticipated with the Proposed Project as well as any population increase in the No-Action condition due to other planned or proposed developments.

Specifically, an indirect effects analysis for residential populations includes:

- The number of residents in the residential study area analysis, which was calculated based on population data from the 2015-2019 5-year American Community Survey (ACS) for census tracts within the study area.
- An inventory of all publicly accessible open spaces in the study area, using secondary sources supplemented with field surveys.
- A quantitative assessment of the OSR in the study area for residents—calculated as the ratio of open space acreage to user population—compared to benchmarks established in the *CEQR Technical Manual*. These include the optimal ratio for resident populations, which is 2.0 acres of active open space per 1,000 residents and 0.5 acres of passive open space per 1,000 residents.
- A qualitative assessment of the condition and usage of open space resources in the study area, based on field visits conducted on April 9, 2021, and May 4, 2021.
- A qualitative assessment of open space resources within or adjacent to the residential study area that are not included in the quantitative assessment but could reasonably be assumed to be utilized by existing residents or by those introduced by the Proposed Actions.

According to the *CEQR Technical Manual*, projects that may result in significant quantitative impacts on open space resources, are typically further assessed in a qualitative assessment to determine the overall significance of the impact. Because the quantitative assessment

concluded that residential active and passive OSRs would decrease by an amount greater than DCP Guidelines, a full qualitative assessment was also included.

Walk-to-a-Park Initiative

New York City, as part of the OneNYC 2050 Building a Strong and Fair City plan, has put forth a goal for 85 percent of New York City residents living within a walking distance of a park by 2030. To help the City reach this goal, NYC Parks has a Walk-to-a-Park initiative that focuses on increasing access to parks and open space in areas of the City where residents live further than a walk to a park. According to Walk-to-a-Park service area geographic data provided by the City, the Project Area does not overlap with any known walk gap areas (see **Figure 5-2**). Therefore, a detailed assessment is not required based on the results of the Walk-to-a-Park analysis. However, a detailed assessment is warranted based on a preliminary quantitative assessment as previously discussed.

Figure 5-2 Walk to a Park Service Area



Impact Assessment

The determination of significant adverse impacts is based on how a project would affect the OSRs in the study area, as well as qualitative factors not reflected in the quantitative assessment. According to the *CEQR Technical Manual*, if a proposed project would reduce an OSR and consequently result in overburdening existing facilities, or if it would substantially exacerbate an existing deficiency in open space, it may result in a significant impact on open space resources. In general, if (1) a study area's OSRs fall below DCP Guidelines, and (2) a proposed project would result in a decrease in the OSR greater than the percent change threshold associated with OSR ranges, it could be considered a substantial change requiring additional analysis. In areas that have been determined to be extremely lacking in open space, a reduction as small as one percent may be considered significant warranting further analysis (see **Table 5-2**).

Table 5-2 Percent Change Guidance to Determine Possible Open Space Impact

Total Open Space Ratio Range	Active Open Space Ratio Range	Passive Open Space Ratio Range	Percentage Change in Open Space Ratio Signifying a Possible Adverse Open Space Impact
2.01 to 2.50 or greater	1.61 to 2.0 or greater	0.41 to 0.50 or greater	5%
1.51 to 2.00	1.21 to 1.60	0.31 to 0.40	4%
1.01 to 1.50	0.81 to 1.20	0.21 to 0.30	3%
0.51 to 1.00	0.41 to 0.80	0.11 to 0.20	2%
0.50 or less	0.01 to 0.40	0.01 to 0.10	1%

Note: A 2.5 OSR is the planning goal in NYC as set by DCP, with an optimal distribution goal of 2.0 Active OSR and 0.5 Passive OSR. OSRs are represented in acres per 1,000 residents

As discussed under the With-Action Condition section, the total OSR falls into the 1.51 to 2.00 acres per 1,000 residents range, and therefore a 4 percent change threshold is relevant for impact assessment. Similarly, the active OSR falls into the 0.81 to 1.20 acres per 1,000 residents range, requiring a 3 percent change threshold and the passive OSR falls into the 0.41 or greater acres per 1,000 residents, requiring a 5 percent change threshold. As discussed below, the quantitative assessment determined that the Proposed Project would result in residential passive, active, and total OSRs exceeding these thresholds. Therefore, a detailed assessment of indirect effects on open space is included below.

Detailed Assessment

Existing Conditions

Study Area Population

Residential Study Area

As shown in **Table 5-3**, based on the 2015-2019 ACS 5-Year Estimates, the eight census tracts in the residential open space study area contain a total residential population of 32,252.

Residential Population Age Distribution

Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children four years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages five through nine typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for activities such as ball playing, running, and skipping rope. Children ages ten through 14 use playground equipment, court spaces, and sports fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 20 and 64 continue to use court game facilities and fields for sports, as well as more individualized recreation such as rollerblading, biking, and jogging, requiring bike paths, promenades, and roadways. Adults also gather with families for picnicking, ad hoc active sports, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

As shown in **Table 5-4**, residents between 20 and 64 make up the largest age cohort (approximately 61 percent) of the residential population in the half-mile residential study area. The next highest cohort is residents aged 65 years and over (approximately 21.1 percent). There is a higher percentage of 65 years and older residents in the study area as compared to Kings County (14.3 percent) and New York City (14.1 percent) as a whole. The higher percentage of senior citizens in the study area is also evident when comparing the median age of the study area to that of Kings County and New York City. The study area's median age is 39.8 compared with 35.6 in Kings County and 37.2 in New York City. The study area median ages by census tract range from a low of 30.1 in Census Tract 1106 and to a high of 50.7 in Census Tract 1058.04. This demographic data for the residential open space study area suggest a need for facilities geared towards the recreational needs of adults and senior citizens, as the study area exhibits a high percentage of residents in the 65 years and older age bracket. The intensity of demand for publicly accessible active open space is less in the residential study area than in Kings County or New York City as a whole because of a higher-than-average median age and percentage of senior citizens as a portion of the population total.

Table 5-3 Existing Population in the Study Area

Census Tract	Residential Population
982	4,532
984	1,998
986	2,856
1016	1,715
1058.01	5,809
1058.04	6,744
1104	5,407
1106	4,191
Total	**32,252**

Table 5-4 Existing Population within the Study Area

Census Tract	Total Residential Population	Age Distribution												Median Age
		Under 5		5 to 9		10 to 14		15 to 19		20 to 64		65 years and over		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
982	4,532	458	10.1%	487	10.7%	249	5.5%	435	9.6%	2,345	51.7%	558	12.3%	30.4
984	1,998	138	6.9%	135	6.8%	52	2.6%	152	7.6%	1,203	60.3%	318	16.1%	41.4
986	2,856	189	6.6%	131	4.6%	184	6.4%	121	4.2%	1,861	65.2%	370	13.0%	37.1
1016	1,715	148	8.6%	69	4.0%	59	3.4%	97	5.7%	1,060	61.9%	282	16.5%	36.0
1058.01	5,809	273	4.7%	46	7.5%	403	6.9%	116	2.0%	2,597	44.7%	1,984	34.1%	50.3
1058.04	6,744	312	4.6%	427	6.3%	258	3.8%	368	5.5%	3,227	48.1%	2,152	31.9%	50.7
1104	4,407	321	7.3%	285	6.5%	279	6.3%	305	6.9%	2,580	58.4%	637	14.4%	37.2
1106	4,191	292	7.0%	471	11.2%	240	5.7%	320	7.6%	2,381	56.8%	487	11.6%	30.1
Total	32,252	2,131	6.6%	2,051	6.4%	1,724	5.4%	1,914	5.9%	17,254	53.5%	6,788	21.1%	39.8
Kings County Total	2,559,903	182,787	7.1%	151,579	5.9%	159,586	6.2%	135,493	5.3%	1,563,080	61%	367,378	14.3%	35.6
NYC Total	8,336,817	551,869	6.5%	476,567	5.6%	464,704	5.5%	455,674	5.4%	5,305,538	62.8%	1,189,361	14.1%	37.2

Source: 2015-2019 ACS 5-year Estimates
Note: Percentages may not add up to 100 due to rounding

Study Area Open Space Resources

Open space that is accessible to the public on a constant and regular basis, including for designated daily periods, is defined as publicly accessible and is analyzed as such per *CEQR Technical Manual* guidelines. Publicly accessible open space may be under government or private jurisdiction and includes open space designated through regulatory approvals, such as public plazas. Private open space—that which is not publicly-accessible or is available only to limited users and is not available to the public on a constant and regular basis—is not included in CEQR-compliant quantitative open space analyses.

In addition to the distinction between public and private open spaces, individual spaces may also be classified as either active or passive, according to the types of activities for which the space is primarily used. Open space that is used for sports, exercise, or active play is classified as active and consists mainly of recreational facilities, while open space that is used for relaxation, such as a plaza, is classified as passive. Some types of open space facilities, such as esplanades, may be devoted to both active and passive uses.

In conducting the open space analysis for the Proposed Actions, publicly accessible open spaces within the study area were inventoried. The open space resources were identified by their location, owner, features, total acreage, and acreage of passive and active areas. The secondary sources for this analysis included land use and geographic PLUTO data at the tax lot level and additional data provided by the New York City Department of Parks and Recreation (NYC Parks). According to the *CEQR Technical Manual*, public open space does not include Greenstreets, malls without seating, or sidewalks.

Quantitative Assessment

The half-mile study area contains six open space resources, as shown in **Figure 5-3**. Open spaces in the study area total 64.43 acres, including 42.24 acres of active open space and 22.19 acres of passive open space. These spaces are described below.

Diagonally across the intersection of Flatlands Avenue and Louisiana Avenue from the Project Area is Breukelen Ballfields and Playground, a 16.16-acre park with several amenities primarily for active recreation. This open space resource contains five baseball fields, handball courts, and a playground.

On the north side of the residential open space study area is Linden Park, which is located off of Linden Boulevard. Linden Park is a 9.32-acre park that also contains several amenities for active recreation including a football field, running track, basketball field, tennis and handball courts, and a playground.

Just west of the Project Area is the Fresh Creek Nature Preserve, which spans both sides of Fresh Creek, a narrow waterbody that flows from North Channel in Jamaica Bay inland to Flatlands Avenue. The eastern portion of Fresh Creek Nature Preserve, closer to the Project Area, contains walking paths through the marsh, which provide opportunities for bird watching. However, the western portion of the nature preserve, just outside of the study area, is not publicly accessible.

In addition, though a small portion of Spring Creek Park is located within the residential study area and included in the quantitative analysis, the majority of the park is outside of the study area. The park is similar in its amenities to Fresh Creek Nature Preserve and contains

walking paths through wildlife refuges and marshes. Spring Creek Park also contains cricket fields, which is a rare open space amenity for New York City parks.

There are also two small playgrounds located in the residential study area, which are jointly operated by NYC Parks and the New York City Department of Education (NYC DOE) due to their location adjacent to public schools. Ethan Allen Playground is a publicly accessible park that serves as the schoolyard for the adjacent P.S. 306 and contains basketball and handball courts and a playground. P.S. 279 Playground is a small through-block park that serves the adjacent school of the same name and contains basketball courts and a playground.

Qualitative Assessment

As shown in **Table 5-5,** all of the open space resources in the half-mile study area were found to be in acceptable or good condition and have low to moderate rates of utilization on weekdays based on field visit conducted in early May. One open space, Linden Park, was found to be in good condition due to a $9 million renovation, which was completed in 2019[1]. The turf field, running track, playground, and courts are all in good condition with limited wear and tear.

In addition to the open spaces detailed above, there are several open space resources located within the Spring Creek Towers/Starrett City complex directly adjacent to the Project Area, including playgrounds and basketball courts. However, as was confirmed during field observations, the playgrounds and basketball courts are for use by residents of the Spring Creek Towers/Starrett City complex only. While these open spaces are not publicly accessible, they are available to the thousands of residents of the Spring Creek Towers/Starrett City. Due to the private nature of the Spring Creek Towers/Starrett City open space resources, they were not included in the quantitative analysis. Open spaces in the adjacent NYCHA Breukelen and Linden Houses, such as basketball courts and playgrounds, are available for use by residents of those housing developments as well as the residents of the surrounding neighborhood—though they are not considered in the quantitative analysis.

There are several publicly accessible open spaces located just outside of the study area, which were therefore excluded from the quantitative analysis. The largest of these parks is Shirley Chisholm State Park, which is located southeast of the Project Area on the opposite side of the Spring Creek Towers/Starrett City and the Belt Parkway. The state park is a destination and comprises over 400 acres with ten miles of biking and hiking trails, waterfront access, and fishing areas. Spring Creek, mentioned previously, is another example, which is primarily located outside of the study area but contains destination amenities such as a cricket field.

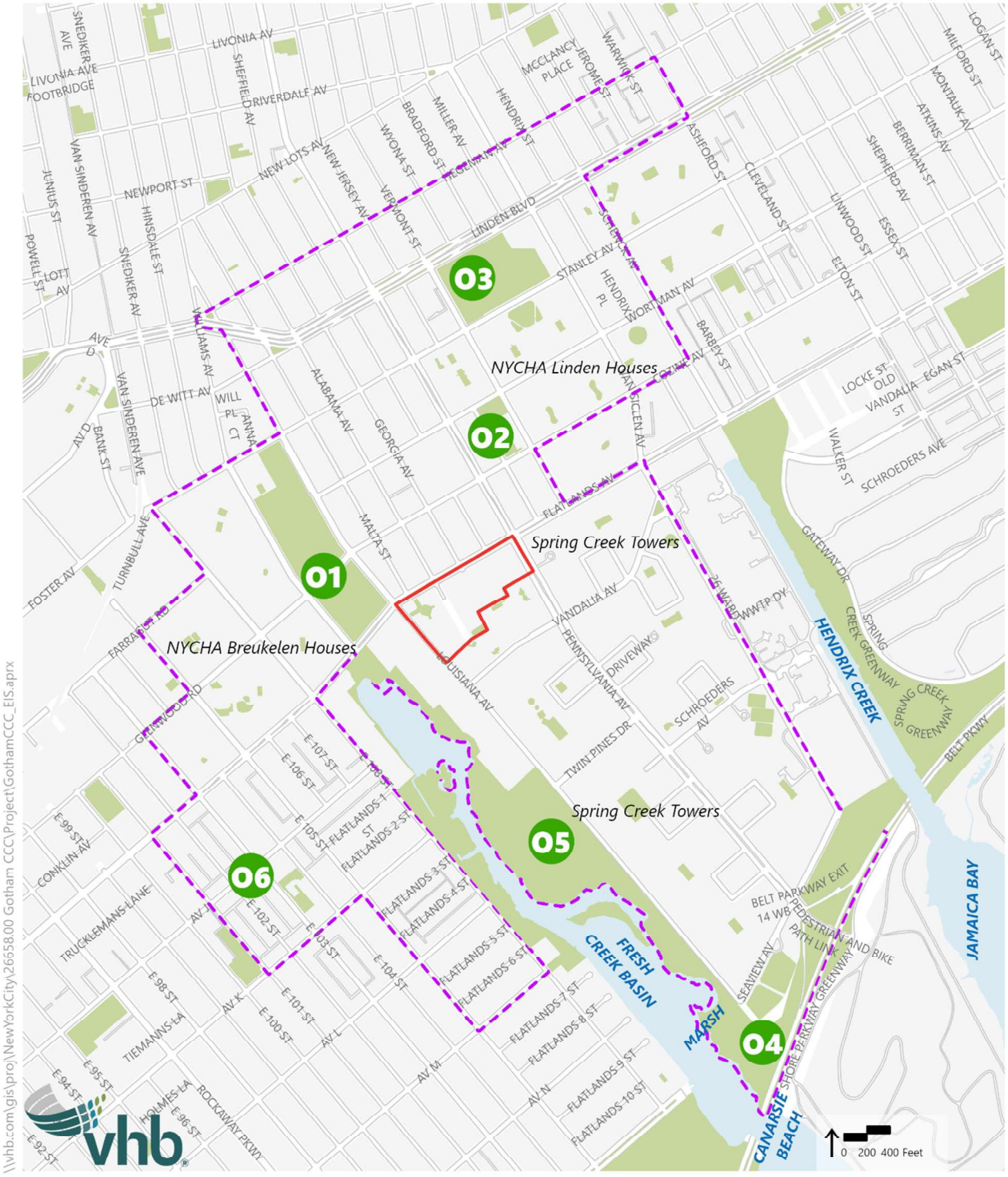
[1] https://www.bkreader.com/2018/12/19/east-new-york-parks-get-much-needed-renovations/

Table 5-5 Existing Study Area Open Spaces

Map No.	Name	Owner/ Agency	Features and Amenities	Total Acres	Active (Acres)	Passive (Acres)	Condition	Utilization
O1	Breukelen Ballfields/ Playground	NYC Parks	Baseball fields, handball courts, playground, bathrooms	16.16	12.93	3.23	Acceptable	Low
O2	Ethan Allen Playground	NYC Parks/ NYC DOE	Playground, basketball and handball courts, bathrooms	0.80	0.80	0.0	Acceptable	Low
O3	Linden Park	NYC Parks	Football and soccer field, basketball, handball, and tennis courts, playground	9.32	9.32	0.0	Good	High
O4	Spring Creek Park	NYC Parks	Walking paths	2.20	1.10	1.10	Acceptable	Low
O5	Fresh Creek Nature Preserve	NYC Parks	Walking paths	35.72	17.86	17.86	Acceptable	Low
O6	P.S. 279 Playground	NYC Parks/ NYC DOE	Playground, basketball and handball courts	0.23	0.23	0.0	Acceptable	Moderate
			Study Area Total	**64.43**	**42.24**	**22.19**		
			Percent of Study Area Open Space	**100%**	**65.56%**	**34.44%**		

Source: NYC Department of Parks and Recreation

Figure 5-3 Residential Open Space Inventory



Adequacy of Open Spaces

The residential open space analysis focuses on open space that may be used by residential populations. Using *CEQR Technical Manual* guidelines, the adequacy of open space was evaluated by comparing the ratio of existing active and passive open space acreage in the study area per 1,000 residents with the CEQR benchmark of 2.0 acres of active open space and 0.5 acres of passive open space per 1,000 residents.

The existing residential population of the study area was estimated at 32,252 people. The study area currently has an overall OSR of 1.998 acres per 1,000 residents, which is below the City's goal of 2.5 acres per 1,000 residents but above the citywide median of 1.5 acres per 1,000 residents (see **Table 5-6**). The study area's active OSR is 1.310 acres per 1,000 residents, below the City's guideline of 2.0 acres per 1,000 residents, and the passive OSR is 0.688 acres per 1,000 residents, which is above the City's guideline of 0.5 acres per 1,000 residents. Thus, based on the quantitative analysis, the study area is adequately served by passive open space, with a deficit in active open space and total open space.

Table 5-6 Existing Conditions – Adequacy of Open Space Resources in Half-Mile Study Area

Residential Population	Open Space Acreage		Ratios[1]	DCP Guidelines
32,252	Active	42.24	1.310	2.00
	Passive	22.19	0.688	0.50
	Total	**64.43**	**1.998**	**2.50**

[1] Acres per 1,000 people.

No-Action Condition

Study Area Population

Absent the Proposed Actions, no new development would occur in the Project Area. There are also no anticipated residential developments that would add a significant number of residents to the study area by the project build year as described in **Chapter 2, Land Use, Zoning and Public Policy**. Therefore, the residential population in the No-Action condition is the same as under Existing Conditions detailed above.

Study Area Open Spaces

In the No-Action condition, no new publicly accessible open space is anticipated to be constructed in the study area. There are no ongoing or planned capital improvement projects at parks or open spaces in the study area. Therefore, the open space acreage in the No-Action condition is the same as under Existing Conditions.

Adequacy of Open Spaces

In the No-Action condition, the OSRs in the study area would remain the same as under Existing Conditions, as detailed in **Table 5-7**. The active OSR would be 1.310 acres per 1,000 residents, which is below the City's guideline of 2.0 acres per 1,000 residents. The passive OSR would be 0.688 acres per 1,000 residents, which would be above the City's guideline of

0.5 acres per 1,000 residents. The total OSR would be 1.998 acres per 1,000 residents, which is below the City's guideline of 2.5 acres per 1,000 residents. Thus, based on the quantitative analysis, in the No-Action condition the study area would be adequately served by passive open space, however there would be a deficit in active open space and total open space.

Table 5-7 No-Action Condition – Adequacy of Open Space Resources in the Half-Mile Study Area

Residential Population	Open Space Acreage		Ratios[1]	DCP Guidelines
32,252	Active	42.24	1.310	2.00
	Passive	22.19	0.688	0.50
	Total	**64.43**	**1.998**	**2.50**

[1] Acres per 1,000 people.

With-Action Condition

Study Area Population

In the With-Action Condition, the Development Site would be developed with approximately 2,200,538 gsf of new residential, commercial, community facility, and parking space, including 2,050 new residential units. In total, the Proposed Actions would introduce an estimated 4,797 additional residents to the study area compared with the No-Action condition.

In the With-Action condition, the introduction of approximately 4,797 new residents would result in a total residential population of 37,049 in the half-mile study area.

Study Area Open Spaces

As part of the Proposed Project, approximately 1.95 acres of publicly accessible passive open space would be created in the Project Area. The approximately 84,950 sf of publicly accessible passive open space would consist of an entry plaza, public arcade, central quad, and landscaped areas and pathways with fixed seating. The entry plaza would be provided on the corner of Flatlands Avenue and Louisiana Avenue, providing a public facing entrance to the CCC. The entry plaza would provide passive space for sitting, with contemplative gardens flanking the plaza that would provide landscaped pedestrian connections to the remainder of the Project Area. The proposed central quad would be located in front of the proposed PAC and would serve as a central gathering space for residents and visitors to the proposed community facilities, including the CCC and PAC. This space would feature walking paths, benches, and landscaping. The public arcade and would be located along Building 5, providing public access for the PAC and the central quad to Flatlands Avenue.[2] See **Figure 5-4** below. The arcade would be an open air passive open space that would include fixed seating and possibly other seating and may also include temporary attractions such as art installations or other programming related to the adjacent community facility tenant.

[2] The proposed publicly accessible open space areas would be managed by the Applicant. Public access to these spaces would be assured via a restrictive declaration.

With the addition of the Proposed Project's publicly accessible passive open spaces, the total open space acreage within the study area would increase to approximately 66.38, including approximately 24.14 acres of passive open space and approximately 42.24 acres of active open space.

Figure 5-4 Illustrative Diagram of Proposed With-Action Active and Passive Open Space



In addition to the publicly accessible passive open space that would be created, the Proposed Project would incorporate private open space, including approximately 0.83 acres of passive open space and approximately 0.67 acres of active open space that would be available to Project Area residents. The proposed private passive open space would be developed across eight of the proposed mixed-use buildings and would primarily include building courtyards and terraces/rooftop areas. The active open space would be comprised of an approximately 18,400-sf recreation area and basketball court, located on the roof of the parking garage, and an approximately 11,000-sf playground located adjacent to the proposed day care (see **Figure 5-4**). For quantitative analysis purposes, these open spaces are considered private. However, the garage rooftop recreation area and playground would

be accessible to the public during specified hours.[3] In addition, it is anticipated that these on-site open space resources would attract residents and reduce the burden of the influx of new residents on existing open space facilities in the study area. These open spaces are considered further in the qualitative assessment below.

Adequacy of Open Spaces

Quantitative Assessment

In the future with the Proposed Actions, the residential population in the half-mile study area is estimated at 37,049. Under the With-Action condition, the OSRs would decrease compared with the No-Action condition. As shown in **Table 5-8**, the active OSR would be 1.140 acres per 1,000 residents, which is a decrease of 0.170 acres per 1,000 residents, or 12.97 percent compared with the No-Action condition. The passive OSR would be 0.652 acres per 1,000 residents, which is a decrease of 0.036 acres per 1,000 residents, or 5.30 percent. The overall OSR would be 1.792 acres per 1,000 residents, which is a decrease of 0.206 acres per 1,000 residents, or 10.33 percent. As in the No-Action condition, the passive OSRs would remain above the guideline of 0.50 acres of passive open space per 1,000 residents. However, the active OSR and the total OSR would continue to be lower than the guidelines of 2.0 and 2.5 acres of open space per 1,000 residents, respectively.

The relevant *CEQR Technical Manual* impact thresholds are presented above under **Impact Assessment**. Although the passive OSR would change by more than the relevant *CEQR Technical Manual* impact threshold of five percent, the OSR would be approximately 30 percent above the DCP guideline of 0.50 acres per 1,000 residents. The active and total OSRs would be below the DCP guidelines, and would decrease by more than the relevant *CEQR Technical Manual* impact thresholds of three and four percent, respectively. However, it is anticipated that the approximately 0.83-acres of private passive open space and approximately 0.67-acres of active open space to be provided on-site as part of the Proposed Project would alleviate the use of nearby existing open spaces from the introduction of 4,797 new residents as a result of the Proposed Actions.

Table 5-8 With-Action Condition – Adequacy of Open Space Resources in the Half-Mile Study Area

Residential Population	Open Space Acreage		Ratios[1]	DCP Guidelines
37,049	Active	42.24	1.140	2.00
	Passive	24.14	0.652	0.50
	Total	**66.38**	**1.792**	**2.50**

[1] Acres per 1,000 people

[3] The proposed active open space areas would be managed by the Applicant. The rooftop recreation space, considered private active open space, would be accessible to the public with the exception of peak church parking demand periods on Tuesday evenings and Sundays and within the hours posted per the public access agreement (PAA). The playground would be available to the public outside of day care operating hours.

Qualitative Assessment

As described previously, all open spaces in the study area were found to be in acceptable or good condition and to have low to moderate utilization rates on weekdays with the exception of Linden Park, which has high utilization.

The study area has a higher median age and a greater percentage of senior citizens than Kings County and New York City as a whole. Therefore, the demand for open space in the future should be geared towards an older and aging population, which includes active recreation such as tennis courts and passive recreation such as walking paths and seating areas. The amount of publicly accessible passive open space in the study area would increase as a result of the Proposed Actions. The Proposed Project would introduce approximately 1.95-acres of public passive open space within the Project Area consisting of an entry plaza, public arcade, a central quad, and interconnecting landscaped areas and pathways. The passive OSR would decrease by more than five percent as a result of the Proposed Actions but would remain above the passive open space guideline. Although the active, passive and total OSRs would decrease by more than three, five and four percent, respectively, as a result of the Proposed Actions, qualitative factors help to lessen their effects. The Proposed Project would create approximately 0.83 acres of private passive open space in the form of terraces for residents' use and approximately 0.67 acres of active open space in the form of a playground and recreational area. The garage rooftop recreation space, considered private active open space, would be accessible to the public within the hours posted per the Public Access Agreement (PAA) with the exception of peak church parking demand periods on Tuesday evenings and Sundays. During peak church demand, an additional 25,410 sf of parking space would be provided on the rooftop for increased parking capacity. The playground would be available to the public outside of day care operating hours.

It is anticipated that the on-site open space resources, such as a new playground adjacent to the child care facility, recreational facility on the roof of the parking garage and balconies, would help to reduce the demand on existing publicly accessible active and passive open space. In addition, the Proposed Actions would facilitate the development of approximately 104,150 sf of private streets and sidewalks that would serve area residents and visitors.

The adjacent Spring Creek Towers/Starrett City also has private athletic facilities, such as basketball and tennis courts and playgrounds, that are not accounted for in the quantitative analysis but are available for use by the 12,956 residents of that housing development. It is anticipated that the availability of on-site open space resources would help to reduce demand on publicly accessible open space resources within the study area. Similarly, open spaces in the adjacent NYCHA Breukelen and Linden Houses, such as basketball courts and playgrounds, are available for use by residents of those housing developments as well as the residents of the surrounding neighborhood, though not considered in the quantitative analysis. There are also several large publicly accessible open spaces located just outside of the study area. Among them is Shirley Chisholm State Park, which is an approximately 400-acre destination park with ten miles of biking and hiking trails, waterfront access, and fishing areas. It could be reasonably assumed that residents of the Proposed Project and other residents of adjacent residential buildings would utilize this park although it is located just outside the bounds of the study area.

Determining Impact Significance

According to the *CEQR Technical Manual*, a proposed action may result in an indirect significant adverse open space impact if it would reduce the OSR by more than the percent change threshold for the associated OSR range and cause the study area's OSR to fall or remain below DCP Guidelines, which could indicate that open space facilities may become overburdened or that a deficiency in open space may become exacerbated.

A summary of the results of the indirect residential open space analysis is presented in **Table 5-9** and each open space type is discussed below.

Table 5-9 Residential Open Space Analysis Summary

Ratio	DCP Guideline	Open Space Ratios per 1,000			Relevant Percent Change Threshold (%)	Percent Change (%)
		Existing	No-Action	With-Action		
Residential Half-Mile Study Area						
Active	2.00	1.310	1.310	1.140	-3.0	-12.97
Passive	0.50	0.688	0.688	0.652	-5.0	-5.30
Total	2.50	1.998	1.998	1.792	-4.0	-10.33

Passive Open Space

In the With-Action condition, the passive OSR in the residential half-mile study area would decrease by 5.30 percent compared with the No-Action condition (0.688 to 0.652 acres per 1,000 residents), which exceeds the relevant *CEQR Technical Manual* percent change threshold of 5 percent for passive open space ratios in the range of 0.41 acres per 1,000 residents or greater category. However, it would continue to meet and exceed the DCP passive open space guideline of 0.50 acres per 1,000 residents.

Active Open Space

The active OSR in the residential half-mile study area would decrease by 12.97 percent compared with the No-Action condition (1.310 to 1.140 acres per 1,000 residents), which exceeds the relevant *CEQR Technical Manual* percent change threshold of 3 percent for active open space ratios in the range of 0.81 to 1.20 acres per 1,000 residents. The active OSR would remain below DCP Guidelines of 2.00 acres per 1,000 residents.

During construction, it is anticipated that the active OSR would exceed a 3 percent change once the first 425 units are constructed and occupied (approximately 997 residents are anticipated) during the first phase of construction. With the Central Quad and the Entry Plaza and walkways constructed in the later phases of the project, a temporary indirect active open space impact would result. Therefore, a discussion of mitigation measures for this temporary active open space impact is provided in **Chapter 20, Mitigation**.

Total Open Space

The total OSR in the residential half-mile study area would decrease by 10.33 percent compared with the No-Action condition (1.998 to 1.792 acres per 1,000 residents), which

exceeds the percent change threshold of four percent for overall open space ratios in the range of 1.51 to 2.00 acres per 1,000 residents. The total OSR would remain below DCP Guidelines of 2.50 acres per 1,000 residents. The effect on total open space is driven by the change in active open space ratios, as discussed above.

With the creation of new private passive and active open space as part of the Proposed Project, as well as the qualitative factors discussed, OSR decreases would be offset upon completion of construction and there would be no active open space impact at full build-out of the project. As discussed above, qualitative factors include the presence of other private open spaces in adjacent NYCHA developments and Spring Creek Towers/Starrett City, and the proximity to large destination parks such as Shirley Chisholm State Park, and the condition and utilization of study area open spaces. Furthermore, the Applicant will commit to providing public access to all Publicly Accessible Areas ~~(PAA)~~ as defined in the Restrictive Declaration.

The new residential population would be introduced before With-Action condition open spaces, resulting in a temporary active open space impact. This impact would not be permanent given the new open spaces that would be provided on-site during later phases of construction. Further, it is anticipated that the qualitative factors described above sufficiently lessen the effects of the introduction of approximately 4,797 new residents on publicly accessible facilities and no permanent significant adverse impacts are anticipated.

6

Shadows

A shadow is defined in the *2021 CEQR Technical Manual* as the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space, or feature. The purpose of this chapter is to assess whether new structures may 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.

Introduction

According to the *2021 CEQR Technical Manual*, a shadows assessment is warranted for proposed actions that would result in new structures greater than 50 feet in height or that are located adjacent to, or across the street from, a sunlight-sensitive resource. Such resources include publicly accessible open spaces, important sunlight-sensitive natural features, or historic resources with sun-sensitive features. A significant adverse shadow impact occurs when the incremental shadow added by a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

As described in **Chapter 1, Project Description**, the Proposed Actions would facilitate the development of 12 new buildings including an above-grade accessory parking garage and Performing Arts Center (PAC), With the exception of the PAC, all of the new buildings would have heights greater than 50 feet (see **Figure 6-1**). Maximum building heights range from an

approximately 87-foot-tall parking garage to an approximately 161-foot-tall mixed-use building (176 feet tall including a 15-foot bulkhead). The approximate maximum height of each individual building, with bulkhead, is listed in **Table 6-1** below. Four of the proposed buildings (Buildings 7/8 and 9/10) would front on Louisiana Avenue on the west side of the Project Area; four (Buildings 1, 3, 5, and 6) would front on Flatlands Avenue on the north side of the Project Area; and two buildings (Buildings 1 and 2) would front on Pennsylvania Avenue. Building 1 would be located at the corner of Flatlands Avenue and Pennsylvania Avenue and would have frontage on both Flatlands and Pennsylvania Avenues. The proposed parking garage would be located along a proposed interior roadway on the south side of the Project Area, adjacent to Building 9/10. Building 4 would also be located along the proposed interior roadways. The ten proposed mixed-use buildings would incorporate a series of setbacks before reaching their maximum height, as depicted in **Figure 6-1** below.

Figure 6-1 With-Action Site Axonometric with Proposed Land Uses



Source: Practice for Architecture and Urbanism (PAU)

Table 6-1 Proposed Project Building Height

	Building										
	1	2	3	4	5	6	7	8	9	10	Parking Garage
Height (ft)	161	140	150	129	153	155	134	134	133	133	87
Height w/ Bulkhead (ft)	176	155	165	144	168	170	149	149	148	148	127

Principal Conclusions

A preliminary shadows assessment conducted for the Proposed Project determined that in the With-Action condition, project-generated shadows could reach two sunlight sensitive resources: Breukelen Ballfields and the Fresh Creek Nature Preserve. The assessment shows that shading that could occur on Fresh Creek Nature Preserve on the June 21st analysis day would be de minimis and does not warrant further analysis. Breukelen Ballfields could receive shading on three analysis days, but the shading would be of short duration and in the early morning, and therefore is not anticipated to affect the vegetation or public use of the park. Therefore, there would be no significant adverse impacts from the Proposed Project with respect to shadows as a result of the Proposed Actions.

Methodology

According to the *2021 CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. In accordance with the *CEQR Technical Manual*, a preliminary screening assessment is conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year; if the preliminary assessment indicates that, in the absence of intervening buildings, shadows from a project could reach sunlight-sensitive resources on any of the representative analysis days, a detailed analysis is typically warranted. The representative analysis days are December 21 (winter solstice), June 21 (summer solstice), March 21/September 21 (vernal/autumnal equinox), and May 6/August 6 (halfway between summer solstice and the equinoxes).

Sunlight-Sensitive Resources

The *CEQR Technical Manual* defines sunlight-sensitive resources as those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. The following are considered to be sunlight-sensitive resources: [1]

[1] According to the *2021 CEQR Technical Manual*, City streets, sidewalks, and private open spaces (such as private residential front and back yards, stoops, and vacant lots) are not considered to be sunlight-sensitive resources.

- Public open space (e.g., parks, beaches, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The uses and vegetation in an open space establish its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather-dependent features like wading pools and sand boxes, or vegetation that could be affected by loss of sunlight during the growing season (i.e., March through October); and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include passive uses, such as sitting or sunning; active uses, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants, and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season, is a minimum requirement.
- Features of historic architectural resources that depend on sunlight for their enjoyment by the public. Only the sunlight-sensitive features are considered, as opposed to the entire architectural resource. Sunlight-sensitive features include the following: design elements that are part of a recognized architectural style that depends on the contrast between light and dark (e.g., deep recesses or voids such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); elaborate, highly carved ornamentation; stained-glass windows; exterior building materials and color that depend on direct sunlight for visual character (e.g., the polychromy (multicolored) features found on Victorian Gothic Revival or Art Deco façades); historic landscapes, such as scenic landmarks including vegetation recognized as an historic feature of the landscape; and structural features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as an historic landmark.
- Natural resources where the introduction of shadows could alter the resource's condition or microclimate. Such resources could include surface water bodies, wetlands, or designated resources such as coastal fish and wildlife habitats.

Preliminary Assessment

The preliminary screening assessment consists of three tiers of analysis:

- **Tier 1 Screening:** The first tier determines a simple radius around the proposed buildings representing the longest shadow that could be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier;
- **Tier 2 Screening:** The second-tier analysis reduces the area that could be affected by project-generated shadows by accounting for a specific range of angles that can never receive shade in New York City due to the path of the sun in the northern hemisphere. According to the *CEQR Technical Manual*, shadows cannot be cast within New York City within 108 degrees from True North. Topographic lines are included to demonstrate the terrain of the area;
- **Tier 3 Screening:** If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by new shadows by looking at specific representative days of the year and determining the maximum extent of shadow over the course of

each representative day. For the Tier 3 screening, three-dimensional modeling software with the capacity to model shadows is used, and the maximum building envelope that could be achieved as a result of the proposed project is modeled and geo-located within the program. Terrain, which has been included in the Tier 1 and Tier 2 screenings, is also incorporated into the model to account for how changes in elevation throughout the study area can influence shadows that could be cast by the proposed project. The representative days are December 21 (winter solstice), June 21 (summer solstice), March 21/September 21 (vernal/autumnal equinox), and May 6/August 6 (halfway between summer solstice and the equinoxes). The modeling software is also used to approximate times that shadows cast from the proposed project could enter and exit a sunlight-sensitive resource.

Detailed Assessment

If the Tier 3 screening indicates that, in the absence of intervening buildings, shadows from a proposed project would reach a sunlight-sensitive resource on any of the representative analysis days, a detailed shadow analysis would be warranted. Because existing buildings (or No-Action buildings) may already cast shadows on a sunlight-sensitive resource, a proposed project may not result in additional (incremental) shadows upon that resource. The detailed shadow analysis models a baseline condition (future No-Action) that is compared to the future condition resulting from a proposed project (future With-Action) to illustrate the shadows cast by the No-Action development and distinguish the additional (incremental) shadow cast by the project. The detailed shadows analysis uses a combination of Geographic Information Systems (GIS) 3D modeling and Sketchup, a 3D modeling software, as well as GIS data provided publicly.

Determination of Significance

As described in the *CEQR Technical Manual*, an incremental shadow is generally not considered significant when its duration is no longer than 10 minutes at any time of year and the resource continues to receive substantial direct sunlight. A significant shadow impact generally occurs when an incremental shadow of 10 minutes or longer falls on a sunlight-sensitive resource and results in one of the following:

- Vegetation: a substantial reduction in sunlight available to a sunlight-sensitive feature of the resource to less than the minimum time necessary for its survival (when there was sufficient sunlight in the future without the project), or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).
- Historic and cultural resources: a substantial reduction in sunlight available for the enjoyment or appreciation of the sunlight-sensitive features of an historic or cultural resource.
- Open space utilization: a substantial reduction in the usability of open space as a result of increased shadow, with consideration given to anticipated new users and the open space's utilization rates throughout the affected time periods as well as to the inventory of available open space resources in the study area.
- For any sunlight-sensitive feature of a resource: complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination

results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

In general, a significant adverse shadow impact occurs when the incremental shadow added by a proposed action falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

Preliminary Assessment

Tier 1 and 2 Screening

As described above and in **Chapter 1, Project Description**, the Proposed Actions would facilitate the construction of 12 new buildings, including an accessory parking garage and the PAC. With the exception of the PAC, all of the buildings would exceed 50 feet in height. The ten mixed-use buildings would range in maximum height from approximately 129 to 161 feet (144 to 176 feet including a 15-foot bulkhead). The proposed parking garage would be approximately 87 feet tall.

For conservative analysis purposes, the maximum shadow screening radius was drawn around the Project Area based on the height of the tallest proposed building (Building 1), which would be located at the corner of Pennsylvania Avenue and Flatlands Avenue. The resulting maximum shadow screening radius is 756.8 feet, which is the height of the tallest building (176 feet including bulkhead) multiplied by 4.3. The area that cannot be shaded by the Proposed Project was drawn from the southernmost point of the Project Area.

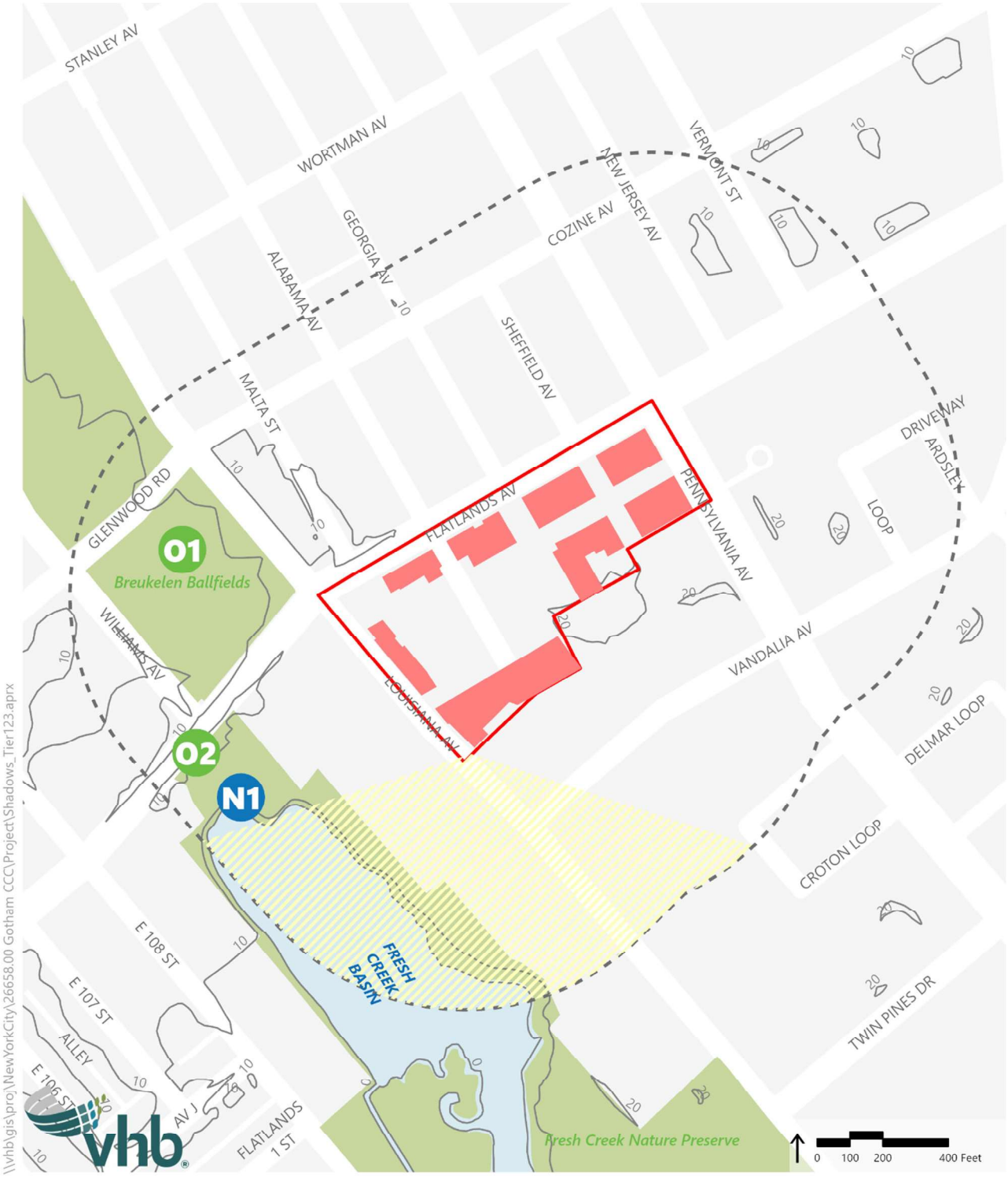
The Tier 1 and 2 screening assessment determined that there are two open space resources and one natural resource within the maximum shadow screening radius drawn from the Project Area. Breukelen Ballfields (O1) is a 16.16-acre park located diagonally across Flatlands Avenue and Louisiana Avenue from the Project Area. Fresh Creek Nature Preserve (O2) comprises the waterfront of Fresh Creek Basin (N1), which are both located southeast of the Project Area. These three resources were therefore advanced to a Tier 3 screening assessment, which is provided in the next section. **Table 6-2** lists and **Figure 6-2** shows the potential sunlight-sensitive resources identified in the Tier 1 and Tier 2 screening assessment.

Table 6-2 Sunlight-Sensitive Resources in the Study Area

Map ID	Resource Name	Potential Resource Summary	Sunlight-Sensitive Elements
Open Space/Historic Resources			
O1	Breukelen Ballfields	16.16-acre park with five baseball fields, handball courts and playgrounds	Active recreation and vegetation
O2	Fresh Creek Nature Preserve	77.04-acre nature preserve with walking paths	Vegetation, wetlands
Natural Resources			
N1	Fresh Creek Basin	Waterbody that extends from Jamaica Bay inland to Flatlands Avenue	Surface waterbody, wetlands

Source: NYC Department of Parks and Recreation open space database, NYC Capital Planning Platform POPS map, New York Cultural Resource Information System, NYC Landmarks Preservation Commission map.

Figure 6-2 Tier 1 and Tier 2 Screening



Tier 3 Screening Assessment

In accordance with the *2021 CEQR Technical Manual*, a Tier 3 screening assessment was performed because the Tier 1 and Tier 2 assessments identified several sunlight-sensitive resources within ±108 degrees of True North and within the area of the longest shadow that could be cast by the Proposed Project.

The Tier 3 screening assessment was performed for the four representative days of the year set forth in the *CEQR Technical Manual*: December 21, the winter solstice and shortest day of the year; March 21/September 21, the equinoxes; May 6/August 6, the midpoints between the summer solstice and the equinoxes; and June 21, the summer solstice and the longest day of the year.

In accordance with the *CEQR Technical Manual*, a model of the building in the With-Action condition was developed in a three-dimensional computer program (ArcGIS Pro). The model was geolocated, and the surrounding terrain was imported into the model to account for how topography affects shadow length. As noted above, the Tier 3 shadow screening shows the shadows that could be cast as a result of the Proposed Project but does not account for existing buildings which may already cast shadows on the identified resources. **Figure 6-3** through **Figure 6-6** below show the Tier 3 screening results.

As shown, the Tier 3 screening indicates that in the absence of intervening structures, the Proposed Project could cast shadows on Breukelen Ballfields (O1) on the March 21/September 21, May 6/August 6, and June 21 analysis days. There would be incremental shading on the northeastern edge of the Fresh Creek Nature Preserve (O2) on the June 21 analysis day (see **Figure 6-6**); however, the shading would not extend very far into this resource. There would be no shading as a result of the Proposed Project on Fresh Creek Basin (N1). Therefore, no further analysis of the potential effects of shading as a result of the Proposed Actions is required for Fresh Creek Nature Preserve (O2) and Fresh Creek Basin (N1). Further discussion of the Tier 3 shadows that would be cast on Breukelen Ballfields (O1) is provided below.

Figure 6-3 Tier 3 Screening December 21 Analysis Day

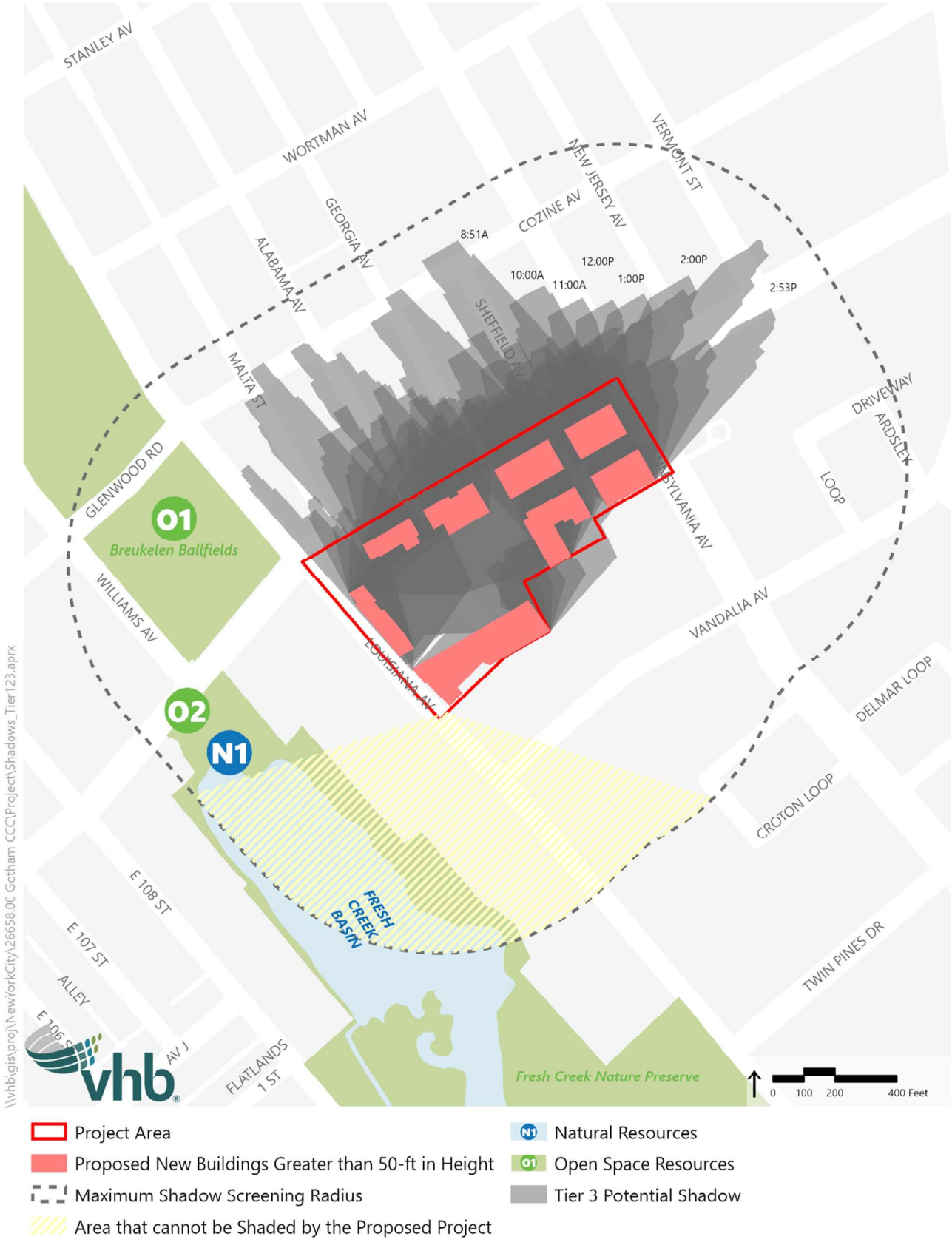


Figure 6-4 Tier 3 Screening March 21/September 21 Analysis Day

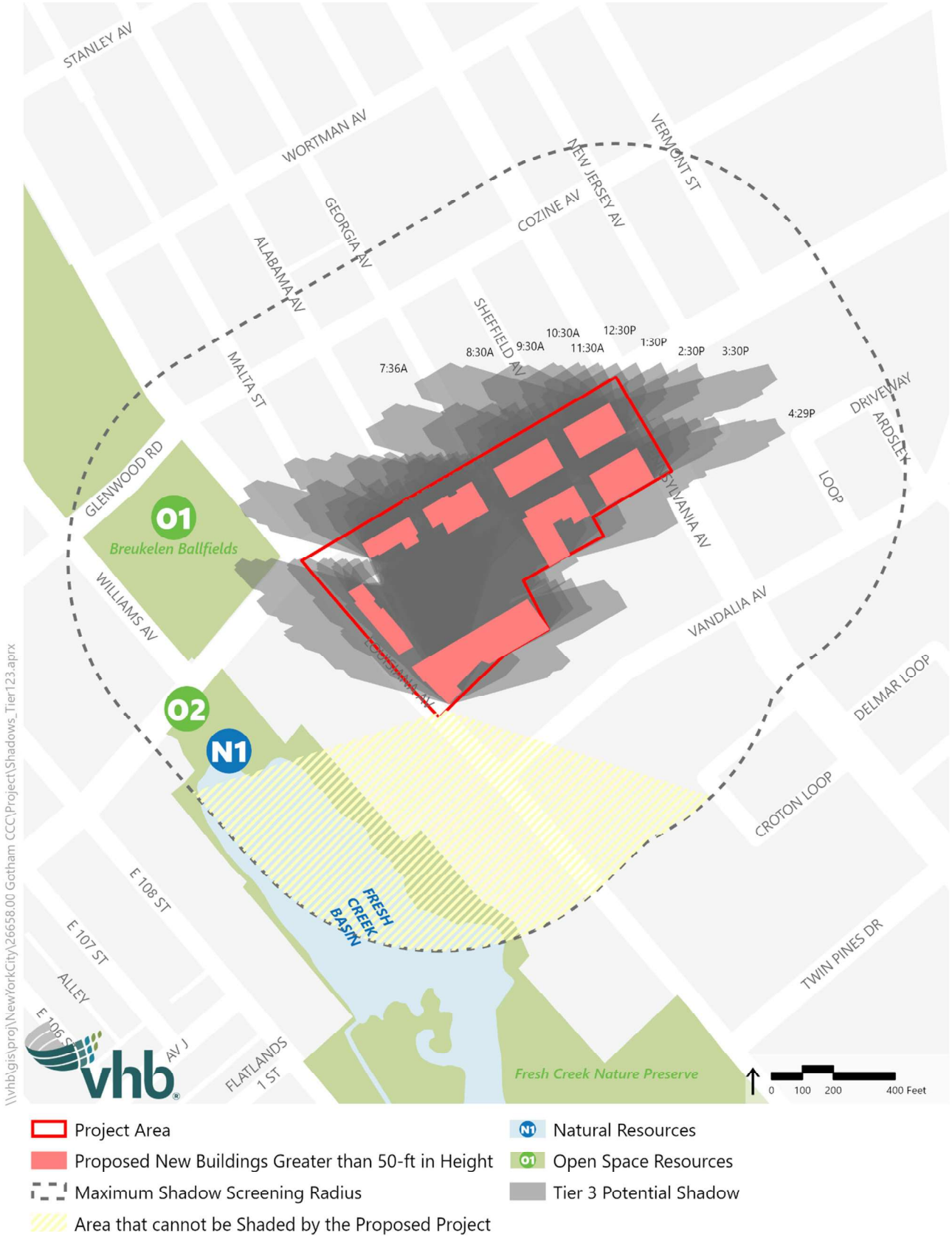


Figure 6-5 Tier 3 Screening May 6/August 6 Analysis Day

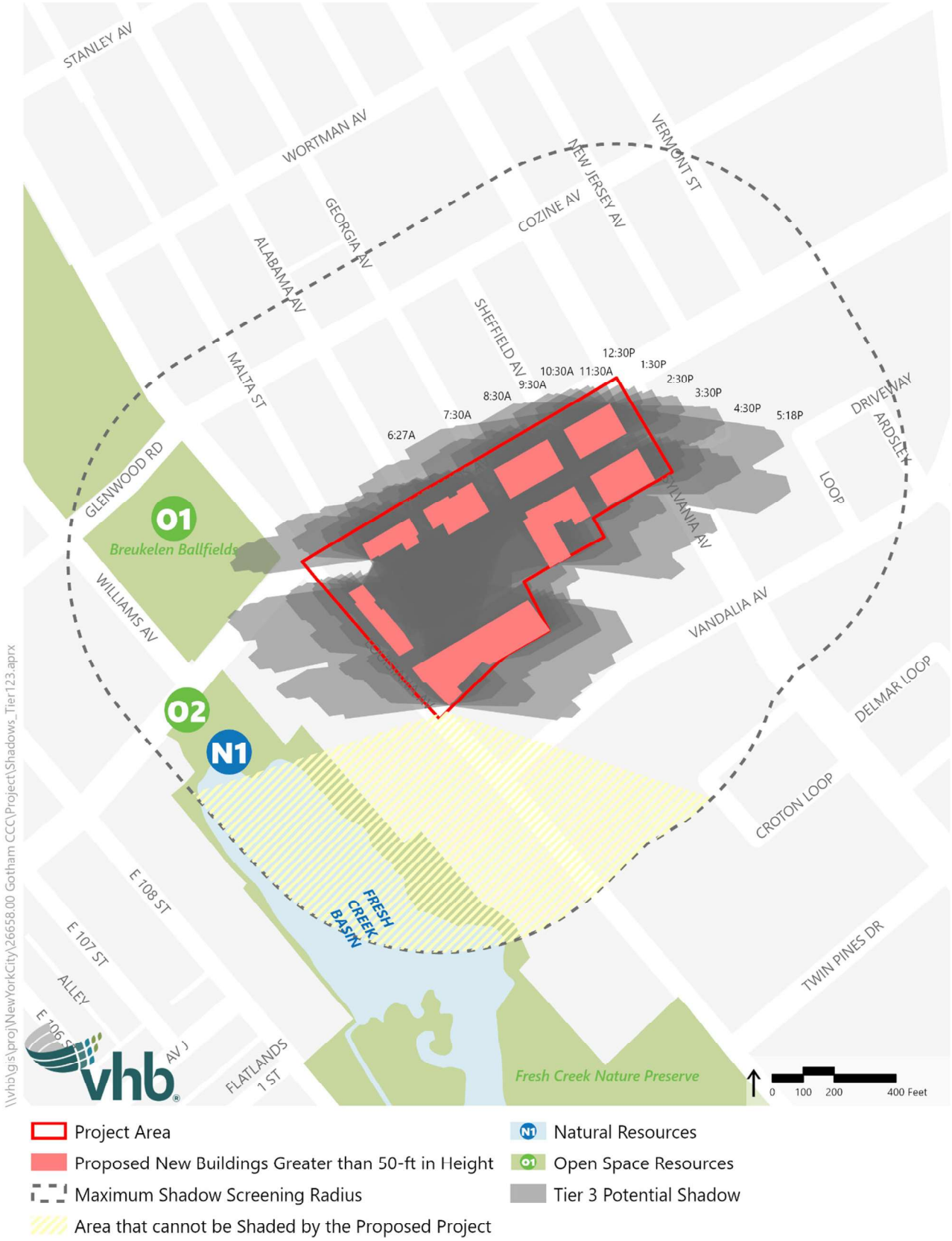
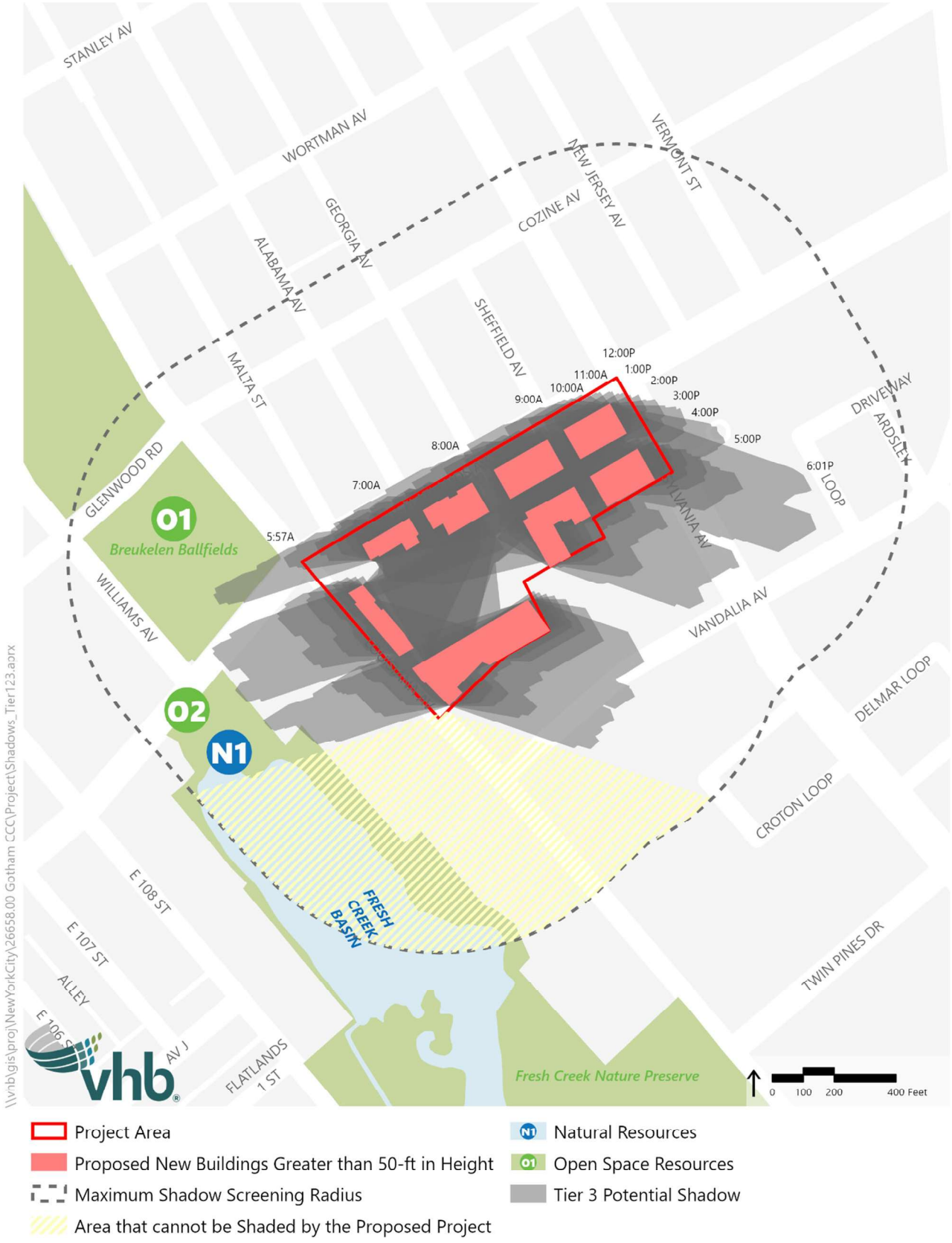


Figure 6-6 Tier 3 Screening June 21 Analysis Day



Breukelen Ballfields (O1)

Breukelen Ballfields is a 16.16-acre park located on the block bounded by Stanley Avenue to the north, Williams Avenue to the west, Louisiana Avenue to the east, and Flatlands Avenue to the south. The park is located diagonally to the northwest across Flatlands Avenue and Louisiana Avenue from the northwestern corner of the Project Area. The portion of the park located within the Study Area on the block south of Glenwood Road contains three baseball fields and shared walking and cycling paths. There are two sets of benches and bleacher seating for two adjoining baseball fields that are located mid-block along Louisiana Avenue between Flatlands Avenue and Glenwood Road, and another set of benches and bleacher seating for the third field at the park's southwest corner. Park entrances are provided at the same locations. The Louisiana Avenue and Flatlands Avenue boundaries of the park are lined with chain link fencing and a row of mature deciduous trees, and there is no access into the park from this area.

The potential for shading by the Proposed Project on this open space resource, as a result of the Proposed Actions, could not be ruled out by the Tier 1 and 2 analyses. Therefore, the analysis was advanced to Tier 3. As shown in **Figure 6-4** through **Figure 6-6**, the Tier 3 analysis shows that there could be shading on Breukelen Ballfields on the March 21/September 21, May 6/August 6, and June 21 analysis days. Without accounting for existing buildings, on the March 21/September 21 analysis day, Breukelen Ballfields could receive a maximum of approximately 39 minutes of shading from the start of the analysis period. On the May 6/August 6 analysis day, the resource could receive a maximum of approximately 39 minutes of shading from the start of the analysis period. On the June 21 analysis day, the resource could receive a maximum of approximately 59 minutes of shading, also from the start of the analysis period. In each case, the period during which the park could receive shading from the Proposed Project is less than 60 minutes and occurs in the early morning when usage of the park typically would be low. The park would experience no incremental shading after 8:10 AM on the March 21/September 21 analysis day. Breukelen Ballfields would continue to receive nearly unobstructed sunlight throughout the duration of each analysis period, and the health of vegetation in the park would be unaffected.

The portion of the park that could receive shading is in the southeast corner, which is a grass outfield for one of the three baseball fields, separated from the sidewalk by a chain link fence and bordered by a row of mature deciduous trees with no access into the park from this area (see **Photo 6-1**). The portion of the park that could receive Tier 3 shading is small relative to its total size and any park user could easily avoid the shaded area if they desired. The potential shadow would not reach any of the park entrances, bleachers, or other seating areas. The area of Breukelen Ballfields shaded by the Proposed Project would likely be shaded already by the existing trees during the affected analysis days during late spring, summer, and early fall. Shadow on the trees themselves would be limited to less than 60 minutes and therefore would not affect their ability to thrive.

The Tier 3 shading described here represents the maximum possible shadow that would be cast by the Proposed Project in the absence of intervening structures. Since there are limited intervening structures between the Project Area and the resource, a detailed analysis would not provide more information about the amount of shading Breukelen Ballfields could receive and, therefore, is not warranted. Existing structures adjacent to the park that stand between it and the Project Area are only approximately one to three stories tall and do not

cast significant shade on the resource, nor would the existing buildings and the existing shadows cast by those buildings significantly intersect with shading from the Proposed Project. Because of the medium density nature of the neighborhood surrounding the ballfields, this open space resource would continue to be largely in sunlight for the rest of the analysis periods. Therefore, no negative shadow impacts to Breukelen Ballfields are anticipated as a result of the Proposed Actions, and no further analysis is required.

Photo 6-1 Southeast Corner of Breukelen Ballfields



Conclusion

According to the Tier 3 analysis described above and summarized below in **Table 6-3**, there would be no shading as a result of the Proposed Project on Fresh Creek Basin (N1). The Tier 3 analysis shows that shading that could occur on Fresh Creek Nature Preserve (O2) on the June 21 analysis day would be *de minimis* and does not warrant further analysis. Breukelen Ballfields could receive shading as a result of the Proposed Project on the March 21/September 21, May 6/August 6, and June 21 analysis days. However, the period that the resource could receive shading is less than 60 minutes from the beginning of the analysis period and in the early morning in each case. The park would continue to receive near-completely unobstructed sunlight throughout the duration of each analysis period, and

vegetation within the park would be unaffected by this limited amount of incremental shading. Furthermore, the area of the park that could receive shading is in the grass outfield of one of the three baseball fields in the southeastern corner of the park that is already shaded by mature deciduous trees that line the Flatlands Avenue and Louisiana Avenue boundaries of the park. The portion of the outfield that would be shaded is small and does not contain any seating/passive open space or high-traffic areas such as park entrances. In addition, there are few intervening structures between the Project Area and Breukelen Ballfields, and existing buildings adjacent to the park are only one to three stories in height—meaning a detailed analysis would not provide further information about the size and/or duration of the potential shading on this resource. Therefore, there would be no significant adverse impacts from the Proposed Project with respect to shadows as a result of the Proposed Actions, and no further analysis is required.

Table 6-3 Tier 1 through 3 Shadows Screening Results

Map ID	Resource Name	Tier 1-3 Screening Results
Open Space Resources		
O1	Breukelen Ballfields	Screened at Tier 3
O2	Fresh Creek Nature Preserve	Screened at Tier 3
Natural Resources		
N1	Fresh Creek Basin	Screened at Tier 3

7

Historic and Cultural Resources

This chapter assesses the potential for the Proposed Actions to result in significant adverse impacts on historic and cultural resources, including both archaeological and architectural resources.

Historical and cultural resources are defined as improvements or landscape features that could be or have been determined to have a special character, or historical or aesthetic interest or value. Historic and cultural resources comprise districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological significance. Per the *2021 City Environmental Quality Review (CEQR) Technical Manual*, these resources include:

- Designated New York City landmarks, interior landmarks, scenic landmarks, and properties within designated New York City historic districts (or resources calendared for consideration by the New York City Landmarks Preservation Commission [LPC]).
- Resources listed on, or formally determined eligible for inclusion on, the State and/or National Register of Historic Places, or contained within a district listed on, or formally determined eligible for listing on, the State and/or National Register of Historic Places.
- Resources recommended by the New York State Board for Historic Preservation for listing on the State and/or National Registers of Historic Places.
- National Historic Landmarks.
- Resources not identified by one of the programs listed above, but that meet their eligibility requirements.

This chapter assesses the potential for the Proposed Project to affect architectural and archaeological resources located on the Development Site and in the surrounding area.

As described in **Chapter 1, Project Description**, the Proposed Actions would facilitate a mixed-use, purpose-built community on the campus of the Christian Cultural Center (CCC), comprising income-based affordable housing, a performing arts center (PAC), local retail, and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood of Brooklyn (the Proposed Project).

The *2021 CEQR Technical Manual* recommends that a historic and cultural resources assessment be performed if a proposed action would result in any of the following actions: in-ground disturbance; new construction, demolition, or significant physical alteration of any building, structure, or object; the change in scale, visual prominence, or visual context of any building, structure, or object or landscape feature; or the screening or elimination of publicly accessible views, even if no known historic resources are located nearby. This analysis has been prepared in accordance with CEQR and in consultation with LPC.

Principal Conclusions

A preliminary assessment concluded that the Proposed Actions would not result in significant adverse impacts to historic and cultural resources. A request for an environmental review letter was sent to LPC to determine if there were any architectural or archaeological resources on the Development Site or within an approximate 400-foot radius of the site. According to the response letter issued by LPC and dated September 6, 2019, the Development Site has no archeological significance and does not contain buildings or structures with architectural significance. In addition, no buildings or structures with architectural significance were identified within 400 feet of the Project Area. Therefore, the Proposed Actions would not cause significant adverse impacts to historic and cultural resources and no further analysis is warranted.

Methodology

The *2021 CEQR Technical Manual* notes that environmental review for historic and cultural resources includes a survey and planning process that helps protect New York City cultural heritage from the potential impacts of projects undergoing CEQR. Historic and cultural resources include both archaeological and architectural resources. Archaeological resources are physical remains, usually subsurface, of pre-contact, post-contact, and historic periods—such as burials, foundations, artifacts, wells, and privies. Architectural resources generally include historically important buildings, structures, objects, sites, and districts. They may include bridges, canals, piers, wharves, and railroad transfer bridges that may be wholly or partially visible above ground.

Archaeological resources are usually assessed for projects that would result in any in-ground disturbance. This is any disturbance to an area not previously excavated, including new excavation that's deeper and/or wider than previous excavation on the same site.

Generally, architectural resources should be surveyed and assessed if a proposed project would result in any of the following, whether or not any known historic resources are located near the site of the project:

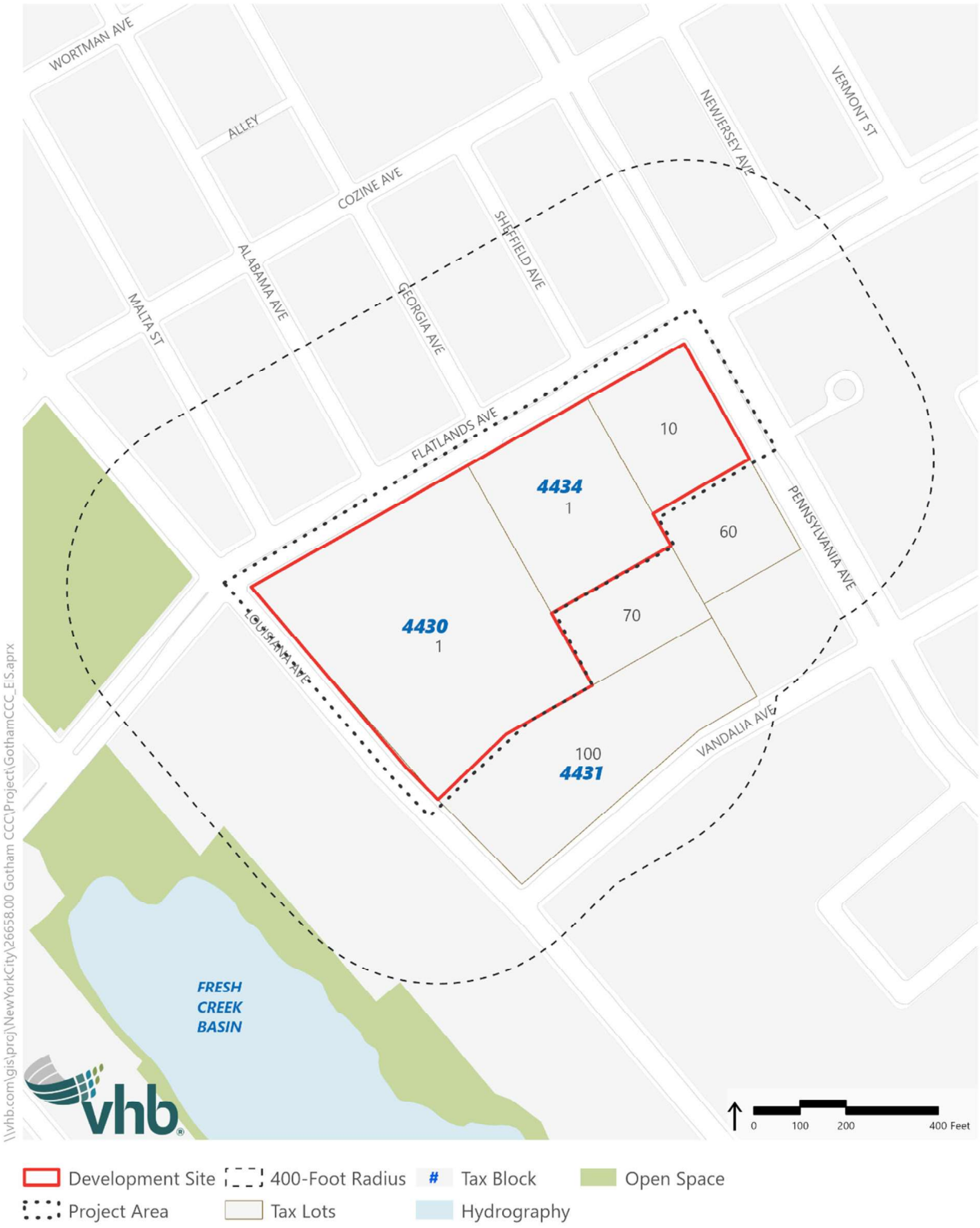
› New construction, demolition, or significant physical alteration to any building, structure, or object;

- A change in scale, visual prominence, or visual context of any building, structure, object, or landscape feature. Visual prominence is generally the way in which a building, structure, object, or landscape feature is viewed. For example, a building may be part of an open setting, such as a tower within a plaza, which is either conforming or nonconforming with the street wall in terms of its height, footprint, and/or setback. Visual context is the character of the surrounding built or natural environment. This may include the following: the architectural components of an area's buildings (e.g., height, scale, proportion, massing, fenestration, ground-floor configuration, style), streetscapes, skyline, landforms, vegetation, and openness to the sky;
- Construction, including but not limited to, excavating vibration, subsidence, dewatering, and the possibility of falling objects;
- Additions to or significant removal, grading, or replanting of significant historic landscape features;
- Screening or elimination of publicly accessible views; or,
- Introduction of significant new shadows or significant lengthening of the duration of existing shadows on a historic landscape or on a historic structure if the features that make the structure significant depend on sunlight. For example, stained glass windows that cannot be seen without sunlight, or buildings containing design elements that are part of a recognized architectural style that depends on the contrast between light and dark design elements, such as deep window reveals and prominent rustication.

Project Area and Study Area

The Project Area, as described in **Chapter 1, Project Description**, contains Brooklyn Block 4430, Lot 1; Block 4431, Lots 1 and 200; Block 4432, Lot 1; and Block 4434, Lots 1 and 10. Per the *CEQR Technical Manual*, a 400-foot study area from the Project Area boundary is considered appropriate for the historic and cultural resources assessment. The 400-foot study area is generally defined as the area bounded by midblock between Flatlands Avenue and Cozine Avenue to the north, a line approximately 350 feet west of Louisiana Avenue to the west, New Jersey Avenue to the east, and Vandalia Avenue to the south (see **Figure 7-1**).

Figure 7-1 Architectural Resources Study Area



Preliminary Assessment

Archaeological Resources

A desktop review was conducted of the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) Cultural Resource Information System (CRIS), indicating that the Development Site is located within an Area of Archaeological Sensitivity. However, a findings statement issued by LPC on June 29, 2021 determined that Block 4430, Lot 1; Block 4431, Lots 1 and 200; Block 4432, Lot 1; and Block 4434, Lots 1 and 10 within the Development Site do not have archaeological significance (see **Appendix B**).

Therefore, the Proposed Actions would not result in significant adverse impacts to archaeological resources and further assessment is not warranted.

Architectural Resources

Consistent with *CEQR Technical Manual* guidance, the assessment of the Proposed Project's potential to result in impacts on architectural resources begins with a survey and documentation of existing resources in the study area. In correspondence dated September 6, 2019, LPC confirmed that the Development Site does not contain any architecturally significant resources (see **Appendix B**).

Furthermore, a review of CRIS indicated that there are no State and/or National Register listed or previously determined eligible properties located within 400 feet of the Project Area. The CRIS mapping tool shows that six properties within 400 feet have been reviewed by SHPO. These include Council Towers II HDFC at 99 Vandalia Avenue, Council Towers III HDFC at 1170 Pennsylvania Avenue, Council Towers IV at 1180 Pennsylvania Avenue, Food Bazaar at 11110 Flatlands Avenue, an oil change service at 1130 Granville Payne Avenue, and the Spring Creek Branch of the Brooklyn Public Library at 12143 Flatlands Avenue. All but the Spring Creek Branch of the Brooklyn Public Library were determined not eligible for State and/or National Register listing; the status of the library is listed as "Undetermined." Similarly, the CRIS mapping tool shows that six properties within the 400-foot study area were evaluated for archaeological sensitivity through consultation projects, including Council Towers II HDFC at 99 Vandalia Avenue, Council Towers III HDFC at 1170 Pennsylvania Avenue, Council Towers IV at 1180 Pennsylvania Avenue, the Starrett City Power Plant - Spring Creek Towers property at 1255 Granville Payne Avenue, the East New York Mural Project at 11110 Flatlands Avenue, and the Fresh Creek Basin Drainage Area High-Level Storm Sewer Project at East 108th Street. At the time of this EIS, the statuses of the projects are closed except for the Fresh Creek Basin Drainage Area High-Level Storm Sewer Project.

Finally, as described above, LPC was consulted and subsequently determined that there are no New York City landmarks or historic districts within the Study Area. Therefore, the Proposed Actions would not result in significant adverse impacts to architectural resources, and further assessment is not warranted.

8

Urban Design and Visual Resources

An urban design assessment under CEQR considers whether and how a project may change the experience of a pedestrian in the study area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment.

Introduction

According to the *2021 CEQR Technical Manual*, urban design is defined as the totality of components—including streets, buildings, open spaces, wind, natural resources, and visual resources—that may affect a pedestrian's experience of public space. A visual resource is defined as the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, and natural resources.

Based on *CEQR Technical Manual* guidance, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Examples include projects that result in the modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed "as-of-right," or in the future No-Action condition.

As described in **Chapter 1, Project Description**, the Applicant is seeking approval of the Proposed Actions to facilitate the proposed large-scale development of a site located in the East New York neighborhood of Brooklyn (the Development Site). These approvals include a

zoning map amendment that would apply to the entire Project Area, which, in addition to the Development Site, includes de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100, and extends to the centerlines of Flatlands Avenue, Louisiana Avenue, and Pennsylvania Avenue. Additional approvals include zoning text amendments to establish the Project Area as a Mandatory Inclusionary Housing area and to expand the boundary of the Transit Zone to include the Project Area, a large-scale general development special permit, and a special permit for a public parking garage (the Proposed Actions). These approvals would facilitate a large-scale mixed-use development (the Proposed Project).

The Applicant is proposing to replace the underutilized portions of the Development Site with a vibrant mixture of community facility, commercial, and residential uses targeted at creating a sustainable, affordable neighborhood anchored by the presence of the Christian Cultural Center (CCC) and targeted at addressing a number of economic, social, educational, and cultural needs of the neighborhood. Overall, the Proposed Project would incorporate ten new buildings in the Development Site, including eight predominately residential buildings, ranging in height from two to 15 stories, with a total of approximately 2,050 units affordable to households with a range of incomes between 30 percent and 100 percent of the area median income (AMI).[1] The CCC building would remain as the dominant feature of the Development Site, to serve its parishioners and the surrounding community, and would be part of a multi-faceted community facility core that includes the PAC, a trade school, a day care facility, a senior center, and a central quad. Ground floor retail and a grocery store, providing opportunities for local businesses, would be introduced along the public and private street frontages, creating economic opportunity, and responding to the dearth of walkable local retail in the neighborhood. A privately-owned, publicly accessible street system aligned with the adjoining street grid would be introduced into the Development Site to invite people into the Proposed Development and create a more walkable environment. Finally, a seven-story (plus rooftop) public parking garage accommodating up to approximately 500 parking spaces for these uses would be located near Louisiana Avenue and would serve as a replacement for the surface parking that exists today. A portion of the Development Site is currently occupied by the 92,784-gross square-foot (gsf) CCC facility, which would remain on the site under future conditions with the Proposed Actions.

Principal Conclusions

Urban Design

The Proposed Actions would not result in significant adverse impacts to urban design. The Proposed Actions would result in built forms and building types that are similar in height and bulk to the low- to mid-density residential buildings that currently exist within the study area. The design of the Proposed Project would provide strong and consistent street wall buildings and would integrate varied building heights and setbacks that would create visual interest and enhance the pedestrian experience. The inclusion of private streets, pedestrian walkways, and publicly and privately accessible open spaces would contribute to an inviting

[1] The ten buildings include eight Residential Buildings, the above grade parking garage, and the PAC. Residential buildings 7 and 8 are connected as one building and Buildings 9 and 10 are connected as one building, though they will have separate residential lobbies.

urban fabric that would be well-integrated into the existing neighborhood and create new pedestrian connections and amenities. The introduction of street-fronting retail; residential lobbies and maisonettes; the trade school, PAC, and childcare facility would activate the street frontages at the perimeter of the site and within the site. The Proposed Project would also incorporate approximately 84,950 ~~square feet~~sf of publicly accessible open space, consisting of an entry plaza for sitting and mingling, as well larger areas suitable for active programing and events; contemplative gardens flanking the entry plaza that would provide landscaped pedestrian connections to the rest of the site; and a centrally located publicly accessible open space, which would form the civic heart of the site, anchored by the PAC and bookended on either side by the trade school and childcare facility. Additionally, the Proposed Project would include an 11,800-sf privately accessible playground as part of the childcare center and an 18,400-sf private recreation space to be located on the roof of the parking garage which would be flexible to accommodate parking for vehicles during peak church hours (Sunday and Tuesday evenings only). The Development Site would introduce buildings of greater bulk and density arranged around a coherent grid that would surround the proposed quadrangle. These elements, together with the church and the PAC, would contribute to orientation and legibility of pedestrians navigating the site. These elements of the Proposed Project's design, along with the introduction of street-fronting retail; residential lobbies and maisonettes; a trade school, PAC, and childcare facility, would serve to activate the Development Site and provide needed facilities and services to the surrounding community. Compared to the No-Action condition, the With-Action condition would improve the built environment with a mix of land uses and new open spaces that would improve the urban design of the Development Site.

Visual Resources

There are two visual resources located within the study area: Fresh Creek Nature Preserve and Fresh Creek Basin. These resources are separated from the Project Area by a shopping plaza and residential development along Louisiana Avenue, and the majority of these resource's features, such as wetlands or walking paths, are not visible from the Project Area. In addition, the Project Area is not visible from these resources. Therefore, no significant adverse impacts to these two visual resources would occur as a result of the Proposed Actions.

Methodology

Per the *CEQR Technical Manual*, the urban design and visual resources assessment is conducted in three basic steps. First, a proposed action is reviewed to determine whether such an assessment is warranted, based on whether it would be expected to result in changes to elements particular to urban design—such as streets, buildings, visual resources, open space, natural features, and/or potential wind effects-and whether there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Pursuant to the *CEQR Technical Manual*, projects that permit the modification of yard, height, and setback requirements, and/or projects that result in an increase in built floor area beyond what would be allowed as-of-right, or in the future without a proposed action, require a preliminary analysis. Second, when such changes, or "effects," could be expected with a proposed action, then a preliminary assessment of urban design and visual resources is conducted to determine which particular effects expected to

result from that proposed action may warrant further investigation in a detailed analysis. Third, a detailed analysis may be needed for projects or actions that potentially obstruct view corridors, compete with icons in the skyline, or make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings. Third, it is within the detailed analysis that the effects are characterized and a determination is made as to whether any changes to the urban design and visual resources of an area would alter the pedestrian's experience of public space in a significant way.

Because the Proposed Actions include zoning changes that could facilitate alterations to the streetscape by changing the scale of buildings and introducing a new private but publicly accessible street network, a detailed analysis of the potential impacts of the Proposed Actions on urban design and visual resources is warranted, per *CEQR Technical Manual* guidance, and is provided below. This analysis describes existing conditions and compares the future conditions with and without the Proposed Project to determine the potential for urban design and visual resource impacts.

The *CEQR Technical Manual* identifies wind as a concern when channelized wind pressure from between tall buildings and/or downwashed wind pressure from parallel tall buildings causes winds that affect pedestrian comfort and safety. The Development Site is not located in a high wind location, such as directly along the waterfront, and would not create a uniform street wall that would result in channelization or downwash effects. Therefore, wind is not considered in this analysis.

Information pertinent to the assessment of the urban design and visual resources analysis includes data collected and analytical information prepared as part of other analyses included in this DEIS, specifically: **Chapter 2, Land Use, Zoning, and Public Policy**; **Chapter 5, Open Space**; and **Chapter 7, Historic and Cultural Resources**. The analysis of existing urban design and visual resources conditions has been informed by field visits and site photographs, and future conditions without and with the Proposed Actions also rely on computer imaging and graphic renderings. Photos included in this assessment were taken on April 9, 2021 and May 4, 2021.

Assessment Criteria

In general, an assessment of urban design and visual resources is needed when a project may have effects on one or more of the elements that contribute to a pedestrian's experience of public space. The elements contributing to urban design are described in the *CEQR Technical Manual* as follows:

- **Streets:** For many neighborhoods, streets are the primary component of public space. The arrangement and orientation of streets define the location and flow of activity in an area, set street views, and create the blocks on which buildings and open spaces are organized. The apportionment of street space between cars, bicycles, transit, and sidewalk is critical to making a successful streetscape, as is the careful design of street furniture, grade, materials used, and permanent fixtures, including plantings, streetlights, fire hydrants, curb cuts, or newsstands.
- **Buildings:** Buildings support streets. Building streetwalls form the most common backdrop in the City for public space. A building's size, shape, setbacks, lot coverage, placement on the zoning lot and block, orientation of active uses, and pedestrian and

vehicular entrances all play major roles in the vitality of the streetscape. The public realm also extends to building façades and rooftops, offering more opportunity to enrich the visual character of an area.

- **Open Space:** For the purpose of urban design, open space includes public and private areas such as parks, yards, cemeteries, parking lots, and privately-owned public spaces.
- **Natural Features:** Natural features include vegetation and geologic, topographic, and aquatic features. Rock outcroppings, steep slopes or varied ground elevation, beaches, or wetlands may help define the overall visual character of an area.
- **Visual Resources:** A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

As described in **Chapter 1, Project Description** and detailed above, the Proposed Actions include zoning map and zoning text amendments that would permit physical alterations beyond what is allowed by existing zoning. Therefore, an urban design and visual resources analysis is warranted.

Study Area

Consistent with **Chapter 2, Land Use, Zoning, and Public Policy**, the area within a quarter mile of the Project Area is defined as the study area for this analysis. The study area is roughly bounded by Wortman Avenue to the north, East 107th Street to the west, Twin Pines Drive to the south, and Van Siclen Avenue to the east.

Detailed Analysis

Existing Conditions

This section provides a summary of the existing conditions within the study area, supported by area photos. **Figure 8-1** provides an aerial image of the Development Site, Project Area, and quarter-mile study area, as well as a photo key for area photos. Accompanying **Photo 8-1** through **Photo 8-24** show existing conditions of the Development Site and study area.

Figure 8-1 Urban Design Photo Key



Urban Design: Streets, Buildings, Open Space, and Natural Features

Development Site and Project Area

The Development Site is located in the East New York neighborhood of Brooklyn, New York, within Brooklyn Community District 5, just north of the Spring Creek Towers/Starrett City development. The Development Site encompasses the northern portion of the block bounded by Flatlands Avenue to the north, Pennsylvania Avenue to the east, Louisiana Avenue to the west, and Vandalia Avenue to the south and has a lot area of approximately 449,653 sf (10.3 acres). Flatlands Avenue is a wide street with a width of approximately 110 feet. The sidewalks located along Flatlands Avenue in this area are approximately 10 feet wide. They are in a good state of repair with minimal cracks and with street trees located at regular intervals along the road. The side of the street that abuts the CCC contains a concrete retaining wall with cast-iron fencing on top, trees, and other decorative landscaping. Two curb cuts provide access to and from the Development Site at the intersection of Alabama Avenue and Georgia Avenue on Flatlands Avenue. Pennsylvania Avenue is a wide street with a width of approximately 120 feet. The sidewalks located along Pennsylvania Avenue in this area are approximately 15 feet wide and they are in a good state of repair. There are no street trees on the sidewalk in this area. A chain-link fence with overgrown vegetation separates the Development Site from the street along the Pennsylvania Avenue frontage. Finally, Louisiana Avenue is a narrow street with a width of approximately 70 feet. The sidewalk along Louisiana Avenue is approximately 12 feet wide and is in a good state of repair.

The Development Site is currently improved with the one-story with mezzanine (approximately 40 feet tall), 92,784-gsf CCC, a large, non-denominational house of worship constructed in 1997, which is situated on the western portion of the Development Site and is surrounded by a surface parking lot containing approximately 383 parking spaces, accessed via the curb cut from Alabama Avenue and via two existing curb cuts along Louisiana Avenue (**Photo 8-1**, **Photo 8-2**, and **Photo 8-3**). The eastern portion of the Development Site is unimproved land, typically serving as a location for overflow parking during church services and other events at the CCC and otherwise not used (**Photo 8-4**, **Photo 8-5,** and **Photo 8-6**).

The Project Area contains the Development Site as well as *de minimis* portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100 and extends to the centerlines of Flatlands Avenue, Louisiana Avenue, and Pennsylvania Avenue.

Study Area

Streets

In the northern half of the study area (north of Flatlands Avenue), the roadway network is generally a grid, which is interrupted in some locations by superblocks formed by New York City Housing Authority (NYCHA) developments, parks, and large manufacturing and industrial buildings. The super blocks of the NYCHA Breukelen Houses on the northwest side of the study area are divided by Williams Avenue, East 108th Street, and Glenwood Road, which are 80-feet wide. Streets are spaced between 500 and 750 feet apart in this area along

Flatlands Avenue and Glenwood Road, which runs through the middle of the NYCHA development. Northeast of the Breukelen Houses and Breukelen Ballfields is a more regular street grid, which comprises the Industrial Business Zone. Alabama Avenue, Georgia Avenue and Sheffield Avenue are one-way, 60-foot-wide streets that run roughly north to south through this portion of the study area. Malta Street is a similar width but with bidirectional traffic. These streets are regularly spaced approximately 250-feet apart, which is two to three times less than the street spacing in the area of the Breukelen Houses described previously. Sheffield Avenue is discontinuous, interrupted by a double-wide block between Wortman Avenue to the north, Pennsylvania Avenue to the east, Cozine Avenue to the south, and Georgia Avenue to the east, which accommodates a large one-story warehouse.

Pennsylvania Avenue is one of two major roadways in the study area and runs north-south through the east side of the study area (**Photo 8-7**). The other major street is Flatlands Avenue. Both streets are wide, between 110 and 125 feet, within the study area, and have between two and four traffic lanes in each direction. These two streets intersect at the northeast corner of the Project Area. North of the intersection in the northernmost corner of the study area are New Jersey Avenue and Vermont Street, which are consistent with the spacing and width of the north-south streets like Georgia Avenue just to the southwest. Northeast of Vermont Street along both sides of Cozine Avenue, which is 80-feet wide and a continuation of Glenwood Road, are two more superblocks which extend beyond the bounds of the study area radius.

The superblocks that compose the Spring Creek Towers/Starrett City housing development are located in the southern half of the study area, south of Flatlands Avenue, where the street grid is more irregular. Pennsylvania Avenue divides the Spring Creek Towers/Starrett City development into eastern and western halves. This segment of Pennsylvania Avenue, south of Flatlands Avenue, is partially served by dedicated bus-only lanes and has center medians with pedestrian refuges. The other major road that provides access to Spring Creek Towers/Starrett City in southeastern portion of the study area is Vandalia Avenue, a 72-foot-wide road that connects Louisiana Avenue to the west with Van Siclen Avenue to the east. Vandalia Avenue, like Twin Pines Drive and Schroeders Avenue just south of the study area, does not have a standard street width. Ardsley Loop on the east side of the study area and Croton Loop on the west side are among several 50-foot-wide loop roads connected to Pennsylvania Avenue and Vandalia Avenue that serve the Spring Creek Towers/Starrett City parking garages (**Photo 8-8**). Flatlands Avenue runs generally in an east to west direction (**Photo 8-9**) along the north side of the Project Area. At the time of the two site visits that were conducted in April and May 2021, the intersection of Flatlands Avenue and Louisiana Avenue on the west side of the study area was undergoing significant construction, which disrupted traffic throughout the study area (**Photo 8-10**). Louisiana Avenue is a narrow through route (70-feet wide) in the study area that runs north to south. It runs parallel to East 108th Street, which forms the westernmost boundary of the study area.

Sidewalks on the major streets in the study area such as Flatlands Avenue and on narrow streets such as Georgia Avenue are between 10 and 15 feet wide. Specifically, the sidewalk on Flatlands Avenue is approximately 10 feet wide, on Pennsylvania is approximately 15 feet wide, and on Louisiana Avenue is approximately 12 feet wide.

Buildings

The study area contains a mix of low- to mid-rise residential buildings surrounded by open space, manufacturing and industrial buildings such as warehouses and distribution centers and public facilities and institutions.

The urban design character of the study area is characterized by the presence of large housing development complexes that exhibit a "tower in the park" typology, meaning the buildings are set back from the street and surrounded by large open spaces. The NYCHA Breukelen Houses, located on the west side of study area, is a low-rise housing development comprising three-story brick buildings surrounded by trees and lawns (**Photo 8-11**). The Breukelen Houses are one of three NYCHA developments in the study area.

The NYCHA Vandalia Houses is a senior housing complex located just south of the Project Area and north of the Spring Creek Towers/Starrett City complex. It includes two 10-story brick towers connected by a small one-story lobby. The Vandalia Houses are directly adjacent to the Council Towers (an approximately 111-foot-tall brick building), a three-building complex of privately owned senior housing surrounded by landscaped lawns, trees, walkways leading up to the building entrance, and parking.

The third NYCHA development in the study area, the Linden Houses, is located on the northeast side of the study area. The Linden Houses include a series of rectangular eight-story and 15-story buildings. The Linden Houses occupy several super blocks between Stanley Avenue to the north, Vermont Street to the west, Cozine Avenue to the south, and Van Siclen Avenue to the east (**Photo 8-12**).

The southwest portion of the study area is developed with the Spring Creek Towers/Starrett City complex, a large private residential development located on a peninsula between Flatlands Avenue to the north, Fresh Creek Basin to the west, the Belt Parkway to the south, and Hendrix Creek to the east. Pennsylvania Avenue runs down the center of the development from north to south (**Photo 8-13**). Spring Creek Towers/Starrett City is composed of a series of 20-story brick apartment towers surrounded by large areas of grassy lawns and parking (**Photo 8-14**). The towers are the tallest buildings in the study area and therefore greatly influence its urban design character (**Photo 8-15**). The residential buildings do not contain ground floor retail and are set back significantly from the streets that border and cut through the development (**Photo 8-16**). Private security booths are located throughout the development.

Blocks to the north of the Project Area in the area bounded by Wortman Avenue to the north, Louisiana Avenue to the west, Flatlands Avenue to the south, and Pennsylvania Avenue to the east are occupied by a variety of manufacturing and industrial uses, and consequently this portion of the study area is largely defined by an industrial building character. Two full blocks are occupied by a one-story brick warehouse for Rainbow Clothing stores, with several curb cuts and loading bays along Cozine Avenue (**Photo 8-17**). Other industrial uses include a bottle deposit and recycling facility, the operation of which can obstruct the sidewalk and pedestrian traffic (**Photo 8-18**). There are two public facilities located on the blocks between Alabama Avenue and Georgia Avenue, including the NYC Department of Sanitation Brooklyn Community District 16 Garage and the MTA Cozine Iron Workshop South. These buildings exhibit a similar character to the surrounding industrial buildings. Along Flatlands Avenue are several automobile-related businesses, including a scrapyard between Alabama Avenue and

Georgia Avenue and a used car dealership between Alabama Avenue and Louisiana Avenue (**Photo 8-19**). There are gas stations on both the northeast and northwest corners of the intersection of Flatlands Avenue and Pennsylvania Avenue (**Photo 8-20**). These uses contribute to a more auto-centric character of the study area.

Local and big box retail within the study area is located within strip malls with large accessory surface parking lots. On the west side of Louisiana Avenue across from the Project Area is a large retail development with a Food Bazaar supermarket and several restaurants spread across three buildings with parking in between (**Photo 8-21**). Other similar retail is located on both sides of Pennsylvania Avenue north of Flatlands Avenue. Most stores in this area are set back from the street with accessory parking lots located between the sidewalk sand the building frontage. This arrangement does not activate sidewalk space for pedestrians and store customers (**Photo 8-22**). A limited number of stores are located directly adjacent to the sidewalk.

Open Space and Natural Features

Three public open spaces are located within the study area that are operated and maintained by the NYC Department of Parks and Recreation. Breukelen Ballfields is a 16.16-acre park located diagonally across from the northwest corner of the Project Area, on two blocks between Stanley Avenue to the north, Williams Avenue to the west, Flatlands Avenue to the south, and Louisiana Avenue to the east. It comprises five baseball diamonds, three of which are located on the block south of Glenwood Avenue that is closest to the Project Area (**Photo 8-23**). A playground, basketball court, and handball court are located just north of the study area adjacent to Public School 260. Mature deciduous trees line the edge of the park along the Louisiana Avenue and Flatlands Avenue sides of the park. Shared bike and pedestrian paths weave through the western side of the park beyond the edge of the baseball fields (**Photo 8-24**).

Fresh Creek Nature Preserve is a 77.04-acre park, located on the banks of Fresh Creek Basin, that contains 42 acres of salt marsh. Together, Fresh Creek Basin and Nature Preserve cover an area roughly bounded by Flatlands Avenue to the north, East 108th Street to the west, Jamaica Bay to the south, and Louisiana Avenue to the east. The eastern bank of the park contains walking paths and views of the creek, with an entrance along Louisiana Avenue just south of the study area (**Photo 8-25**). The paths wind through the nature preserve and contain information plaques that describe the ecosystem and native wildlife. The western bank of the park on the far side of Fresh Creek Basin from the Project Area is not publicly accessible.

Fresh Creek Basin is a narrow, approximately 1.25-mile long inlet off of Jamaica Bay that runs north to Flatlands Avenue (**Photo 8-26**). It is not a publicly accessible waterbody and there are no docks, beaches, or fishing areas. It is bordered by salt marshes and wetlands, which have been the target of restoration and revitalization plans by the City of New York in the last five years.

Ethan Allen Playground is a 0.80-acre park containing a playground, basketball courts, handball courts, and trees located on Wortman Avenue between New Jersey Avenue and Vermont Avenue.

Visual Resources

There are two visual resources located within the study area—Fresh Creek Nature Preserve (**Photo 8-25**) and Fresh Creek Basin (**Photo 8-26**), both of which are located approximately 450 feet southeast of the Project Area. The tops of some trees that are located within Fresh

Creek Nature Preserve are visible from the Project Area. However, the park is separated from the Project Area by a shopping plaza that is located along the west side of Louisiana Avenue, between Flatlands Avenue and Vandalia Avenue, and the majority of the park's features, such as wetlands, are not visible. There are no clear sightlines to Fresh Creek Basin from the Project Area under existing conditions. In addition, the Project Area is not visible from the publicly accessible portions of the Spring Creek Nature Preserve. Therefore, no significant adverse impacts to these two visual resources would occur and no further analysis is warranted.

Photo 8-1 Christian Cultural Center within the Development Site, looking Southeast from Flatlands Avenue



Photo 8-2 Christian Cultural Center within the Development Site, looking East from Louisiana Avenue



Photo 8-3 Development Site looking East from Louisiana Avenue



Photo 8-4 Development Site looking Southwest from Flatlands Avenue



All photos captured on 4/9/21 and 5/4/21

Photo 8-5 Development Site looking Southeast from Flatlands Avenue



Photo 8-6 Development Site looking west from Pennsylvania Avenue



Photo 8-7 Intersection of Pennsylvania Avenue and Flatlands Avenue looking South



Photo 8-8 Vandalia Avenue and Bethel Loop looking Southwest



All photos captured on 4/9/21, 5/4/21, and 9/21/21

Photo 8-9 Flatlands Avenue looking East from Vermont Street



Photo 8-10 Intersection of Flatlands Avenue and Louisiana Avenue looking East



Photo 8-11 NYCHA Breukelen Houses looking North from Glenwood Road



Photo 8-12 NYCHA Linden Houses from the Intersection of Vermont Street and Cozine Avenue



All photos captured on 4/9/21 and 5/4/21 and 9/26/2021

Photo 8-13 Pennsylvania Avenue looking North from Twin Pines Drive East



Photo 8-14 Spring Creek Towers/Starrett City looking North from Louisiana Avenue



Photo 8-15 Spring Creek Towers/Starrett City looking East from Pennsylvania Avenue



Photo 8-16 Spring Creek Towers/Starrett City Looking Northwest from the Intersection of Vandalia Avenue and Bethel Loop



All photos captured on 4/9/21 and 5/4/21

Photo 8-17 Cozine Avenue at Sheffield Avenue looking North



Photo 8-18 Alabama Avenue between Flatlands Avenue and Cozine Avenue looking North



Photo 8-19 Flatlands Avenue at Malta Street looking North



Photo 8-20 Intersection of Flatlands Avenue and Pennsylvania Avenue looking Northwest



All photos captured on 4/9/21 and 5/4/21

Photo 8-21 Looking South at Shopping Center along Flatlands Avenue and Louisiana Avenue



Photo 8-22 Looking North at Shopping Center from Intersection of Cozine Avenue and Pennsylvania Avenue



Photo 8-23 Northwest Corner of Flatlands Avenue and Louisiana Avenue looking West



Photo 8-24 Breukelen Ballfields Bicycle and Pedestrian Paths looking East



All photos captured on 4/9/21 and 5/4/21

Photo 8-25 Fresh Creek Nature Preserve looking Southwest towards Fresh Creek Basin



Photo 8-26 Fresh Creek Basin looking East towards Spring Creek Towers/Starrett City from E 108th Street



All photos captured on 4/9/21 and 5/4/21

No-Action Condition

In the future without the Proposed Actions (the No-Action condition), the Development Site would remain unchanged from existing conditions, with only the CCC operational on the site, surrounded by surface parking and vacant land serving as overflow parking.

Urban Design: Streets, Buildings, Open Space, and Natural Features

Project Area and Study Area

Streets

One transportation project is proposed on the South Brooklyn Crosstown Select Bus Service (SBS) B86 bus route in the No-Action condition.[2] The Southern Brooklyn Crosstown SBS route aims to improve bus speeds, reliability, and driver and pedestrian safety along a ten-mile bus route in Brooklyn from the Gravesend to Spring Creek neighborhoods. The B82 SBS was launched in 2018 by the NYC Department of Transportation (DOT) and NYC Transit Authority (NYCTA). The capital project focuses on the 7.5-mile portion of the entire SBS corridor along Kings Highway, Flatlands Avenue, and Pennsylvania Avenue. Along these three corridors, the capital project will build a combination of new bus lanes with high-quality bus stations, apply signal timing changes, and implement safety improvements for bus passengers, pedestrians, and all street users. Existing bus stops will be rehabilitated with expanded ADA-accessible platforms, bus shelters, lighting, and seating. Finally, concrete curb extensions and central medians will be built to reduce crossing distances for pedestrians.

Buildings

No new developments are anticipated to be completed within the quarter-mile study area under the future No-Action condition by the 2031 analysis year. As such, building forms are expected to remain unchanged as compared to existing conditions.

Open Space and Natural Features

No new publicly accessible open space is anticipated to be constructed in the study area by the analysis year. Further, there are no ongoing or planned capital improvement projects at parks or open spaces in the study area.

With-Action Condition

As detailed in **Chapter 1, Project Description**, the With-Action condition would extend the street network through the site, providing vehicular, bicycle, and pedestrian connections through the site.

Additionally, the Proposed Actions would facilitate the development of approximately 84,950 sf (approximately 1.95 acres) of publicly accessible open space across the site, consisting of an entry plaza that would serve as a public facing entrance to the CCC, a public arcade

[2] Information retrieved from NYC Capital Projects: https://www1.nyc.gov/site/capitalprojects/dashboard/project.page?pid=802 and NYC Department of Transportation: https://nycdotprojects.info/south-brooklyn-sbs/south-brooklyn-sbs-project-area#

connecting to the center of the site, a quad to serve as a central gathering space, and interconnecting landscaped areas and pathways. The Proposed Project would include approximately 84,950 sf of publicly accessible open space, consisting of an entry plaza on the corner of Flatlands and Louisiana Avenues; a central quad anchored by the PAC, and bookended on either side by the church building and a residential building with a ground-floor child care facility a public arcade lined with additional community facility space, and interconnecting landscaped areas and pathways. The Proposed Project would also include an approximately 11,800-sf privately accessible playground adjacent to the childcare facility and approximately 18,400 sf of private recreation space on the roof of the public parking garage. (The rooftop recreation area would be publicly accessible except during Sundays and Tuesday evenings, which are periods of peak church parking demand. The playground would be publicly accessible outside of daycare hours.) The Proposed Project would also include approximately 36,000 sf of private open space across the site, including residential building courtyards and terraces for passive recreation.

The Proposed Development would include approximately 2,200,538 gsf of development (4.29 FAR) within 10 new buildings, above grade public parking garage along with below-grade accessory parking, and the PAC, while the church building will remain. This would include approximately 1,645,820 gsf of residential space accommodating approximately 2,050 residential units; approximately 100,904 gsf of community facility space, including a day care (approximately 12,320 gsf), general community facility space to include uses such as a senior center or medical office space (approximately 9,900 gsf), and the remainder of the existing CCC facility (78,684 gsf); approximately 110,570 gsf of commercial space, including an approximately 14,300 gsf grocery store, approximately 65,670 gsf of local retail space, a trade school (approximately 14,100 gsf) to be located in one wing of the existing CCC building, and a PAC (approximately 16,500 gsf); and approximately 343,244[3] gsf of parking, including approximately 145,684 gsf of residential parking and approximately 197,560 gsf of above-grade public parking.

The sections below discuss the design components of each of the Proposed Project features in detail.

Urban Design: Streets, Buildings, Open Space, and Natural Features

Project Area and Study Area

Streets

As part of the Proposed Project, approximately 104,150 sf of private streets and sidewalks would be constructed within the Development Site and would create seven blocks with a grid of approximately 200-foot-by-150-foot blocks across the eastern half of the site, with the block containing Buildings 5 through 8 and the CCC and the block containing Building 9/10 and the CCC garage are larger and irregularly shaped (see **Figure 8-2**). Existing curb cuts on Louisiana Avenue and Pennsylvania Avenue would be relocated to facilitate the new internal private street network. On Flatlands Avenue, one existing curb cut that aligns with

[3] The 343,244 gsf of parking provided includes approximately 25,410 sf of flex space would be provided on the roof of the proposed public parking garage to allow for increased parking capacity during the church's peak parking periods (Sundays and Tuesday evenings). At all other times, this space would be reserved for private recreation space.

Georgia Avenue would be maintained, and a second would be relocated from its current alignment with Alabama Avenue to align with Sheffield Avenue.

Figure 8-2 Development Site Street Access Plan



The proposed street extensions of Georgia Avenue and Sheffield Avenue would each provide three traffic lanes and would be 30 feet wide, allowing for a drop off or loading lane on the eastern side of the streets. The Georgia Avenue access would provide two-way traffic between Flatlands Avenue and the PAC and would end in a cul-de-sac between the PAC and Building 4. The Sheffield Avenue access would allow for two-way traffic between Flatlands Avenue and its southern terminus. In addition, a primarily east-west interior roadway would be provided, including a single one-way westbound travel lane from Pennsylvania Avenue to Georgia Avenue. During peak periods for the CCC, traffic would be directed along two one-way eastbound travel lanes from Louisiana Avenue to Georgia Avenue, where Louisiana Avenue would provide an entry point to the site and to the parking garage, and Georgia Avenue would provide an exit point. During off-peak hours for the CCC, a portion of this roadway (Central A and Central B) would be closed to vehicular traffic, and the western segment of Central Louisiana between Louisiana Avenue and the PAC would have two-way traffic via one eastbound lane and one westbound lane to provide access to the proposed public parking garage and one of the residential parking garages. Outside of peak CCC hours, the portion of roadway (Central A and Central B) that would be closed to traffic outside of peak periods for the CCC would provide additional pedestrian circulation and access to the CCC, the quad, the

PAC, and the public parking garage. Sidewalks would generally be a minimum of approximately 11-feet 6-inches wide near the public parking garage and approximately 13 feet elsewhere within the site and would be provided along all of the interior roadways to facilitate pedestrian circulation at all times within the Development Site. Street trees would line the sidewalks at regular intervals to enhance the pedestrian experience and contribute to a pleasing urban fabric.

Buildings

As discussed in **Chapter 1, Project Description**, the Proposed Actions include changes to the existing zoning provisions that would modify building form and the way pedestrians would experience the streetscape within and near the Development Site. A total of ten new buildings that front the avenues and private streets—including the proposed mixed-use buildings, the above grade public parking garage, and the PAC—are proposed to be constructed as part of the With-Action condition (see **Figure 8-3** and **Figure 8-4**).

The buildings would be situated along the proposed interior roadway system described above, to extend the established street grid to the north of the Development Site onto the site). The buildings would generally follow a contextual building form with strong street walls, varying base heights from two to 15 stories, setbacks, building articulations, and maximum building heights across the Development Site. The design of the Proposed Project would be well-integrated with the existing CCC facility, as the facility would be framed by Building 6 with frontage along Flatlands Avenue and Buildings 7/8 with frontage along Louisiana Avenue (see **Photo 8-27**). A landscaped entry plaza leading up to the entrance of the CCC would create an inviting street presence and contribute to a positive pedestrian experience. This experience would be further facilitated into the urban fabric with the quad (the heart of the Development Site) that is anchored by the PAC and framed by Buildings 3, 4, and 5 (see **Photo 8-28**). Detailed descriptions of the building design and how it contributes to the urban fabric are provided below.

Building 1 is proposed between Sheffield Avenue (extended) and Pennsylvania Avenue. This building would range from 12 to 15 stories over a base of one to two stories in some areas (see **Photo 8-29**) and would have frontage on both Flatlands Avenue and Pennsylvania Avenue. The tallest 15-story portion of the building would reach a height of approximately 161 feet (176 feet to the top of bulkhead) and would have a 13-story (approximately 141 feet in height) shoulder along Pennsylvania Avenue (both to the north and south of the 15-story portion of the building) and a 12-story (approximately 131 feet in height) shoulder along the Sheffield Avenue access road. At the southwest corner of the building, the building base between the 12-story and 13-story shoulders would be two stories and would reach a maximum height of approximately 31 feet to accommodate five maisonette units along the proposed east-west roadway.

Building 2 is proposed along Pennsylvania Avenue and the proposed east-west roadway, immediately south of Building 1. The building would range from 11 to 13 stories and would provide ground floor retail and residential units in the upper floors (see **Photo 8-30**). An 11-story portion of the building, at a height of approximately 120 feet, would form a street wall along Pennsylvania Avenue in conjunction with Building 1. The central 13-story core of the building would rise to a height of approximately 140 feet (155 feet with bulkhead), before stepping down again to 11 stories along the proposed Sheffield Drive extension. Five

maisonette units are proposed along the north side of the building in a two-story (approximately 30 feet in height) base, fronting along the proposed east-west roadway. The proposed maisonettes within the two-story building base would reflect the design along the north side of the street and is intended to create an inviting an activated street frontage with multiple entrances and landscaped yards.

Figure 8-3 Development Site Axonometric Diagram



Figure 8-4 No-Action/With-Action Comparative Views Photo Key

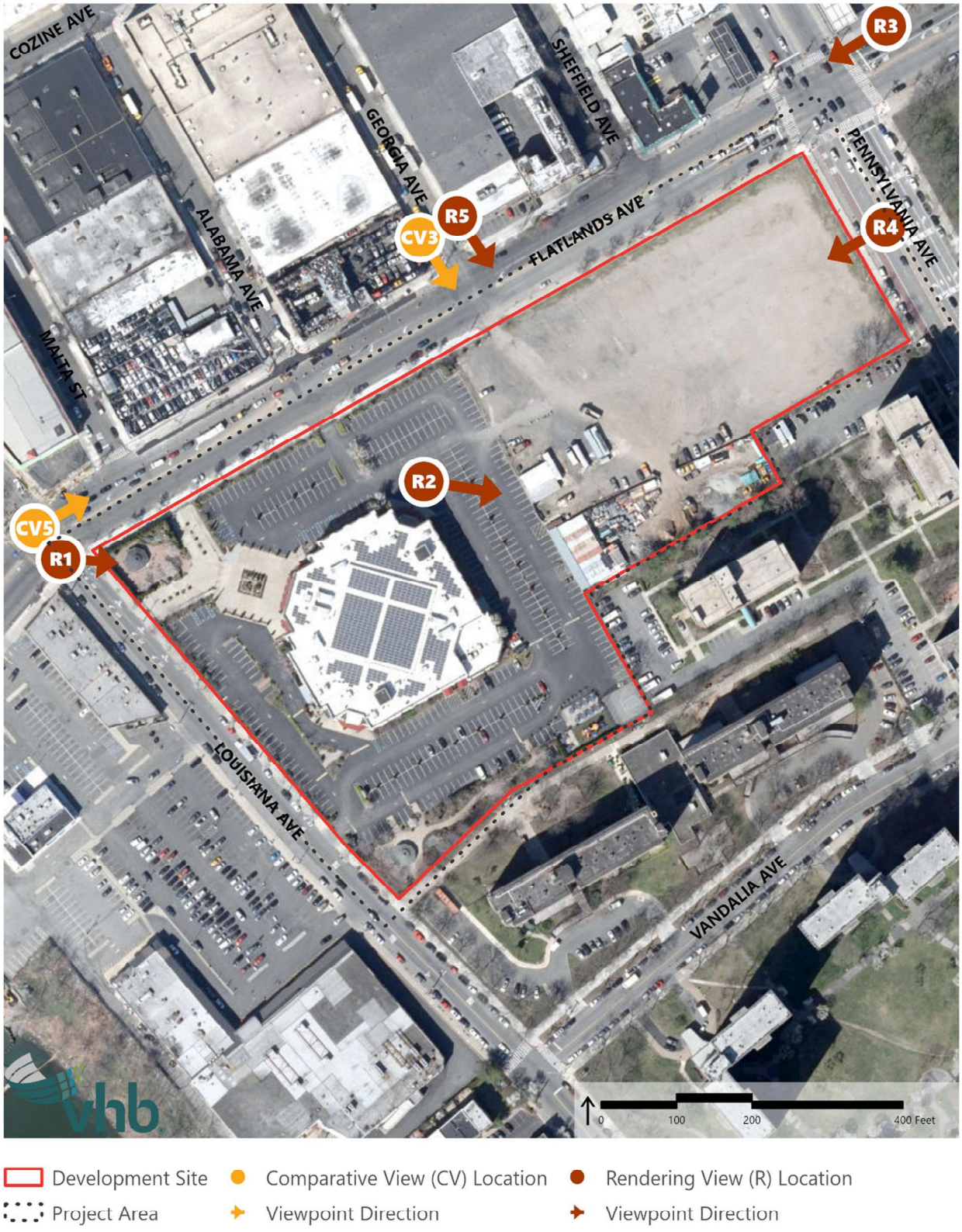


Photo 8-27 R1 – Illustrative Rendering: View facing southeast from Flatlands Avenue



For Illustrative Purposes Only. Source: Practice for Architecture Urbanism (PAU) DPC

Photo 8-28 R2 – Illustrative Rendering: View facing southeast across the quadrangle



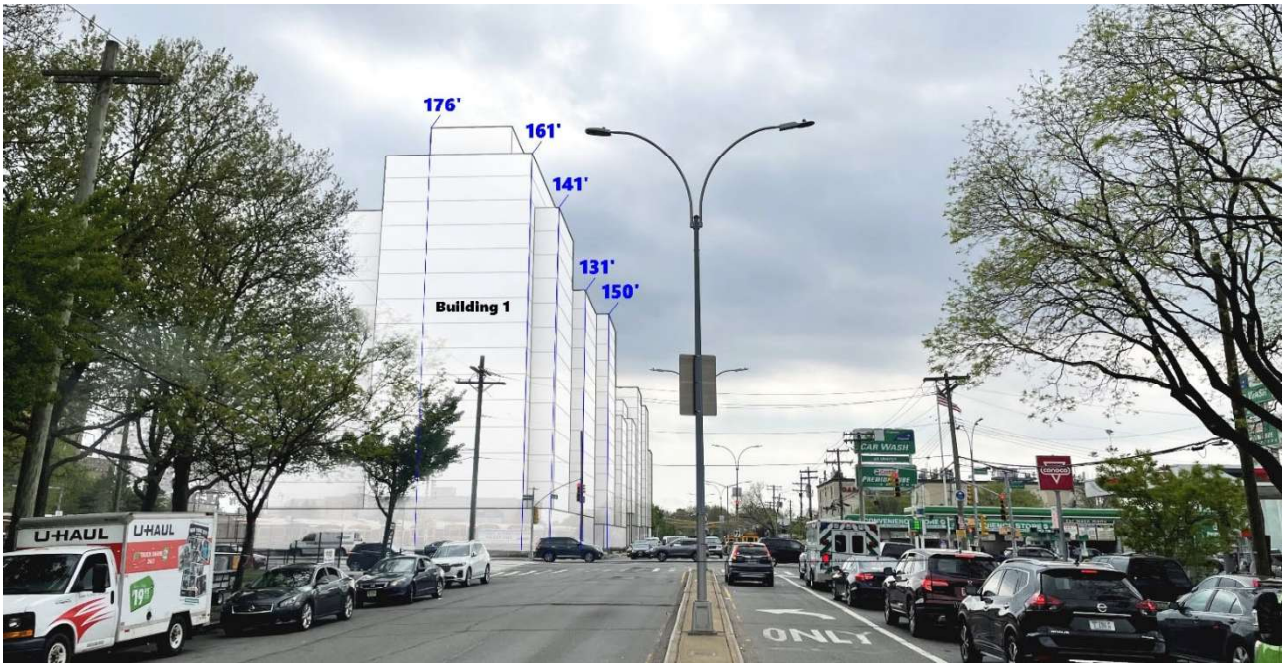
For Illustrative Purposes Only. Source: Practice for Architecture Urbanism (PAU) DPC

Photo 8-29 CV1 – Comparative View facing west on Flatlands Avenue from its intersection with Pennsylvania Avenue

No-Action Condition



With-Action Condition (Illustrative Massing)



For Illustrative Purposes Only; Approximate Heights Are Shown

Figure 8-5 With-Action Condition (R3 – Illustrative Rendering)



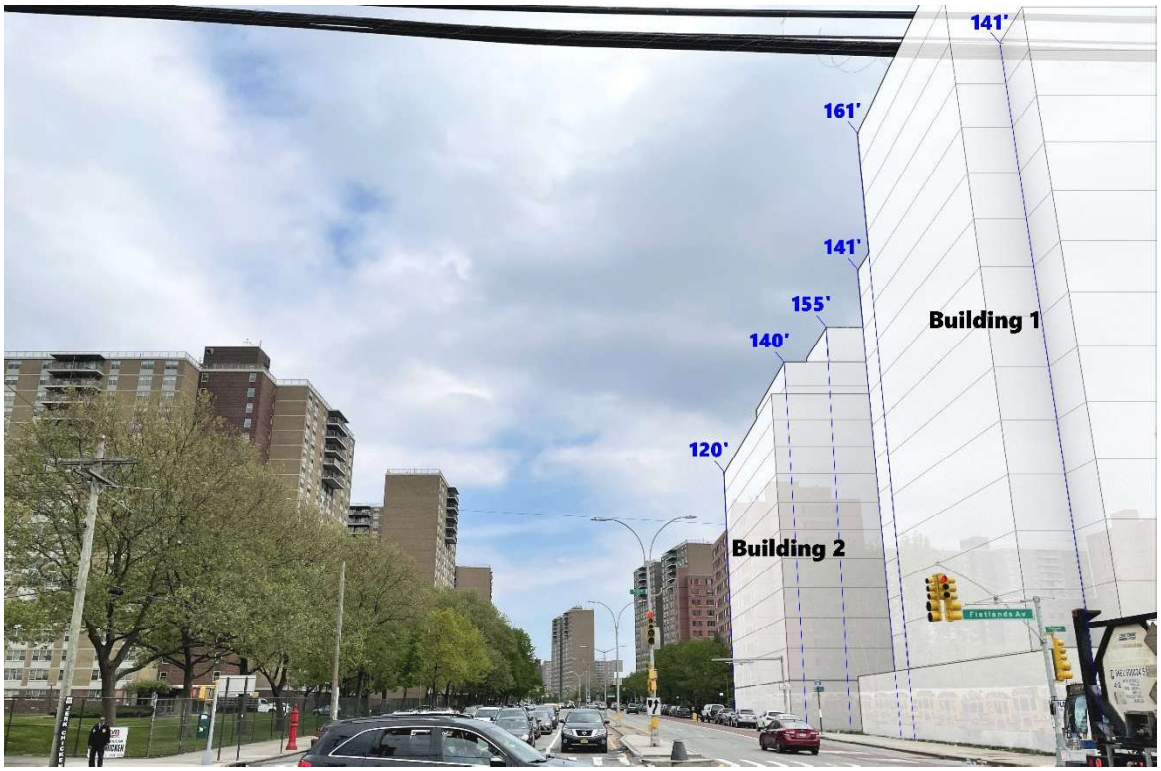
For Illustrative Purposes Only. Source: Practice for Architecture Urbanism (PAU) DPC

Photo 8-30 CV2 – Comparative View facing south on Flatlands Avenue from its intersection with Pennsylvania Avenue

No-Action Condition



With-Action Condition (Illustrative Massing)



For Illustrative Purposes Only; Approximate Heights Are Shown

Figure 8-6 R4 – Illustrative Rendering: View facing west from Pennsylvania Avenue



For Illustrative Purposes Only. Source: Practice for Architecture Urbanism (PAU) DPC

Building 3 is proposed between Georgia Avenue (extended) and Sheffield Avenue (extended). This building would range from nine to 14 stories over a base of one to two stories in some areas (see **Photo 8-31)**. The building bulk would increase from west to east, reaching a maximum height of approximately 150 feet (approximately 165 feet with bulkhead) and would have a lower shoulder of approximately 140 feet (13 stories) along the Sheffield Avenue access road. The building would be set back from the proposed interior roadway (the east-west roadway that is proposed to the south of the building) above a two-story base. Ten maisonette units are proposed within the two-story building base that would front on the proposed east-west roadway. The units would be set back from the public sidewalk by steps that would be framed by planter boxes. This would bring ample light and air into interior street within the interior of the site, while maintaining a continuous streetwall along Flatlands Avenue and providing a direct entrance into the building.

The interior portion of the Development Site would contain the proposed publicly accessible quadrangle, as well as Building 4, the PAC, and the proposed public parking garage. Building 4 would contain a mix of residential and community facility uses and would consist of a 12-story building (approximately 129 feet, or approximately 144 feet with bulkhead) with nine- and 10-story wings set on a two-story base. The eastern portion of the building, along the Sheffield Drive extension, would consist of nine stories (approximately 99 feet to the top of the roof); the western portion of the building, oriented along the proposed quad, would rise to ten stories (approximately 109 feet to the top of the roof). Eleven maisonette units would be provided within the two-story (approximately 29 feet to the top of the roof) building base along the northern and western frontages of the building. The proposed maisonettes would reflect the design along the north and eastern side of the street and would also serve to provide a transition in scale down to the PAC's profile and the interior open space. The bulk approach, together with the location of the street wall and uses, create a strong definition and legibility to the public space and enhance its function as an anchor of activity of the development.

The PAC would be located in the center of the Development Site, immediately west of Building 4, and would feature an L-shaped building that would be approximately 50 feet in height. The PAC would serve to anchor the quad as the civic heart of the Proposed Project. As such, public visibility and access is an important component in its placement and design. Specifically, the sidewalk along the Georgia Avenue alignment would be widened to create an entry point and would further expand the public space with the arcade space in Building 5. These elements also control the building heights in the vicinity of the PAC, allow the PAC to remain at a height of 50 feet, and reduce the incidence of shade on the quadrangle. The proposed parking garage would be constructed immediately south of the PAC to a height of eight stories and approximately 74 feet (see **Figure 8-7**).

Figure 8-7 Proposed Parking Garage



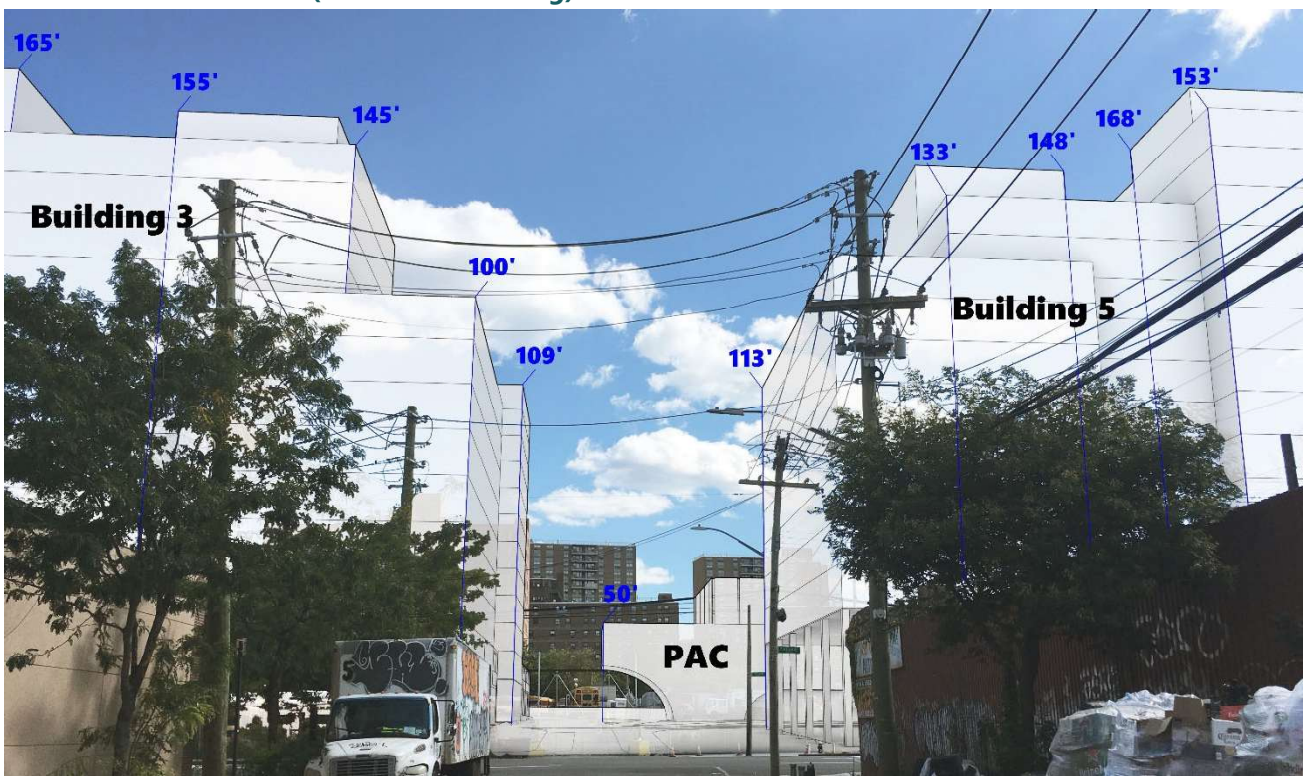
View of the proposed parking garage with the rear of the CCC in the foreground.

Photo 8-31 CV3 – Comparative View facing south on Georgia Avenue

No-Action Condition



With-Action Condition (Illustrative Massing)



For Illustrative Purposes Only; Approximate Heights Are Shown

Figure 8-8 With-Action Condition (R5 – Illustrative Rendering)



For Illustrative Purposes Only. Source: Practice for Architecture Urbanism (PAU) DPC

Building 5 and the proposed central open space quad are proposed between Alabama Avenue (extended) and Georgia Avenue (extended). The 14-story building would contain ground floor retail and community facility uses with residential uses above (see **Photo 8-32**). The proposed building would range from 10 to 14 stories over a one-story base in some areas, with the tallest portion of the building reaching a height of approximately 153 feet (approximately 168 feet to the top of the bulkhead). The central 12-story portion of the building (a height of approximately 133 feet to the top of the roof) would be set back from the street by approximately 10 feet, providing a break in the street wall, and by approximately 40 feet at the rear of the building above a one-story base (approximately 23 feet in height to the top of the roof), creating a rear courtyard. An approximately 20-foot-deep arcade, with a clearance of 20 feet, would be provided at ground level at the eastern end of the building along the Georgia Avenue access road. The arcade would have seating and would likely provide spill-out space for the adjacent community facility that would occur on the ground-level of Building 5. The arcade would serve to provide site lines to the interior of the site, including the proposed quad and the PAC. It would also frame the PAC and provide shade for pedestrians passing through this area (see **Photo 8-31**).

Photo 8-32 CV4 – Comparative View facing east along Flatlands Avenue from its intersection with Alabama Avenue

No-Action Condition



With-Action Condition (Illustrative Massing)



For Illustrative Purposes Only; Approximate Heights Are Shown

Four mixed-use buildings would be constructed with frontage along Flatlands Avenue, creating a consistent street wall, and would include a ten-foot setback from the street to provide a wider sidewalk (see **Photo 8-33**). Building 6 is proposed between Malta Street (extended) and Alabama Avenue (extended). This 14-story building would contain ground floor retail with residential uses above. The proposed building would range from 10 to 14 stories over a one-story base in some areas, with the 14-story portion of the building situated along a pedestrian walkway extending south from Alabama Avenue. Building 6 would reach a height of approximately 155 feet (170 feet with a 15-foot-tall bulkhead), as measured from the base plane. Lower shoulders of the building include a central 12-story portion of the building (a height of approximately 135 feet to the top of the roof), which would be set back above a base height of approximately 25 feet, and a ten-story portion of the building that is proposed closer to Malta Street and would reach a height of approximately 115 feet. Building 6 together with Buildings 7/8 would have a tiered design to frame the entrance to the CCC.

Finally, Buildings 7/8 and 9/10 are proposed along Louisiana Avenue. These buildings would be mixed-use residential buildings with retail on the ground floor. Buildings 7/8, which would be located closer to Flatlands Avenue, would range from nine to 12 stories, reaching a maximum height of approximately 134 feet (approximately 149 feet with bulkhead) at the southern end of the building. A one-story portion of the building (approximately 24 feet to the top of the roof) would be provided along Louisiana Avenue west of a 10-story portion of the building (approximately 115 feet in height), to break up the building massing.

Buildings 9/10 would be constructed in an L-shape, with frontage along both Louisiana Avenue and the proposed east-west roadway (see **Photo 8-34**). These buildings would rise to 12 stories, (approximately 133 feet to the top of the roof and approximately 148 feet to the top of the proposed bulkhead) at its northwest corner. Along the north side of the building and the internal access road, the number of stories and building heights would alternate from west to east with a 10-story portion of the building (approximately 113-foot-tall), then a one-story portion of the building (approximately 23-foot-tall), followed by a nine-story portion of the building (approximately 103-foot-tall), and finally a one-story portion of the building (approximately 23-foot-tall). Along Louisiana Avenue the building would consist of 10-story (approximately 113-foot-tall), 12-story (approximately 133-foot-tall) and 10-story (approximately 113-foot-tall) sections and would have a staggered setback from the street.

Photo 8-33 CV5 – Comparative View facing east along Flatlands Avenue from its intersection with Louisiana Avenue

No-Action Condition



With-Action Condition (Illustrative Massing)

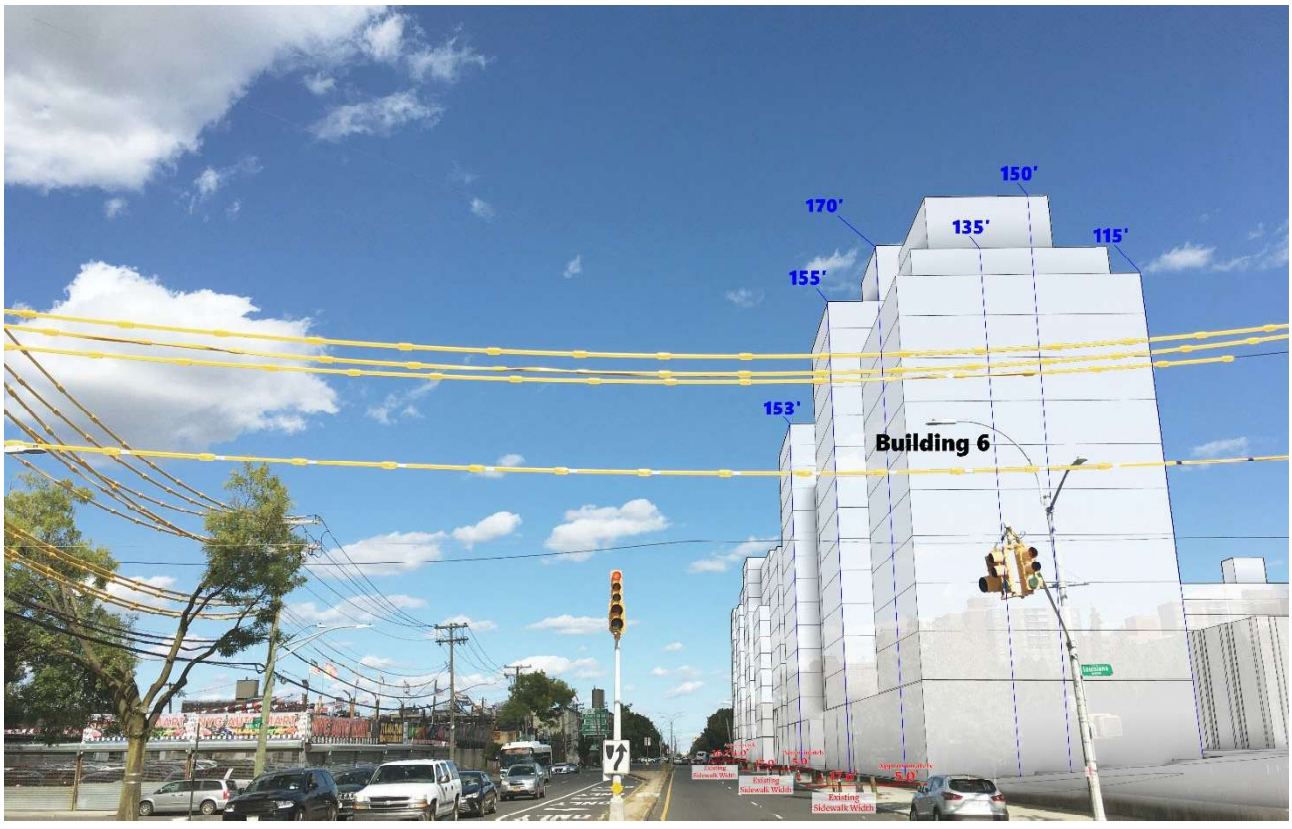
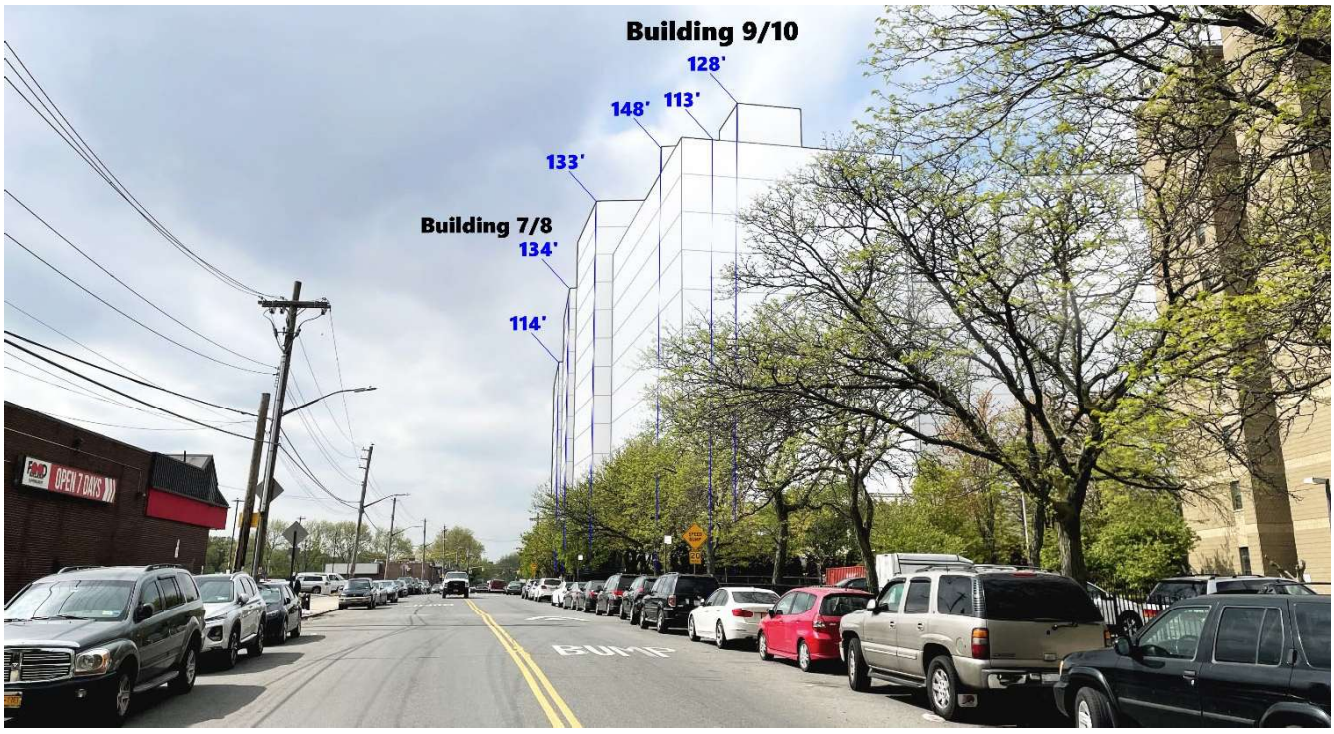


Photo 8-34 CV6 – Comparative View facing north on Louisiana Avenue and Vandalia Avenue

No-Action Condition



With-Action Condition (Illustrative Massing)



For Illustrative Purposes Only; Approximate Heights Are Shown

Open Space

As discussed in **Chapter 5, Open Space**, approximately 1.95 acres of publicly accessible open space would be created within the Development Site. This open space would be located primarily on the west side of the Development Site near the intersection of Flatlands Avenue and Louisiana Avenue, as well as within a quad which is proposed in front of the PAC. Publicly accessible open space would occur in the form of an entry plaza, quad, and public arcade. Privately owned open space would include a playground, residential building courtyards and terraces, and recreation space on the roof of the parking garage. Detailed descriptions of these spaces are provided below. Altogether, the Development Site would include approximately 84,950-sf of publicly accessible space across the different types of open spaces and 65,400-sf of privately accessible space.

Entry Plaza

The publicly accessible entry plaza would be located on the corner of Flatlands and Louisiana Avenues and would encompass approximately 14,600-sf. It would provide a much more porous, inviting, and public-facing entrance to the CCC than the present condition. The plaza would have both passive space for sitting and mingling as well larger areas of gently graded hardscape suitable for active programing and events. Contemplative gardens would flank the piazza to provide landscaped pedestrian connections to the rest of the site. The entry plaza would be open to the public during regular hours.

Quad

A primary open space and organizing element for the project as a whole is the "Central Quad," approximately 22,800 sf of publicly accessible open space that would be located roughly in the center of the site. The Central Quad would be located to the east of the CCC and north of the PAC and would be visible and accessible from Flatlands Avenue to the north with views highlighted by an arcade with a depth no less than 20 feet, a length of approximately 110-feet, 6-inches and at least 15 feet in height. Additional access to the Central Quad would be available from the northwest via landscaped pathways located between the CCC and Building 5, from Louisiana Avenue to the west along the southern sidewalk that would run along the proposed interior roadway (between the CCC and Buildings 9 and 10 and the Public Parking Garage) and would also be available from the east via the proposed north-south roadway that would be the southern extension of Georgia Avenue. The roadway immediately adjacent to the Central Quad on the north and west is envisioned to be a shared roadway that would be closed to vehicular traffic during non-peak periods for the CCC.

The Central Quad would be open to the public at regular hours and is envisioned as a central gathering and programming space for both the Proposed Development and the community at large. The Central Quad would feature fixed seating and lawn areas which would be used by project residents and neighbors as a place to sit, relax, read, and meet friends and neighbors.

Event programming would take place within the Central Quad on a year-round basis, similar to Bryant Park. Possible program events during the winter months include holiday markets, concerts, and holiday celebrations. Event programming for the spring and fall would feature art installations, farmers markets, street markets, and religious events. Event programming

for the summer months would include activities such as movie nights, concerts, and youth activities while school is not in session. These events would be sponsored and supported by the Christian Cultural Center and the PAC.

Arcade

The public arcade would be lined with additional community facility space and would provide public access for the PAC as well as open up views to the quad from Flatlands Avenue.

Playground

A privately accessible, approximately 11,800-sf playground would be located adjacent to the proposed daycare facility on the south side of Building 4.[4] The playground would offer residents of the Proposed Development and the surrounding community an active recreation space for children. It is expected that this amenity would be open between the hours of dawn and dusk.

Courtyards and Terraces

Each residential building that comprises the Proposed Project would include private passive recreation space in the form of courtyards and terraces. Altogether, these spaces add up to approximately 36,000-sf.

Public Parking Garage Roof Recreation Space

At times when the full capacity of the Garage is not needed, the roof would be used as an additional active open space providing recreational play space for the public. The space would be accessible by an exterior stair and via elevator. It would be comprised of sports courts and space for physical exercise. During peak church hours, the space would be available to accommodate vehicular parking. The garage rooftop recreation space and other private active space throughout the Development Site would constitute approximately 18,400-sf of additional space for resident use.

The PAC's location also benefits from ample light and air facilitated by the design of the quad and arcade. In addition, landscaped and pedestrian pathways would be interspersed throughout the urban fabric to contribute to an aesthetically pleasing and open atmosphere. Overall, the open spaces would serve as a central gathering space for residents and visitors to the proposed community facilities, including the CCC and PAC (see **Figure 8-9**).

[4] The private active open space (playground and rooftop recreation space) would be accessible to the public except during peak church parking demand periods on Tuesday evenings and Sundays.

Figure 8-9 Open Space Elements of the Proposed Project



Landscaping and street trees near the entrance to the CCC in the northwest corner of the Development Site



View of the proposed quad situated between the PAC, CCC, and Buildings 3, 4, and 5.

Assessment

Under the With-Action condition, the Proposed Project would provide infill development on lots that are currently underutilized and would remain so under the No-Action condition. The Proposed Actions would facilitate new development on the entirety of the Development Site, activating the full block. Infill development on these lots would facilitate several urban design improvements over the No-Action condition and create an urban fabric, including a more engaging streetscape and shorter walkable blocks for pedestrian navigation, facilitated by the proposed interior roadways and sidewalks.

The buildings proposed along the interior roadways would serve to extend the street grid from the north of the Development Site and support the integration of the Proposed Project within the study area. For example, as shown in **Photo 8-29,** the extension of Georgia Avenue into the site would create a consistent view corridor south toward the proposed PAC. Together, the proposed streets and sidewalks would provide circulation and support the foot traffic generated by residents and visitors. The Proposed Project would also integrate open spaces into the overall layout of the Development Site, featuring a quad around which the existing CCC, as well as the proposed PAC and other community facility uses would be situated. This layout would facilitate a central gathering space within the community that is integrated with the urban fabric of the study area.

As discussed above, in the With-Action condition, the Development Site would be developed with paved streets, sidewalks and walkways as well as lawns and other porous surfaces. Under the No-Action condition, a majority of the Development Site would be unpaved and vacant, whereas, in the With-Action condition, the Project Area would feature an extension of Georgia Avenue, Sheffield Avenue, and the proposed east-west roadway parallel to Flatlands Avenue. These streets would be constructed on portions of the vacant lots in the Development Site and some of the existing paved areas that are used as parking. Sidewalks would line these new streets to support the foot traffic generated by the increased activity brought on by the new uses. The combination of the streets and sidewalks would connect to the existing street grid and provide a more cohesive pedestrian street experience. Pervious surfaces would occur in the form of walking paths, benches, and landscaping, which under the No-Action condition would remain unpaved. These spaces would enliven the Development Site and, as discussed above, serve as a gathering space for residents and visitors to the site.

The Proposed Project would include the construction of ten new buildings, including the proposed parking garage, and the PAC, and would introduce new land uses to the Development Site, including open space, local retail, a grocery store, increased community facility space, and residential uses. These new buildings, and the proposed mix of uses, would seek to activate the currently vacant and underutilized portions of the Development Site with increased foot traffic around and through the Development Site. In addition, the proposed uses in the buildings would provide needed community benefits in the form of a trade school, PAC, and publicly accessible open space, among other amenities. Although these uses are new to the Development Site, as discussed in **Chapter 2, Land Use, Zoning, and Public Policy**, they are compatible with the land uses currently found in the study area. Specifically, the proposed ground floor retail within the Development Site would help to integrate with and extend the existing commercial corridors along Flatlands Avenue, Pennsylvania Avenue, and Louisiana Avenue, supporting a more consistent streetscape along those corridors. Additionally, the introduction of retail, residential, and community facility space, including the

proposed street level maisonette units, would serve to activate the Development Site, providing a more vibrant streetscape and needed facilities and services to the surrounding community and future Development Site residents.

The Proposed Project would incorporate building forms and various design elements that would be consistent with and improve upon the design character in the study area. As described above, an allowance of 15 feet has been provided for building bulkheads on each proposed building. The proposed building heights would represent an increase of between 10 and 125 feet over the existing CCC building, which would remain in place under the No-Action condition. The heights of the new buildings would range from approximately 50 feet (the PAC) to approximately 161 feet tall (Building 1) and the integration of setbacks and recesses would be appropriate for the existing street widths and the scale of the proposed private streets within the urban fabric. The increased height and bulk of the proposed buildings overall is consistent with the higher density multi-family buildings in the study area. For example, the NYCHA Vandalia Houses immediately south of the Project Area contain two ten-story towers, and the Linden Houses feature multi-family buildings between eight and 15 stories. The proposed buildings would be of a similar scale to these existing multi-family development complexes. In addition, although the Proposed Project introduces buildings of greater height and bulk compared with the No-Action condition, the 20-story Spring Creek Towers/Starrett City buildings to the south of the Project Area would remain the tallest buildings in the study area under the With-Action condition (see **Photo 8-31**).

However, the Proposed Project buildings would be constructed along the street fronts, creating a continuous street wall and contributing to a more pedestrian-friendly built environment, in contrast to the tower-in-the-park design exhibited in these nearby developments, including Spring Creek Towers/Starrett City. The building forms proposed across the site contain one or two-story bases to form a consistent street wall along the exterior and proposed interior roadways, with upper floor setbacks that serve to break up the building massing (see **Photo 8-32**). The proposed building arrangement and massings would support an atmosphere that activates the sidewalks and contributes to a pleasant pedestrian experience. Furthermore, the wide roadways that currently exist around the Development Site, along with the ample open spaces provided, allow the Proposed Project to be developed in an area that is appropriate for the scale of the buildings that are part of the program.

Overall, the Proposed Actions would result in changes to the visual character of the Development Site through increased height and bulk and the introduction of new urban blocks. The composition of the ten new buildings and their relationship to surrounding built context, street width, and site design create a robust, active, and engaging urban fabric that would provide significant improvements to the overall urban design character of the study area.

9

Natural Resources

This chapter assesses the potential for a proposed action to result in significant adverse impacts to natural resources, which are defined as the City's biodiversity (plants, wildlife, and other organisms); any aquatic or terrestrial areas capable of providing suitable habitat to sustain the life processes of plants, wildlife, and other organisms; and any areas capable of functioning in support of the ecological systems that maintain the City's environmental stability.

Introduction

Pursuant to Chapter 11 of the *2021 CEQR Technical Manual*, a natural resources assessment considers species in the context of the surrounding environment, habitat, or ecosystem, and examines the potential for a project to affect the species and/or any supporting resources, which include the City's water, wetland, upland, and built resources. The determination of whether a natural resources assessment is appropriate should consider whether a natural resource(s) occurs on or near the site of a project and if the project would result in disturbance of the identified resource(s). As defined in Chapter 11 of the *CEQR Technical Manual*, disturbance to natural resources can include both direct and indirect effects. Direct effects on natural resources are defined as: "activities that directly alter the condition of a resource." Indirect effects occur when: "…the changes on a site alter conditions to adjacent or nearby resources or on the site itself after construction has ended."

Based on review of existing ecological conditions, the Project Area is highly urbanized and developed with buildings, pavement, and other impervious surfaces. As a consequence, with the exception of scattered street trees, the Project Area is largely unvegetated and therefore does not represent a significant source of native plant diversity, vegetated ecological communities, or wildlife habitat. As such, the Project Area is essentially devoid of natural resources that might otherwise be subject to potential direct effects from the Proposed Actions.

However, as the Project Area is located proximate to nearby natural resources, including the Fresh Creek Nature Preserve (located approximately 390 feet west of the site) and Jamaica Bay (located approximately 1.25 miles to the south of the site), the Proposed Actions have the potential to result in indirect effects to these resources and their resident flora and fauna. Accordingly, this assessment examines the potential for the Proposed Project to result in indirect effects to these nearby natural resources. As listed in the *CEQR Technical Manual*, the potentially relevant indirect impacts of the Proposed Actions to nearby natural resources include:

- A change in on-site conditions that would alter the amount of light that reaches natural resources on or near the site.
- A change that would decrease the quality of surface or groundwater that currently supports a natural resource.
- A change such as…introduction of impervious surfaces, or any other change in drainage patterns, that would alter the way in which surface or groundwater flows from the project site to a nearby natural resource or vice versa.

Accordingly, this natural resources assessment examines the potential for the Proposed Actions to result in the indirect effects to the identified natural resources of the Fresh Creek Nature Preserve and Jamaica Bay.

Principal Conclusions

As the Project Area does not support natural resources, the Proposed Actions do not have the potential to result in direct effects to same. As defined in Chapter 11 of the *CEQR Technical Manual*, the potentially relevant indirect effects of the Proposed Actions to nearby natural resources (i.e., the Fresh Creek Nature Preserve and Jamaica Bay) include potential impacts due to shadows, decreases in water quality, or introduction of impervious surfaces that alter drainage patterns. Based on the analyses present in this chapter and supported by analyses from **Chapter 6, Shadows** and **Chapter 11, Water and Sewer Infrastructure**, the identified potential impacts would not occur, were determined to be *de minimis*, or would be avoided through regulatory agency requirements and implementation of best management practices (BMPs).

Specifically, the very limited temporal and areal extent of incremental shading that would occur within Fresh Creek Nature Preserve would be limited to ecologically degraded, upland portions of the preserve, and would not affect Fresh Creek Basin. Therefore, shading impacts to natural resources would be *de minimis* and do not warrant further analysis. Based on implementation of BMPs and conformance with the NYC Department of Environmental Protection (NYC DEP), New York State Department of Environmental Conservation (NYSDEC) and other regulatory agency regulations and permitting requirements, the Proposed Actions

are consistent with the applicable NYC DEP Water Quality and Stormwater Objectives for Jamaica Bay included in the *Jamaica Bay Watershed Protection Plan Volume II*. Therefore, no significant adverse impacts to natural resources are anticipated due to implementation of the Proposed Actions, and no further analyses are warranted.

Methodology

This assessment of natural resources follows the methods set forth in Chapter 11 of the *2021 CEQR Technical Manual* for identifying and characterizing natural resources, evaluating the potential for a project to result in direct or indirect effects to natural resources, performing the appropriate analyses to the determine the degree of any recognized effects, and identifying potential avoidance, minimization, and/or mitigation measures for any potential adverse effects, as applicable.

Existing Conditions

The Project Area is highly urbanized and developed with buildings, pavement, and other impervious surfaces. With the exception of scattered street trees, the Project Area is largely unvegetated and therefore does not represent a significant source of native plant diversity, vegetated ecological communities, or wildlife habitat. As such, the Project Area is essentially devoid of natural resources.

Natural resources in the vicinity of the Project Area include the Fresh Creek Nature Preserve and Jamaica Bay. A description of these natural resources is provided below.

Fresh Creek Nature Preserve/Fish Creek Basin

The Fresh Creek Nature Preserve is a 42-acre New York City Park located to the southwest of the Project Area, beyond Flatlands Avenue and Louisiana Avenue. In contrast to the dense urban development that occurs within the surrounding area (including the Project Area), the Preserve contains undeveloped upland and wetland habitats, including ecologically valuable surface water and tidal wetland communities that comprise Fish Creek Basin.[1] As a result of a diversity of intertidal marsh, high marsh, mudflats, and other tidal wetland communities, the Fresh Creek Nature Preserve supports a diverse species assemblage of vegetation, birds, butterflies, finfish, shellfish, crustaceans, and other aquatic organisms. The tidal wetland communities of the Fresh Creek Nature Preserve provide a number of important ecological functions, including erosion and flood control, sequestration of nutrients and pollutants, and valuable wildlife habitat benefits for many species, as noted above. Along with the adjoining habitats at Spring Creek Park, the tidal waters, wetlands, and upland communities of the Fresh Creek Nature Preserve are connected to and are part of part of the watershed of the extensive Jamaica Bay estuarine complex.

Water quality degradation and colonization by non-native/invasive plant species are among the chief threats to Fresh Creek Nature Preserve and Fish Creek Basin. In particular, the high marsh wetlands and much of the upland areas at the Fresh Creek Nature Preserve have been

[1] New York City Parks. Fresh Creek Nature Preserve. Available at: https://www.nycgovparks.org/parks/fresh-creek-park/ Accessed September 2021.

colonized and are dominated by the non/native/invasive species Common Reed (*Phragmites australis*). Additionally, although some notable native plants are known to occur within upland areas, the non-native/invasive herbaceous plant Mugwort (*Artemesia vulgaris*) and deciduous tree Tree-of-Heaven (*Ailanthus altissima*) cover much of the upland portions of the preserve.[2] The presence of invasive vegetation degrades the overall habitat quality of an ecosystem by outcompeting and replacing native plants, reducing overall vegetative species diversity, and lowering wildlife habitat value.

Jamaica Bay

Jamaica Bay is located approximately 1.25 miles to the south of the Project Area and includes extensive areas of terrestrial lands, underwaters lands, and surface waters, much of which are managed by the National Park Service as the Jamaica Bay Wildlife Refuge section of the larger Gateway National Recreation Area. Jamaica Bay is an extensive estuarine complex that includes over 12,600 acres of surface waters, vegetated saltmarsh habitats, mudflats, islands, tidal creeks, freshwater and brackish ponds, upland fields, shrublands, and woodlands.[3] Jamaica Bay drains a surrounding watershed of approximately 142 square-miles that includes the Project Area and other portions of Queens, Brooklyn, and Nassau County.[4] In addition to representing an important recreational and open space resource, the largely undeveloped ecological communities comprising Jamaica Bay represent habitat for extensive inventories of birds, mammals, amphibians, reptiles, insects, finfish, shellfish, and other marine invertebrates. Over 325 species of birds, 50 species of butterflies, and 100 species of finfish have been documented within the various habitats of Jamaica Bay.

According to NYC DEP's *Jamaica Bay Watershed Protection Plan Volume II,* among the chief issues facing Jamaica Bay is the degradation of water quality due to increasing human population and development within the surrounding watershed, resulting in increased impervious surfaces within the Jamaica Bay Watershed and increased sewage discharge, solid waste, and stormwater runoff to the bay.[5] The resulting increased loading of pollutants and nutrients and lowered dissolved oxygen levels have had multiple negative impacts on water quality and resident aquatic and terrestrial species within Jamaica Bay. Accordingly, NYC DEP has identified the following Water Quality and Stormwater Objectives for Jamaica Bay:

- Objective 1a: Reduce nitrogen loading to the tributary basins and Jamaica Bay.
- Objective 1b: Reduce CSO and other discharges into the tributary basins to improve pathogen and DO levels.
- Objective 1c: Increase dissolved oxygen levels in tributary basin areas of chronic hypoxia to improve ecological productivity.

[2] New York City Parks. Fresh Creek Nature Preserve. Available at: https://www.nycgovparks.org/parks/fresh-creek-park/ Accessed September 2021.

[3] National Park Service. Gateway National Recreation Area. Available at: https://www.nps.gov/gate/learn/historyculture/jamaica-bay-wildlife-refuge.htm Accessed September 2021.

[4] New York City Department of Environmental Protection. NYC DEP begins Dredging at Hendrix Creek. Available at: https://www1.nyc.gov/html/dep/html/press_releases/10-79pr.shtml#.YUD7cMuSlPY Accessed September 2021.

[5] New York City Department of Environmental Protection. Jamaica Bay Watershed Protection Plan – Volume II. Available at: https://www.esf.edu/glrc/documents/Jamaica%20Bay%20Watershed%20Protection%20Plan%20volume%202.pdf Accessed September 2021.

- Objective 1d: Develop a robust and coordinated scientific monitoring program.
- Objective 3a: Promote the use of on-site BMPs in new and existing development.
- Objective 3b: Promote the use of off-site stormwater BMPs.

The potential positive or negative impacts of a proposed project within the Jamaica Bay Watershed can be evaluated through a consistency review with the above NYC DEP Water Quality and Stormwater Objectives.

The Future Without the Proposed Actions

Absent the Proposed Actions, the Project Area would continue to be characterized by highly urbanized and developed conditions, with largely unvegetated impervious surfaces occupying the vast majority of land cover. Accordingly, under the Future Without the Proposed Actions, natural resources, as defined in Chapter 11 of the *CEQR Technical Manual,* would continue to be absent from the Project Area.

The Future With the Proposed Actions

As described in detail in **Chapter 1, Project Description**, the Proposed Actions would result in the construction of approximately 2,200,538-gsf of phased development within the Project Area over a period of 10 years, resulting in the construction of 10 buildings, of which eight are predominantly residential, ranging from two to 15 stories. Buildings 7 and 8 and Buildings 9 and 10 are connected, though they will have separate residential lobbies.

As identified in Existing Conditions, the potentially relevant indirect effects of the Proposed Actions on nearby natural resources (i.e., the Fresh Creek Nature Preserve and Jamaica Bay) include potential impacts due to shadows, decreases in water quality, and/or introduction of impervious surfaces that alter drainage patterns.

As detailed in **Chapter 6, Shadows**, incremental shading of the Fresh Creek Nature Preserve would occur only on the June 21 analysis day and would be limited to the very beginning (starting at 5:57 AM) of the analysis day. Furthermore, the areal extent of the incremental shading would be restricted to a minimal (1,050± square-foot) upland area along the far northeastern boundary of the preserve that is dominated by invasive vegetation that has degraded the overall habitat quality within this area. Significantly, there would be no incremental shading to Fish Creek Basin, Jamaica Bay, or any other surface waters or wetlands as a result of the Proposed Actions. Given the very limited temporal and areal extent of incremental shading that would occur within ecologically degraded, upland portions of the Fresh Creek Nature Preserve, and taking into account the absence of incremental shading to Fresh Creek Basin, the overall indirect effects to natural resources would be insignificant. As a result, shading impacts to Fresh Creek Nature Preserve would be *de minimis* and do not warrant further analysis.

The Proposed Actions would result in a net incremental increase of 2,050 residential units and 211,474 sf of commercial/public and institution/community facility space, in a primarily CSO area. As discussed in detail in **Chapter 11, Water and Sewer Infrastructure**, although the Proposed Actions would create new demand for treatment of sewage and stormwater in comparison to the No-Action condition, based on the methodology set forth in the *CEQR*

Technical Manual, the incremental increases would be well within the capacity of the City's systems, and the effects would not be considered significant or adverse.

With respect to the potential for adverse effects to water quality within Jamaica Bay, as summarized in Existing Conditions, NYC DEP has identified six Water Quality and Stormwater Objectives for Jamaica Bay in the *Jamaica Bay Watershed Protection Plan Volume II*. Based on the analyses and conclusions included in **Chapter 11, Water and Sewer Infrastructure**, a consistency review of the Proposed Actions with the six objectives is provided below:

› Objective 1a: Reduce nitrogen loading to the tributary basins and Jamaica Bay.

  Sanitary sewage generated by the Proposed Actions would discharge to the 26th Ward Wastewater Treatment Plant (WWTP), which has a State Pollutant Discharge Elimination System (SPDES)-permitted dry weather flow capacity of 85 mgd. This incremental increase in sanitary flow would represent approximately a 0.59 percent of the 26th Ward WWTP's SPDES-permitted capacity. As the projected increase in sanitary sewage would not cause the 26th Ward WWTP to exceed its operational capacity or the SPDES-permitted capacity, the Proposed Actions would not result in significant adverse impacts to sanitary sewage treatment at the 26th Ward WWTP. Wastewater at the 26th Ward WWTP is fully treated by physical and biological processes before it is discharged into Jamaica Bay. The quality of the treated wastewater (effluent) is regulated by the aforementioned SPDES permit issued by the NYSDEC, which establishes limits for effluent parameters (i.e., suspended solids, fecal coliform bacteria, and other pollutants).

  Moreover, as detailed in the consistency analysis with Objective 1b below, the incorporation of the appropriate NYC DEP-required sanitary flow and stormwater source control BMPs, would reduce the overall volume of sanitary sewer discharge and stormwater runoff that might otherwise be generated from the Project Area, thereby reducing the potential for nitrogen loading in Jamaica Bay and its tributaries as a result of the Proposed Actions.

  Therefore, the Proposed Actions are consistent with this objective.

› Objective 1b: Reduce CSO and other discharges into the tributary basins to improve pathogen and DO levels.

  It is important to note that the Proposed Actions would not result in the introduction of new or additional CSO, MS4, or WWTP effluent outfalls to Jamaica Bay or any of its tributaries, including Fresh Creek Basin.

  The NYC DEP Guidelines for the Criteria for Detention Facility Design establish allowable stormwater release rates. To achieve the allowable release rates for the Proposed Actions, stormwater could be managed by utilizing one or a combination of detention or infiltration techniques identified in the NYC Green Infrastructure Plan. Green technologies, such as green and blue roofs, subsurface detention and infiltration, and permeable pavement, could be implemented to retain or release stormwater with slowed discharge rates to control peak runoff rates. Specific BMP methods will be determined with further refinement of the building design and in consultation with NYC DEP. Moreover, in accordance with the New York City Plumbing Code (Local Law 33 of 2007), the Proposed Project would be required to utilize low-flow plumbing fixtures, which would reduce sanitary flows to the plant 26th Ward WWTP and therefore CSO

discharge volume to Jamaica Bay. In summary, the incorporation of the appropriate sanitary flow and stormwater source control BMPs that would be required as part of the site connection approval process, with the review and approval of NYC DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff that might otherwise be generated from the Project Area.

With respect to pathogen and dissolved oxygen levels, Wastewater at the 26th Ward WWTP is fully treated by physical and biological processes before it is discharged into Jamaica Bay. The quality of the treated effluents is regulated by a SPDES permit issued by the NYSDEC, which establishes limits for effluent parameters (i.e., suspended solids, fecal coliform bacteria, and other pollutants).

Based on the foregoing, the Proposed Actions are consistent with this objective.

› Objective 1c: Increase dissolved oxygen levels in tributary basin areas of chronic hypoxia to improve ecological productivity.

As described in the consistency analyses for objectives 1a and 1b, the incorporation of the appropriate sanitary flow and stormwater source control BMPs that would be required as part of the site connection approval process, with the review and approval of NYC DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff. Therefore, the BMPs would reduce loading of nitrogen and other nutrients in WWTP effluent that contribute to declines in dissolved oxygen levels and cause hypoxic conditions in Jamaica Bay and its tributaries.

Accordingly, the Proposed Actions are consistent with this objective.

› Objective 1d: Develop a robust and coordinated scientific monitoring program.

As the objective relates to government and non-government agency monitoring of water quality, it is not applicable to the Proposed Actions.

› Objective 3a: Promote the use of on-site Best Management Practices in new and existing development.

As detailed in the consistency analysis for Objective 1b, new development under the Proposed Actions could incorporate one or more stormwater BMPs identified in the NYC Green Infrastructure Plan, including green and blue roofs, subsurface detention and infiltration, and permeable pavement. Specific BMP methods will be determined with further refinement of the building design and in consultation with NYC DEP. Additional on-site BMPs include the required use of low-flow plumbing fixtures, which would reduce sanitary flows to the plant 26th Ward WWTP and therefore CSO discharge volume to Jamaica Bay.

Therefore, the Proposed Actions are consistent with this objective.

› Objective 3b: Promote the use of off-site stormwater Best Management Practices.

As the objective relates to off-site activities that are beyond the scope of the Proposed Actions, it is not applicable to the Proposed Actions. However, it is important to note that the Proposed Actions would comply with all on- and off-site stormwater BMPs ultimately required by NYC DEP.

Based on the foregoing consistency review, the Proposed Actions are consistent with the applicable NYC DEP Water Quality and Stormwater Objectives for Jamaica Bay included in the *Jamaica Bay Watershed Protection Plan Volume II*.

10

Hazardous Materials

A hazardous material is any substance that poses a threat to human health or the environment if it creates an exposure pathway. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic) which may create a dermal, inhalation or vapor exposure pathway if present in the environment and are left uncontrolled.

Introduction

According to the *2021 CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when:

- hazardous materials exist on a site;
- an action would increase pathways to their exposure; or
- an action would introduce new activities or processes using hazardous materials.

This section presents the findings of the hazardous materials assessment and identifies potential issues of concern with respect to workers, the community, and/or the environment during construction and after implementation of the Proposed Project.

As indicated in the *CEQR Technical Manual*, a hazardous materials (E) Designation is an institutional control that may be placed on a site to establish a hazardous materials review and approval framework. It provides a mechanism to ensure that testing for and remediation of hazardous materials, if necessary, are completed prior to future development of an affected site, thereby eliminating the potential for a hazardous materials impact. (E) designated parcels are administered under the authority of the New York City Mayor's Office of Environmental Remediation (OER).

This section presents the findings of the hazardous materials assessment and identifies potential issues of concern with respect to workers, the community, and/or the environment during construction and after implementation of the Proposed Project and how such potential issues of concern will be mitigated.

Principal Conclusions

Environmental site assessments have been conducted in the Development Site, which have determined that the Development Site does require remediation prior to development. Subsurface investigations confirmed historic site uses, including landfilling activities associated with the placement of ash from city incinerators to level the land, were the source of this contaminated soil material. This material is known as "historic fill". To address the historic fill and other contamination based on the additional historic uses of a former gasoline filling station and former auto wrecking facility identified within the Development Site, Block 4430, Lot 1 and Block 4434, Lots 1 and 10, an (E) Designation (E-679) for hazardous materials is appropriate for the Development Site, which would be remediated in accordance with, at a minimum, the (E) Designation program administered by the New York City Mayor's Office of Environmental Remediation (OER).

Notably, Block 4434, Lot 10 has already been entered into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and shall be remediated in accordance with the BCP requirements under NYSDEC regulatory oversight and pursuant to a Brownfield Cleanup Agreement (BCA) Index No. C224290-04-19 dated May 31, 2019. All reports generated for the benefit of NYSDEC will also be shared with OER. OER will generally accept the reports generated in the BCP for the purpose of complying with the (E) Designation (E-679) requirements on that lot once the State Remedial Action Work Plan is approved. Compliance with the respective remediation regulatory programs would provide for the protection of human health and the environment within the Development Site once a Certificate of Completion (COC) issued by NYSDEC or a Notice of Satisfaction (NOS) by OER, and any required long term institutional and engineering controls are in place. Therefore, the Proposed Actions would eliminate any significant adverse impacts related to hazardous materials through implementation of required regulatory remediation of the Development Site and long-term site management. Additional details relating to the subsurface investigations are provided, below.

The subsurface investigation conducted on the BCP portion of the Development Site (Block 4434, Lot 10) evaluated for the presence of contamination in soil/fill materials, groundwater and soil vapor based on historic uses, which included a gasoline filling station, automobile junkyard/vehicle dismantling facility, and historic ash landfilling by the city. Miscellaneous debris, including tires, porcelain, wire, plastic, fabric and shoes were found in test pits installed as part of the subsurface investigation. The results of the Phase II Environmental

Investigation (EI) Report indicated the presence of semi-volatile organic compounds (SVOCs) and heavy metals in soils that exceed NYSDEC soil cleanup objectives (SCOs) for residential, commercial, and industrial use and were attributed to historic site activities. Groundwater evaluated on Block 4434, Lot 10 also exhibited contamination—including SVOCs and heavy metals at concentrations exceeding NYSDEC groundwater standards and guidance values—attributed to historic site uses. While historic investigations in the early 2000's found some methane vapor, more recent field screening completed during the Environmental Investigation (EI) Report did not reveal methane exceedances.

To address these conditions during site redevelopment, a BCP application was submitted to the NYSDEC on December 14, 2018. A BCA was executed on May 15, 2019, and Block 4434, Lot 10 was entered into the NYSDEC BCP as of that date. As such, hazardous materials remedial requirements associated with Block 4434, Lot 10 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH. A comprehensive Remedial Investigation (RI) was implemented and the RI Report (RIR), submitted on July 23, 2021, was approved on February 1, 2022. Next, the NYSDEC-approved Remedial Action Work Plan (RAWP) and Construction Health and Safety Plan (CHASP) will be prepared and implemented. Upon completion of the approved remedial action, a Final Engineering Report (FER) shall be completed and submitted to NYSDEC for review and approval. Any potential institutional or engineering controls (ICs/ECs) relating to site management would be followed in accordance with an NYSDEC-approved Site Management Plan (SMP).

The remainder of the Development Site (Block 4430, Lot 1 and Block 4434, Lot 1) were evaluated in a recent July 2021 Phase II Environmental Investigation (EI) Report, which identified soil and groundwater contamination above applicable regulatory standards attributed to similar landfilling and petroleum related historic site activities and the presence of historic fill materials. Elevated SVOC, pesticides, PCBs and metals above applicable NYSDEC SCOs were identified in soils across the non-BCP portions of the Development Site, which were attributed to the presence of historic fill materials. SVOC, metal and PCB contamination in groundwater identified in the Phase II EI was attributed to sediment entrainment of fill material in the groundwater samples. Methyl tert-butyl ether (MTBE), a chemical additive to petroleum, was also identified.

To address the conditions identified on Block 4434, Lot 1, a BCP application and Remedial Investigation Work Plan (RIWP) were submitted to the NYSDEC on January 13, 2022 and were issued for public comment on March 23, 2022. ~~If~~As the site is accepted into the BCP on May 23, 2022, hazardous materials remedial requirements associated with Block 4434, Lot 1 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH, similar to Block 4434, Lot 10. A comprehensive RI will be implemented and documented in a RIR, followed by the preparation of a RAWP and CHASP. Upon completion of the approved remedial action, a FER shall be completed and submitted to NYSDEC and NYSDOH for review and approval. Any potential ICs/ECs relating to site management would be followed in accordance with an NYSDEC-approved SMP.

Given the conditions identified within the Development Site in the subsurface investigations, the Proposed Actions would include an (E) Designation for hazardous materials (E-679), which would be applied to the Development Site (Brooklyn Block 4430, Lot 1 and Block 4434, Lots 1 and 10). The (E) Designation provides a mechanism for regulatory oversight for future remedial action as a pre-construction requirement to ensure the potential risks or exposures

associated with the presence of hazardous substances shall be reduced or eliminated to the maximum extent possible as related to the hazardous materials present. The implementation of the preventative and remedial measures required under the (E) Designation would avoid the potential for significant adverse hazardous materials impacts due to the Proposed Actions. As previously indicated, Block 4434, Lot 10, and ~~potentially~~ Block 4434, Lot 1, shall be remediated under the BCA with regulatory oversight provided by NYSDEC. However, OER will generally accept the reports generated in the BCP for the purpose of complying with the (E) Designation requirements once the State RAWP is approved. Additionally, BCP eligibility may be explored in the future for the remaining portions of Development Site that are not currently entered in the BCP.

With regulatory oversight provided by NYSDEC under the BCA executed for Block 4434, ~~Lot 10 and potentially for Block 4434, Lot 1~~Lots 1 and 10, and the placement of an (E) Designation for the Development Site, the Proposed Actions would not result in any significant adverse impacts with respect to hazardous materials for the Development Site since the hazardous materials present will be properly remediated under the oversight of either or both State and City remediation agencies.

Methodology

As detailed in **Chapter 1, Project Description**, the Proposed Actions would facilitate the development of a mixed-use, purpose-built community on the campus of the Christian Cultural Center (CCC) comprised of income-based affordable housing (rental and home ownership); a performing arts center (PAC); local retail; and a variety of community facilities including trade school and daycare facility targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood.

The Development Site consists of Block 4430, Lot 1 and Block 4434, Lots 1 and 10 in the East New York neighborhood of Brooklyn, Community District 5.

The potential for hazardous materials in the Development Site was evaluated in the following environmental documents:

- Phase I ESA, dated March 19, 2018/Updated July 2021, prepared by Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) for the Development Site.[1]
- Phase I ESA, dated August 24, 2018, prepared by Langan for Block 4434, Lot 10.[2]
- Phase II Environmental Investigation Report, dated August 24, 2018 prepared by Langan for Block 4434, Lot 10.
- Brownfield Cleanup Program Application, dated December 14, 2018, prepared by Knauf Shaw LLP for Block 4434, Lot 10.

[1] It should be noted the referenced parcels in the March 19, 2018 / Updated July 2021 Phase I ESA prepared by Langan reflect a previous parcel configuration that includes former Block 4430, Lots 1 and 200, Block 4432, Lot 1 and a demapped portion of Alabama Avenue, which have since been merged into the current Block 4430, Lot 1. The summary provided herein references former parcel configurations.

[2] It should be noted Lot 10 was previously part of Block 4434, Lot 1 and was subdivided into Lot 10 after the completion of the August 24, 2010 Phase I ESA. As such, the August 24, 2018 Phase I ESA prepared by Langan references Lot 10 as p/o Lot 1.

- Phase II Environmental Investigation Report, dated July 7, 2021, prepared by Langan for Block 4430, Lot 1, Block 4431, Lots 1 and 200, Block 4432, Lot 1 and Block 4434, Lot 1.[3]
- BCA, dated May 15, 2019 prepared by the NYSDEC for Block 4434, Lot 10.
- Brownfield Cleanup Program Application, dated January 13, 2022, prepared by Knauf Shaw LLP for Block 4434, Lot 1.

The goal of a Phase I ESA process is to identify Recognized Environmental Conditions (RECs), which means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. Per the ASTM Standard, a Phase I ESA reviews a variety of information sources, including current and historic Sanborn Fire Insurance Maps and aerial photographs; state and federal environmental regulatory databases identifying listed sites; and local environmental records. The Phase I ESA summarized herein also included reconnaissance of the Development Site and surrounding neighborhood and interviews with personnel.

As stated in Practice E1527-13, there may be environmental issues or conditions in the Development Site, which may be requested by the user to be addressed as part of the Phase I ESA, which are not covered within the scope of ASTM Practice E1527-13. These additional environmental issues (or non-scope considerations) could evaluate for the potential present of radon, lead-based paint (LBP), asbestos-containing materials (ACM), wetlands, and mold and water damage. Additional environmental issues, or non-scope considerations, are typically characterized in a Phase I ESA as Business Environmental Risks (BERs), which are risks that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated.

To evaluate RECs and relevant BERs established in the Phase I ESAs, subsurface investigations were performed by Langan with the goal of evaluating subsurface conditions for the potential presence of contamination. The results of the investigations can be used to establish practical mitigation measures that would be implemented during construction, as well as to prevent future site occupants from risk of exposure to potential contaminants of concern. The Phase II ESAs were also performed in support of future enrollment into the NYSDEC BCP.

Assessment

Existing Conditions

The Development Site is currently improved with the two-story, 92,784-gross-square-foot (gsf) CCC—a large, non-denominational house of worship that was constructed in 1997. Situated on the western portion of the Development Site, the CCC is surrounded by a surface parking lot containing approximately 385 parking spaces accessed via a curb cut along Flatlands Avenue immediately opposite of Alabama Avenue and two existing curb cuts along

[3] It should be noted that since completion of the Phase II ESA, these parcels, along with a demapped portion of Alabama Avenue were merged into Block 4430, Lot 1. As such, the July 7, 2021 Phase II ESA prepared by Langan references parcel numbers prior to the merge.

Louisiana Avenue. The eastern portion of the Development Site is unimproved land, typically serving as a location for overflow parking during church services and other events at the CCC and otherwise not used. Due to the known methane vapors under the Development Site, the CCC house of worship was constructed with a methane venting system to prevent subsurface gasses from entering the structure.

An analysis of hazardous materials within the Development Site is provided below.

Phase I Environmental Site Assessment, March 19, 2018 / Updated July 2021

A Phase I ESA was prepared by Langan for the Development Site[4] dated March 19, 2018. Based on the Phase I ESA, a history of the Development Site was established dating back to 1908, when the Development Site was mostly vacant/undeveloped lots. A one-story shed and one-story wagon house were located on the western portions of current Block 4434 and remained present through at least 1928, along with the addition of a one-story shed and one-story residential building located on current Block 4431 with an additional one-story building of unspecified use. By 1950, the one-story buildings were no longer present, and Block 4434 (Lot 10) was improved with a one-story gasoline filling station on the northeastern corner, at the intersection of Pennsylvania Avenue and Flatlands Avenue, and a one-story garage building with frontage along Pennsylvania Avenue. In addition, the southeastern corner of the Development Site, south of the one-story storage building, was a vacant lot indicated as a portion of "Masons Materials" on historic Sanborn Fire Insurance Maps. By 1967, apparent auto junkyard uses along with two one-story office buildings were located at 12058 Flatlands Avenue (Block 4432, Lot 1) and 12096 Flatlands Avenue (Block 4434, Lot 1). The Development Site remained similar in configuration between 1969 and 1981, with the addition of a one-story building of unspecified use at 12048 Flatlands Avenue (Block 4431, Lot 1) depicted on the 1969 Sanborn map, a one-story office at 12026 Flatlands Avenue (Block 4431, Lot 1) constructed sometime between 1977 and 1981, and a one-story building of unspecified use located at 12120 Flatlands Avenue (Block 4434, Lot 1) in 1979. In 1983, Lots 4431 and 4432 became vacant and were no longer utilized as auto junkyards. By 1986, the gasoline filling station and one-story building located 12096 Flatlands Avenue were no longer present on Sanborn map depictions. By 1989, the one-story building on the southeastern portions of the Development Site was no longer present on Sanborn map depictions. The Development Site remained of similar configuration through at least 1996. The existing CCC was constructed in 1997; at this time, the one-story building of unknown use located at 12120 Flatlands Avenue was also no longer present on Sanborn map depictions. Furthermore, current Block 4430, along the northwestern portions of the Development Site, was no longer utilized as an auto junkyard. The Development Site remained similar through 2007.

In addition to the above, the Phase I ESA provided existing conditions noted during the site reconnaissance and study of the Development Site. According to the Phase I ESA, the Development Site, at the time of the Phase I ESA site reconnaissance, consisted of the CCC and on-grade accessory parking lot located on portions of Block 4430, Lot 1; Block 4431, Lots 1 and 200; Block 4432, Lot 1; and the de-mapped former Alabama Avenue roadway.

[4] As indicated in **Chapter 1, Project Description**, the Development Site consists of Block 4430, Lot 1 and Block 4434, Lots 1 and 10. References made in the summary reflect former parcel configurations prior to the merging of Block 4430 Lots 1 and 200, Block 4432 Lot 1 and a demapped portion of Alabama Avenue into Block 4430, Lot 1.

Block 4434, Lot 1 (along with current Lot 10) consisted of a large vacant and unpaved lot on the northeastern portions of the Development Site.

Based upon the information provided in the Phase I ESA, the following findings and features were identified for the Development Site:

- Groundwater beneath the Development Site is assumed to flow to the southeast, toward the North Channel of Jamaica Bay;
- Portions of the Development Site were identified on the Environmental Data Resources, Inc. (EDR) Gas Stations database as the ISO Auto Service gasoline filling station located at 12026 Flatlands Avenue, which operated between 1969 and 1975. There were no other EDR database listings identified for the Development Site;
- Based on a review of regulatory agency databases, the Phase I ESA concluded environmental impacts from the surrounding database listings are not anticipated. However, the number of nearby database listings, including nearby gasoline/auto repair facilities, may have contributed to the cumulative impacts on regional groundwater and/or soil vapor that were identified;
- There were no environmental concerns or conditions that were identified for the Development Site as part of a review of municipal records made available from local, State, and federal agencies;
- Approximately 12 storm drains were observed in the asphalt-paved parking area surrounding the CCC. Connective piping was observed during the Phase I ESA site reconnaissance. It was determined that the storm drains do not discharge to the municipal sewer system;
- The CCC is improved with two hydraulic piston-driven elevators, with hydraulic tanks mounted on top of finished floor areas and containing automatic leveling pumps submerged within each tank. The hydraulic pistons could not be inspected due to access constraints;
- The roof was equipped with five separate heating, ventilation, and air conditioning (HVAC) units; solar panels; and an eight-inch-diameter steel pipe connected to an exhaust blower. The exhaust blower is connected to a methane venting system that consists of horizontal piping installed below the CCC building slab;
- At the time of the Phase I ESA site reconnaissance, the northeastern portions of the Development Site (Block 4434, Lot 1 and present 10), consisted of a vacant lot used for additional parking and storage. The parking lot surface is compacted recycled concrete aggregate (RCA). One trash compactor; one 30-cubic-yard (cy) dumpster; and four metal storage trailers containing household lighting, decorations, wardrobe clothing, and audio equipment for CCC special events were observed at the southwestern portions of Block 4434, Lot 1.

Two previous reports were appended in the Phase I ESA and are summarized as follows:

Limited Geophysical Investigation, November 2017, prepared by Langan

On November 29, 2017, a limited geophysical investigation was completed by Langan on the northeastern portions of the Development Site, within the location of the former gasoline filling station (Block 4434, Lot 10). Five significant buried anomalies were identified in the approximate footprint of the former gasoline filling station; they were identified to be either buried foundations/concrete debris or abandoned underground storage tanks (USTs).

Phase I ESA, April 2003, prepared by Soil Mechanics Environmental Services

A previous Phase I ESA, dated April 2003, was prepared by Soil Mechanics Environmental Services (Soil Mechanics). The Phase I ESA prepared by Soil Mechanics included several historical investigations that were completed for the Development Site. According to the Phase I ESA prepared by Soil Mechanics, a Technical Memorandum for a previous Draft Environmental Impact Statement (DEIS) prepared by AKRF, Inc. (AKRF) indicated the Development Site originally consisted of marshlands and was filled during the early 1900s with ash and waste from a city solid waste incinerator. A geophysical investigation revealed two anomalies near Flatlands Avenue and one near Vandalia Avenue. Test pits, completed to approximately seven feet below grade (bg), identified the presence of automobile parts, such as gasoline tanks and tire rims, as well as a crushed drum in one location.

As described in the Phase I ESA, a soil gas survey completed in the area of the former gasoline station revealed the presence of methane gas that was attributed to the former marsh deposits and presence of historic fill. No volatile organic compounds (VOCs) associated with gasoline were detected. Soil sampling activities revealed the presence of elevated concentrations of total petroleum hydrocarbons and metals throughout the former gasoline station portions of the Development Site and elevated semi-volatile organic compounds (SVOCs) in several surficial and subsurface soil samples. Elevated metals, VOCs, and SVOCs detected in groundwater were attributed to the presence of historic fill impacted with the same compounds in contact with groundwater. AKRF recommended the implementation of a health and safety plan (HASP) during future construction activities and the construction of a soil capping system to prevent human exposure to remaining impacts in the soil.

In addition, the Phase I ESA prepared by Soil Mechanics also included a Subsurface Investigation Report prepared by SESI Consulting Engineers and dated March 1994. The investigation included the installation of eight soil borings between 36 and 51.5 feet bg. At depths ranging from 18.5 to 35 feet bg at each location, miscellaneous fill material was encountered. The fill reportedly consisted of cinders and ash mixed with sand, silt, gravel, and clay and various debris such as concrete, wood, rubble, metal, brick, glass, and asphalt. Groundwater was encountered between 17 and 23 feet bg.

The Phase I ESA prepared by Soil Mechanics concluded that the recommendations for the HASP and soil capping system be followed and noted a methane mitigation system may be required as part of any future building construction.

Based upon the results of the Phase I ESA, the following RECs were identified for the Development Site:

- REC-1: Former on-site gasoline filling station. A gasoline filling station was historically located on the northeastern portions of the Development Site. A limited geophysical survey completed at this location identified five subsurface anomalies, four of which may be indicative of potential USTs based on size, shape, and depth.
- REC-2: Former on-site automobile junkyards. Based upon a review of historical Sanborn Maps and New York City Department of Buildings (NYCDOB) certificates of occupancy (C/O's), automobile junkyards and/or auto dismantling operations were identified on the northern portions of the Development Site along Flatlands Avenue from 1967 to 2001.
- REC-3: Presence of methane in subsurface. An exhaust blower connected to eight-inch steel piping was observed on the roof of the CCC during the Phase I ESA site

reconnaissance and was determined to be the outlet of a methane venting/mitigation system installed below the building. Methane may be present in the subsurface within the remainder of the Development Site.

In addition to the aforementioned RECs, the following BERs were identified for the Development Site:

- BER-1: Potential presence of historic fill material. Based upon a review of historical topographic maps, an approximately 120,000-square-foot (sf) area along the southwestern portions of the Development Site were historically subject to periodic inundation. It is assumed this area was historically filled with material of unknown origin to raise the surface grade and prevent flooding.
- BER-2: Potential presence of undocumented heating oil storage tanks. Heating oil USTs may be present beneath the lots or adjacent sidewalks associated with small structures depicted on the Sanborn Maps and possibly in association with former auto junkyard/dismantling operations within the Development Site.
- BER-3: Potential impacts from current and historical operations conducted at adjacent and nearby properties. Auto junkyard/dismantling facilities, auto repair shops, and gasoline filling stations located adjacent to the north of the Development Site between 1950 and 1970 were identified on historical Sanborn Maps and in the regulatory agency database search.

Phase II Environmental Investigation Report, July 7, 2021

To investigate the RECs identified in the Phase I ESA prepared by Langan, dated March 19, 2018, a Phase II EI was conducted for portions of the Development Site (Block 4430, Lot 1; Block 4431, Lots 1 and 200; Block 4432, Lot 1 and Block 4434, Lot 1; which have since been merged into Block 4430, Lot 1 of the Development Site. The Phase II EI evaluated subsurface conditions based upon historical site use as automobile junkyards or dismantling facilities on the northern portions, as well as portions of the site subject to historical inundation which may have been filled with City incinerator waste, and the potential presence of methane in the subsurface. The scope of the Phase II EI was as follows:

- Performance of a geophysical utility clearance surrounding proposed sample locations.
- Installation of three test pits down to five-to-six feet below sidewalk grade on the eastern portions of the Development Site,
- Installation of 14 soil borings and collection and analysis of multi-depth soil samples from each soil boring.
- Installation of five (5) permanent groundwater monitoring wells, and associated collection and analysis of five (5) groundwater samples.
- Installation of temporary soil vapor/methane monitoring points, with methane monitoring occurring over a period of five minutes at each location. There were no soil vapor samples collected as part of the Phase II EI.

Based upon the results of the Phase II EI, odors and elevated PID readings up to 22.1 parts per million (ppm) were detected on the northern portion of the Development Site from eight-to-14 feet below sidewalk level (bsl), which were presumably associated with historical automobile/vehicle dismantling and junkyard operations.

Soil analytical results identified elevated concentrations of the VOC acetone (a common laboratory artifact) in seven samples collected. Elevated concentrations of polycyclic aromatic hydrocarbons (PAHs), pesticides, PCBs and metals in soil samples throughout the Site were attributed to the presence of fill materials and historic site operations. It should be noted certain regulatory exceedances for PAHs in soil samples were above NYSDEC Part 375 Industrial Restricted Use Soil Cleanup Objectives (SCOs), with additional exceedances of SVOCs, pesticides, PCBs and metals at varying above commercial, restricted residential, residential and unrestricted use SCOs depending on location.

Groundwater analytical results revealed exceedances of one VOC (methyl tert-butyl ether [MTBE]), a common fuel additive, above its applicable NYSDEC standard in one location. SVOCs, particularly PAHs were detected at concentrations exceeding their applicable NYSDEC groundwater quality standards/guidance values at several sample locations, as well as PCBs, and total and dissolved metal concentrations. Elevated concentrations of total PAHs, PCBs and metals were attributed to likely sediment entrainment of fill material of unknown origin in the groundwater samples. Dissolved metal exceedances were attributed to naturally occurring background concentrations.

Soil vapor/methane field screening results did not identify the presence of methane in the subsurface.

The Phase II EI Report indicates the subsurface has been impacted from historical site operations, and historic fill containing elevated concentrations of SVOCs, pesticides, PCBs and metals has been identified within the portions of the Development Site included in the Phase II EI. Although a methane monitoring system was previously installed for the CCC building, methane was not detected in the subsurface and does not appear to be a contaminant of concern under current site conditions.

Phase I Environmental Site Assessment, August 24, 2018

Although the Development Site was evaluated in the Phase I ESA prepared by Langan, dated March 19, 2018 and summarized above, Langan prepared a Phase I ESA specific to the northeastern portions of the Development Site (Block 4434, Lot 10 ["Lot 10"]), dated August 24, 2018. The Phase I ESA was prepared for the study area in support of a NYSDEC BCP Application (as later summarized).

Based on this Phase I ESA, a history of Lot 10 was established dating back to 1908, when the northeastern portions were vacant/undeveloped. According to historic Sanborn Maps, Lot 10 remained vacant through at least 1928. A one-story gasoline filling station was improved on the northern portions of Lot 10, and, by 1950, a one-story storage building was improved with frontage along Pennsylvania Avenue. By 1967, the northern frontage of Lot 10 east of Sheffield Avenue was shown as auto wrecking on historic Sanborn Maps. The study area remained similar through at least 1983. By 1986, the gasoline station was presumably demolished and was no longer depicted on historic Sanborn Maps. Lot 10 remained similar through at least 1996. By 2001, the one-story building was presumably demolished and Lot 10 became vacant.

In addition to the above, the Phase I ESA provided existing conditions noted during the site reconnaissance and study of Lot 10. According the Phase I ESA, Lot 10 was vacant, covered with compacted RCA, and was used for parking for the CCC.

Based upon the information provided in the Phase I ESA, the following findings and features were identified for Lot 10:

- Groundwater beneath Lot 10 is assumed to flow to the southeast, toward the North Channel of Jamaica Bay;
- Lot 10 was not identified in any databases according to the regulatory agency database report;
- Based on a review of regulatory agency databases, the Phase I ESA concluded environmental impacts were not anticipated from any specific database listings. However, the surrounding development density and numerous database listings may have contributed to cumulative impacts on regional groundwater and/or soil vapor were identified, including nearby gasoline/auto repair facilities;
- There were no environmental concerns or conditions that were identified for the Lot 10 part of a review of municipal records made available from local, State and federal agencies;
- At the time of the Phase I ESA site reconnaissance, Lot 10 consisted of a vacant lot used for additional parking and storage for the CCC. The parking lot surface consists of compacted RCA.

Two previous reports were appended in the Phase I ESA and are summarized as follows:

Limited Geophysical Investigation, November 2017, prepared by Langan

A limited geophysical investigation was completed for Lot 10 by Langan on November 29, 2017. The results of the geophysical survey were previously summarized as part of Langan's March 19, 2018 Phase I ESA for the larger Development Site.

Phase I ESA, April 2003, prepared by Soil Mechanics Environmental Services

A previous Phase I ESA, dated April 2003, was prepared by Soil Mechanics. The Phase I ESA prepared by Soil Mechanics was previously summarized as part of Langan's March 19, 2018 Phase I ESA for the larger Development Site.

Phase II Environmental Investigation Report, August 24, 2018, prepared by Langan

A Phase II Environmental Investigation Report (the Phase II EI Report) was prepared by Langan specific to Lot 10 in support of a NYSDEC BCP application. The Phase II EI Report was appended to Langan's Phase I ESA prepared for Lot 10. The following areas of concern (AOCs) were identified for Lot 10 in association with the Phase II EI:

- Former on-site gasoline filling station
- Former on-site automotive dismantling/wrecking
- Presence of historic fill
- Presence of methane in soil vapor

The scope of the Phase II EI involved the excavation of five test pits along the northern and western boundaries of Lot 10 to depths ranging between five and 6.50 feet bg; the installation of six soil borings; and the installation of one permanent flush-mounted, two-inch groundwater monitoring well. In addition, methane readings were collected within Lot

10 at approximately ten feet bg to evaluate subsurface methane levels. The following findings were provided in the Phase II:

Test Pit Investigation Results

Test pits excavated within Lot 10 identified historic fill in each location, including concrete, asphalt, wood, brick, metal, and slag. Additional miscellaneous debris, including tires, porcelain, wire, plastic, fabric, and shoes were also observed in certain test pits. No USTs or fill/distribution piping were identified during the test pit investigation. As such, due to the lack of competent subsurface structures identified during the test pit investigation, it was determined that concrete and metal debris within the historic fill layer were likely the source of the anomalies identified in the 2017 geophysical survey previously summarized.

Soil Boring Investigation Results

As previously indicated, six soil borings were installed in Lot 10 to evaluate subsurface soil conditions. A total of 12 soil samples were collected for laboratory analysis to evaluate fill material identified in the soil borings. Laboratory results identified SVOCs in soil on the northern portions of Lot 10 at concentrations exceeding NYSDEC soil cleanup objectives for residential, commercial, and industrial use. Heavy metals (barium, cadmium, copper, lead, and mercury) were detected in surficial soil samples at concentrations exceeding the NYSDEC SCOs for Restricted Residential Use, Restricted Commercial Use, and/or Restricted Industrial Use. The metals were likely attributable to historic site operations including automotive dismantling/wrecking.

Groundwater Investigation Results

As previously indicated, one groundwater monitoring well was installed within Lot 10 to evaluate groundwater conditions. Groundwater was recorded at approximately 14 feet bg. There were no VOCs, pesticides, or polychlorinated biphenyls (PCBs) detected in groundwater in exceedance of relevant NYSDEC groundwater standards and guidance values. However, several metals and one SVOC, benzo(a)anthracene, were detected at concentrations exceeding their relevant NYSDEC standards and guidance values. The presence of groundwater contaminated with SVOCs and metals on Lot 10 was likely attributable to historic filling operations, reportedly including the use of waste from the city incinerator in the 1900s.

Methane Monitoring

A temporary methane monitoring point was installed on Lot 10 at approximately 10 feet bg within the vadose zone of the historic fill layer. No measurable methane concentrations were detected over a five-minute monitoring period.

Based upon the results of the Phase II ESA, Langan indicated Lot 10 may be eligible for enrollment into the NYSDEC BCP.

Based upon the results of the Phase I ESA and Phase II EI included therein, the following RECs were identified for Lot 10:

› REC-1: Former on-site gasoline filling station. A gasoline filling station was historically located on Lot 10. Test pits and sampling completed as part of the May 2018 did not

identify the presence of UST and gasoline contamination in soil and groundwater. However, the investigation was limited in scope and may not be considered representative of conditions throughout Lot 10. As such, there remained a potential for adverse environmental impacts due to the use and storage of gasoline associated with former filling station operations.

- REC-2: Former on-site automobile junkyards. Based upon a review of historical Sanborn Maps and the City Directory Abstract, automobile wrecking operations were identified in the study area between 1967 and 1987.
- REC-3: Presence of historic fill. The May 2018 Phase II confirmed the presence of historic fill material. Furthermore, laboratory analytical results for soil revealed the presence of elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals above NYSDEC Restricted Residential, Commercial, and Industrial SCOs.

In addition to the aforementioned RECs, the following BERs were identified for Lot 10:

- BER-1: Potential presence of undocumented heating oil storage tanks. Heating oil USTs may be present beneath Lot 10 or adjacent sidewalks associated with small structures depicted on the Sanborn Maps and possibly in association with former auto junkyard/dismantling operations.
- BER-2: Potential impacts from current and historical operations conducted at adjacent and nearby properties. Auto junkyard/dismantling facilities, auto repair shops, dry cleaners, the use of USTs, spills, and the generation and disposal of hazardous waste within Lot 10.

Brownfield Cleanup Agreement, May 15, 2019

The Phase I ESA for Block 4434, Lot 10 and the appended Phase II ESA prepared by Langan were submitted to the NYSDEC in a Brownfield Cleanup Program Application, prepared by Knauf Shaw LLP on behalf of the applicant, Innovative Urban Living, LLC on December 14, 2018. On May 15, 2019, a BCA was executed between the applicant and NYSDEC, and Block 4434, Lot 10 entered into the NYSDEC BCP, ensuring regulatory oversight for remedial action of Block 4434, Lot 10 would be provided by NYSDEC.

Brownfield Cleanup Application and RIWP, January 13, 2022

To address the conditions identified on Block 4434, Lot 1, a BCP application and RIWP were submitted to the NYSDEC on January 13, 2022 and were issued for public comment on March 23, 2022. ~~If~~As the site ~~is~~was accepted into the BCP on May 23, 2022, hazardous materials remedial requirements associated with Block 4434, Lot 1 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH, similar to Block 4434, Lot 10. A comprehensive RI will be implemented and documented in a RIR, followed by the preparation of a RAWP and CHASP. Upon completion of the approved remedial action, a FER shall be completed and submitted to NYSDEC and NYSDOH for review and approval. Any potential ICs/ECs relating to site management would be followed in accordance with an NYSDEC-approved SMP.

Future No-Action Condition

Absent the Proposed Project, it is assumed that the Development Site would remain in its existing condition, with only the CCC operational in the Development Site, surrounded by accessory parking. Under the future No-Action condition, remedial action on Block 4434, ~~Lot~~Lots 1 and 10 would not be completed under the NYSDEC BCP. As such, confirmed contaminants on Block 4434, ~~Lot~~Lots 1 and 10 would go unmitigated and remain in-place. Furthermore, the Applicant would not pursue enrollment into the NYSDEC BCP or NYC OER programs for the remediation of the remaining non-BCP portions of the Development Site. Furthermore, an (E) Designation for hazardous materials would not be applied to non-BCP portions of the Development Site (Block 4430, Lot 1; Block 4431, Lots 1 and 200; Block 4432, Lot 1; Block 4434, Lot 1; and a demapped portion of Alabama Avenue). As such, potential subsurface contamination within these portions of the Development Site would go unmitigated without regulatory oversight.

Future With-Action Condition

The future With-Action condition would facilitate the Proposed Project in the Development Site with approximately 2.20 million gsf of development. The Proposed Project would include publicly accessible open space, with a campus quadrangle, recreational space on the roof of the public parking garage, and a playground, and would also provide private open space, including residential building courtyards. The With-Action condition would include pedestrian paths and a private street network that would run through the Development Site.

Based upon the results of the Phase II ESA, Block 4434, Lot 10 entered into the NYSDEC BCP under a BCA executed on May 15, 2019, and Block 4434, Lot 10 was entered into the NYSDEC BCP as of that date. As such, remedial action associated with Block 4434, Lot 10 shall be completed under the requirements of the NYSDEC BCP, with regulatory oversight provided by the NYSDEC and NYSDOH under the With-Action condition, including performance of a more comprehensive RI, and the generation and implementation of a NYSDEC-approved RAWP and CHASP. A comprehensive Remedial Investigation (RI) was implemented and the RI Report (RIR), submitted on July 23, 2021, was approved on February 1, 2022. Next, the NYSDEC-approved Remedial Action Work Plan (RAWP) and Construction Health and Safety Plan (CHASP) will be prepared and implemented. Upon completion of remedial action, a Final Engineering Report (FER) would be completed and submitted to NYSDEC for review and approval. Any potential institutional or engineering controls (ICs/ECs) relating to site management would be followed in accordance with an NYSDEC-approved SMP.

To address the conditions identified on Block 4434, Lot 1, a BCP application and RIWP were submitted to the NYSDEC on January 13, 2022 and were issued for public comment on March 23, 2022. ~~If~~As the site ~~is~~was accepted into the BCP on May 23, 2022, hazardous materials remedial requirements associated with Block 4434, Lot 1 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH, similar to Block 4434, Lot 10. A comprehensive RI will be implemented and documented in a RIR, followed by the preparation of a RAWP and CHASP. Upon completion of the approved remedial action, a FER shall be completed and submitted to NYSDEC and NYSDOH for review and approval. Any potential ICs/ECs relating to site management would be followed in accordance with an NYSDEC-approved SMP.

For the non-BCP portions of the remaining Development Site, a subsurface investigation identified soil and groundwater contamination relating to historic site activities. Given the conditions identified within the Development Site, the Proposed Actions would include an (E) Designation for hazardous materials (E-679), which would be applied to Brooklyn Block 4430, Lot 1 and Block 4434, Lots 1 and 10, which would provide a mechanism for regulatory oversight for future remedial action as a pre-construction requirement that would reduce or eliminate to the maximum extent possible the potential for future risk or exposure as it relates to hazardous materials.

The (E) Designation process generally begins with the evaluation of RECs and/or areas of concern (AOCs) that may require additional investigation based upon the results of a Phase I ESA. Any potential RECs or AOCs identified would follow the (E) Designation protocol for additional investigation and potential remedial action. Compliance with the (E) Designation protocols would utilize the information provided in the Phase I ESA to the maximum extent practicable. The applicable text for the (E) Designation (E-679) to be applied to Brooklyn Block 4430, Lot 1 and Block 4434, Lots 1 and 10 would be as follows:

Task 1: Sampling Protocol

Prior to construction, the Applicant submits to OER, for review and approval, a Phase II Investigation protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented.

No sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum-based contamination and non-petroleum-based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2: Remediation Determination and Protocol

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

If remediation is indicated from the test results, a proposed RAWP must be submitted to OER for review and approval. The Applicant must complete such remediation as determined necessary by OER in accordance with the approved RAWP. The Applicant should then provide proper documentation that remedial action has been satisfactorily completed.

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

Under the (E) Designation program, remedial action measures would be determined based upon the results of the remedial investigation. However, based upon the results of the Phase

II ESA, it is anticipated that remedial measures will require proper handling and off-site disposal of historic urban fill materials and soil vapor mitigation (i.e., below slab soil vapor mitigation system and/or a chemical vapor barrier).

Given the conditions identified within the Development Site in the subsurface investigations, the Proposed Actions would include an (E) Designation for hazardous materials (E-679), which would be applied to the Development Site (Brooklyn Block 4430, Lot 1 and Block 4434, Lots 1 and 10). The (E) Designation provides a mechanism for regulatory oversight for future remedial action as a pre-construction requirement to ensure the potential risks or exposures associated with the presence of hazardous substances shall be reduced or eliminated to the maximum extent possible as related to the hazardous materials present. The implementation of the preventative and remedial measures required under the (E) Designation would avoid the potential for significant adverse hazardous materials impacts due to the Proposed Actions.

As previously indicated, Block 4434, Lot 10 and ~~potentially~~ Block 4434, Lot 1, shall be remediated under the BCA with regulatory oversight provided by NYSDEC. However, OER will generally accept the reports generated in the BCP for the purpose of complying with the (E) Designation requirements once the State Remedial Action Work Plan is approved. Additionally, BCP eligibility may be explored in the future for the remaining portions of Development Site that are not currently entered in the BCP.

With regulatory oversight provided by NYSDEC under the BCA executed for Block 4434, Lot 10 and ~~potentially~~ for Block 4434, Lot 1, and the application of an (E) Designation for the remaining portions of the Development Site, the Proposed Actions would not result in any significant adverse impacts for the Development Site since the hazardous materials present will be properly remediated under the oversight of either or both State and City remediation agencies to levels allowing for the safe planned redevelopment of the Development Site.

11

Water and Sewer Infrastructure

This chapter evaluates the potential for the Proposed Actions in connection with the Proposed Project to result in significant adverse impacts on the City's water supply, as well as its wastewater and stormwater conveyance and treatment infrastructure.

Introduction

The Applicant proposes to redevelop the Development Site with a mixed-use community on the campus of the Christian Cultural Center (CCC). Comprised of affordable housing, local retail, a Performing Arts Center (PAC), a variety of other commercial/community facility uses (trade school, day-care, medical office or senior center), and parking facilities, the Proposed Project would be approximately 2,162,808 gross square feet (gsf) of development. The proposed building program includes approximately 1,645,820 gsf of residential space containing 2,050 units; approximately 79,970 gsf of retail space, including a grocery store (approximately 14,300 gsf) and local retail (approximately 65,670 gsf); 131,504 gsf of other commercial/community facility space, including a trade school (approximately 14,100 gsf) located in one wing of the existing CCC building, a new PAC (approximately 16,500 gsf), a day care (approximately 12,320 gsf), other community facility uses such as a senior center or medical office (approximately 9,900 gsf) and the remainder of the existing CCC facility (78,684 gsf); and 305,514 gsf of parking, including residential parking and structured parking for the retail and community facility uses.

~~According to the *2021 CEQR Technical Manual,* discretionary actions that would increase density or change the drainage conditions may warrant a water and sewer infrastructure analysis. Specifically, development that would result in an exceptionally large demand for~~

~~water (more than a million gallons per day (mgd)) or that is located in an area that experiences low water pressure require an analysis of potential impacts on the water supply system. Additionally, developments located in combined sewered areas exceeding incremental development thresholds (above the predicted No-Action condition) of 400 residential units or 150,000 square feet (sf) or more of commercial, public facility, and institution, and/or community facility space in Brooklyn would warrant a sewer infrastructure analysis.~~

Principal Conclusions

According to the *2021 CEQR Technical Manual,* discretionary actions that would increase density or change the drainage conditions may warrant a water and sewer infrastructure analysis. Specifically, development that would result in an exceptionally large demand for water (more than a million gallons per day (mgd)) or that is located in an area that experiences low water pressure require an analysis of potential impacts on the water supply system. Additionally, developments located in combined sewered areas exceeding incremental development thresholds (above the predicted No-Action condition) of 400 residential units or 150,000 square feet (sf) or more of commercial, public facility, and institution, and/or community facility space in Brooklyn would warrant a sewer infrastructure analysis. An analysis of the Proposed Actions' potential impacts on the City's wastewater and stormwater conveyance and treatment system is therefore warranted and is provided below.

~~The Proposed Project would result in a total daily water demand of approximately 0.55 mgd; therefore, no analysis of the water supply system is warranted. The Proposed Actions would result in a net incremental increase of 2,050 residential units and 211,474 sf of commercial/public and institution/community facility space, as compared with the No-Action condition, in a primarily combined sewered area.~~

As described below, a preliminary assessment was conducted and determined that the Proposed Actions would not result in a significant adverse impact on the City's water and sewer infrastructure. Although the Proposed Actions would create new demand for water and treatment of sewage in comparison to the No-Action condition, based on the methodology set forth in the *CEQR Technical Manual*, the incremental increases would be well within the capacity of the City's systems, and the effects would not be considered significant or adverse.

Methodology

This analysis follows the *CEQR Technical Manual* guidelines that recommend a preliminary water analysis be completed if a project would result in an exceptionally large demand of water (over one million gpd) or is located in an area that experiences low water pressure (i.e., in an area at the end of the water supply distribution system such as the Rockaway Peninsula or Coney Island). The Project Area is not located in an area that experiences low water pressure, and the Proposed Project would generate a water demand of 547,438 gpd. Therefore, the Proposed Project does not meet the *CEQR Technical Manual* threshold requiring a detailed analysis. It is anticipated that there would be adequate water service to meet the incremental water demand and that there would be no significant adverse impacts on the City's water supply.

Existing and future water demand and sanitary sewage generation are calculated based on use rates set by the *CEQR Technical Manual*. The New York City Department of Environmental Protection (NYC DEP) Flow Volume Calculation Matrix is then used to calculate the overall stormwater runoff volume for four rainfall volume scenarios with varying durations. The ability of the City's sewer infrastructure to handle the anticipated demand from the Proposed Project is assessed by estimating existing sewage generation rates, and then comparing these existing rates with the No-Action and With-Action conditions, per *CEQR Technical Manual* methodology.

Existing Conditions

The Development Site is currently improved with the two-story, 92,784 gsf CCC, a large, non-denominational house of worship constructed in 1997, which is situated on the western portion of the Development Site and is surrounded by a surface parking lot containing approximately 385 parking spaces, accessed via a curb cut along Flatlands Avenue immediately opposite of Alabama Avenue and via two existing curb cuts along Louisiana Avenue. The eastern portion of the Development Site is unimproved land, serving as a location for overflow parking during church services and other events at the CCC and otherwise not used.

Water Supply

The New York City water supply system consists of a network of reservoirs, lakes, and aqueducts extending north into the Catskill region, and a grid of underground distribution mains that distributes water within the City. As mentioned earlier, approximately 1.3 billion gpd of water are consumed by New York City through this water supply system.

Most of New York City obtains water from three surface water supply systems operated by NYC DEP – Delaware, Catskill, and Croton. The watersheds of the three systems cover almost 2,000 square miles, with 19 reservoirs and three control lakes, which have a combined storage capacity of approximately 550 billion gallons.

Two of the three surface water systems, the Delaware and Catskill systems, collect water from watershed areas in the Catskill Mountains and deliver it to the Hillview Reservoir in Yonkers. From there, it is distributed to the City through three tunnels: City Tunnel 1, which runs through the Bronx and Manhattan to Brooklyn; City Tunnel 2, which goes through the Bronx, Queens, and Brooklyn (and from there through the Richmond Tunnel to Staten Island); and City Tunnel 3 (Stage 1), which goes through the Bronx and Manhattan and ends in Queens. Stage 2 of City Tunnel 3 is currently under construction in Queens and Brooklyn.

The third surface water system, the Croton system, collects water from watershed areas in Dutchess, Putnam, and Westchester Counties and delivers it to the Jerome Park Reservoir in the Bronx. From there, it is distributed to the Bronx and Manhattan through the New Croton Aqueduct.

Once in the City, the aqueducts distribute water into a network of water mains. Water mains up to 96 inches in diameter feed smaller mains, such as 20, 12, and 8-inch mains, which deliver water to their destination, including to fire hydrants along many of the City's streets. Nearly all of the water reaches consumers by gravity alone, with roughly four percent (generally located at the outer limits of the system where in-line pressure is lowest, at high elevations, or at pressure extremity such as Far Rockaway) being pumped to its final destination. Water pressure throughout the City's water supply system is monitored and controlled by pressure regulators. Hydrant flow tests were conducted along Flatlands Avenue on April 30, 2021, as part of a data collection effort in accordance with NYC DEP.

New York City consumes approximately 1.3 billion gallons of water per day from a reservoir system with a total storage capacity of approximately 550 billion gallons.[1, 2] The total water usage anticipated as a result of the Proposed Actions is calculated to equal approximately 0.55 mgd, which is an increment of approximately 0.52 mgd, compared to the No-Action condition's projected demand of approximately 0.03 mgd. As the total water usage would result in less than 1 mgd, the Proposed Actions would not have a significant adverse impact on the City's water supply or system water pressure.

Water consumption and wastewater generation rates were derived from the *CEQR Technical Manual* and are provided in **Table 11-1**. Existing water consumption and sewage generation for the site is shown in **Table 11-2**.

Table 11-1 Water Consumption and Wastewater Generation Rates

	Rate			
Land Use	**Domestic[1]**	**Units**	**Air Conditioning[1]**	**Units**
Residential	100	gpd/person	0.00	gpd/sf
Retail	0.24	gpd/sf	0.17	gpd/sf
Schools	10	gpd/seat	0.17	gpd/sf
Community Facility[2]	0.10	gpd/sf	0.17	gpd/sf

Notes:

[1] Consumption rates obtained from the *2021 CEQR Technical Manual* Table 13-2 "Water Usage and Sewage Generation Rates for Use in Impact Assessment"

[2] Consistent with the *Stevenson Commons EIS*, the water consumption and wastewater generation rates for Community Facility utilizes the same CEQR rates as office space

Table 11-2 Existing Water Consumption and Sewage Generation

Land Use	**Area (sf)**	**Dwelling Units/Seats**	**Domestic Water/Wastewater Generation (gpd)**	**Air Conditioning (gpd)**
Community Facility	92,784	-	9,278	15,773
Water Consumption Subtotals			9,278	15,773
Sewage Generation Subtotal			9,278	
Total Water Consumption			25,052	
Total Wastewater Consumption			9,278	

Conveyance System

The Project Area is in a part of New York City that is served by combined sewer systems. The stormwater runoff is collected by inlets located on Flatlands Avenue into a 96-inch box relief combined sewer line. The church sanitary flows into the 96-inch box relief sewer and flows west towards Combined Sewer Outfall (CSO) 26W-003. Pennsylvania Avenue has a separate sewer system. The 24-inch storm sewer flows south into a 60-inch storm sewer on Vandalia

[1] Source: New York City's Wastewater Treatment System, New York City Department of Environmental Protection (NYC DEP); https://www1.nyc.gov/site/dep/water/

[2] Source: *2021 CEQR Technical Manual.*

Avenue and flows west. The stormwater flows towards Louisiana Avenue and then flows south, away from the site. The 10-inch sanitary sewer on Pennsylvania Avenue flows south and then east on Vandalia Avenue towards the 26th Ward WWTP.

At the 26th Ward WWTP, wastewater is fully treated by physical and biological processes before it is discharged into Jamaica Bay. The quality of the treated wastewater (effluent) is regulated by a SPDES permit issued by the New York State Department of Environmental Conservation (NYSDEC), which establishes limits for effluent parameters (i.e., suspended solids, fecal coliform bacteria, and other pollutants). Since the volume of flow to a WWTP affects the level of treatment a plant can provide, the maximum permitted capacity for the 26th Ward WWTP is 85 mgd.

Sanitary Flows

For purposes of analysis, the amount of sanitary sewage is calculated as all water demand generated by the existing uses on the Development Site except water used by air conditioning, which is typically not discharged to the sewer system.

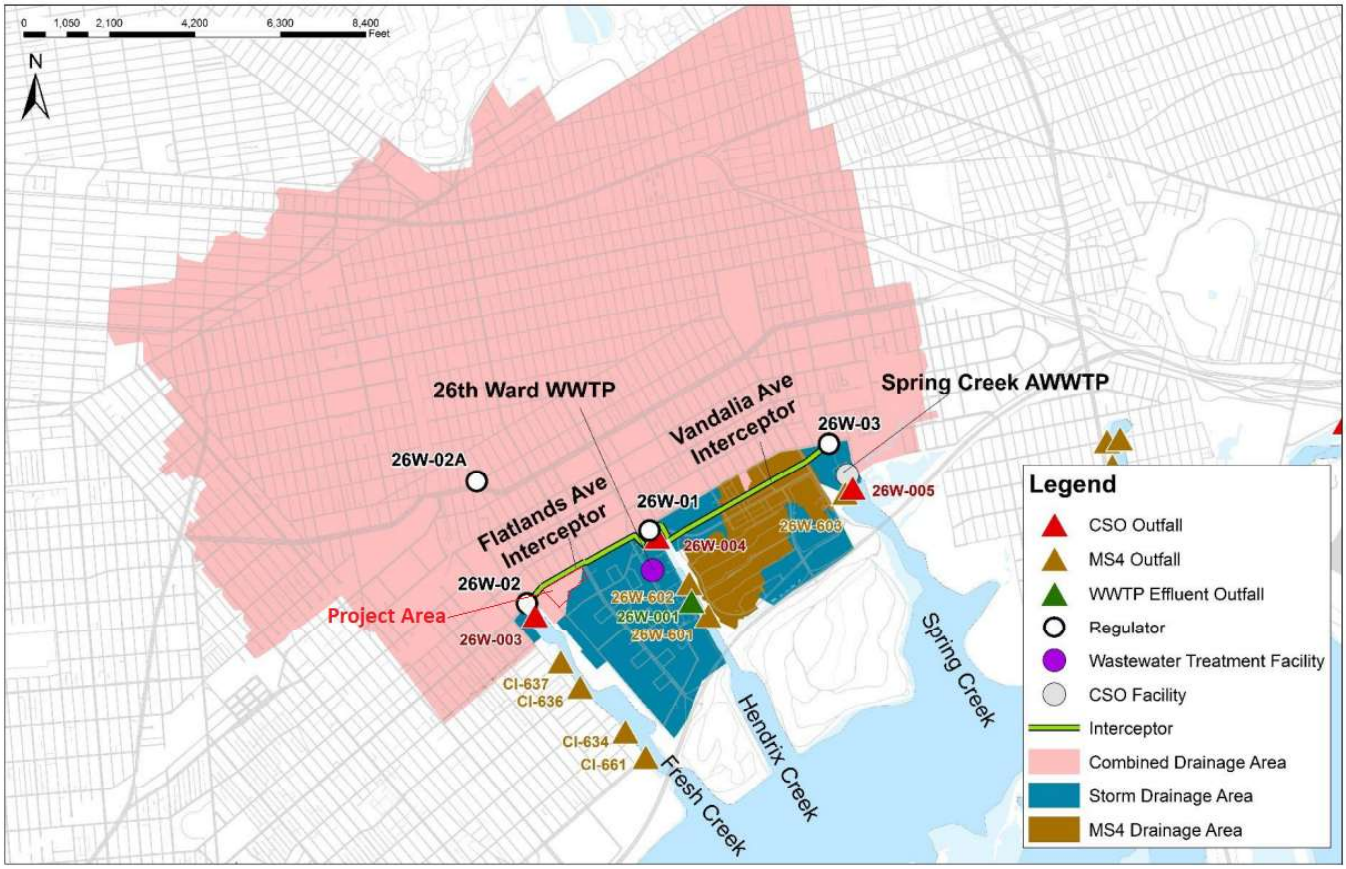
Sanitary sewage generated by the Proposed Actions would discharge to the 26th Ward Wastewater Treatment Plant (WWTP), which has a State Pollutant Discharge Elimination System (SPDES)-permitted dry weather flow capacity of 85 mgd (see **Figure 11-1**). The average monthly flow to 26th Ward WWTP over a 12-month period is 47.7 mgd (see **Table 11-3**). The Proposed Actions have the potential to result in a total generation of 0.51 mgd of sanitary sewage discharge, an increment of 0.50 mgd over the No-Action total sewage generation, which is estimated at 0.01 mgd. This incremental increase in sanitary flow would represent approximately a 0.59 percent of the 26th Ward WWTP's SPDES-permitted capacity. As the projected increase in sanitary sewage would not cause the 26th Ward WWTP to exceed its operational capacity or the SPDES-permitted capacity, the Proposed Actions would not result in significant adverse impacts to sanitary sewage conveyance and treatment.

Table 11-3 26th Ward Average Monthly Flows

Month (2020)	Flow (MGD)
January	45
February	45
March	48
April	48
May	41
June	40
July	48
August	48
September	48
October	52
November	52
December	57
Average	**47.7**

Note:
[1]Average Monthly flows were provided by NYC DEP

Figure 11-1 26th Ward WWTP Collection System



Source: NYC DEP's Combined Sewer Overflow Long Term Control Plan for Jamaica Bay Tributaries, June 2018

Stormwater Flows

As described above, the Development Site consists of a 92,784 gsf church building, accessory surface parking lots and some private open space. **Table 11-4** summarizes the surfaces and surface areas, as well as the weighted runoff coefficient (the fraction of precipitation that becomes surface runoff for each surface type).

As described below, the Project Area is served by a combined sewer system. Stormwater runoff flows primarily to the north, collecting in inlets located on Flatlands Avenue into a 96-inch box relief combined sewer flowing west towards the Combined Sewer Overflow (CSO) Outfall 26W-003, as depicted in **Table 11-4**. The total area to be redeveloped exceeds one acre.

Table 11-4 Existing Surface Coverage

Affected Outfall	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scope	Total
26W-003[2]	Area (%)	14%	80%	0%	6%	100%
	Surface Area (sf)	61,700	359,597	0	27,733	449,030
	Runoff Coefficient[1]	1.00	0.85	0.85	0.20	-

Notes:
[1] Runoff coefficients for each surface type as per NYC DEP
[2] Source: CSO Locations in New York City's Waterways, CSO Locations in New York City's Waterways (arcgis.com)

The Future Without the Proposed Actions

As described in **Chapter 1, Project Description**, absent the Proposed Actions, the Development Site is assumed to remain in its existing condition with only the CCC operational on the site. Therefore, the stormwater runoff, water demand, and wastewater generation calculations would remain unchanged.

The Future with the Proposed Actions

The With-Action condition would result in the development of 2,050 affordable residential units (1,645,820 gsf), 79,970 gsf of commercial retail and grocery space, and 131,504 gsf of other commercial/community facilities (including a trade school, day-care, the existing CCC building, and the PAC). The results of the analysis of the With-Action condition on water and sewer infrastructure is described below.

Sanitary Flows

As shown in **Table 11-5**, the Proposed Project is expected to have a total water demand of 547,438 gpd, with approximately 511,488 gpd of daily sanitary sewage generated under the With-Action condition.

Table 11-5 With-Action Water Consumption and Sewage Generation

Land Use	Area (sf)	Dwelling Units/Seats	Domestic Water/Wastewater Generation (gpd)	Air Conditioning Rates
Residential	1,645,820	2,050	479,700[1]	-
Retail	79,970	-	19,193	13,595
School	26,420[2]	209[3]	2,087	4,491
Other Commercial/ Community Facility[4]	105,084	-	10,508	17,864
Water Consumption Subtotals			511,488	35,951
Sewage Generation Subtotal			511,488	
Total Water Consumption			547,438	
Total Wastewater Consumption			511,488	

Notes:
[1] The number of residents is based on an average household size of 2.34.
[2] Includes 12,320 sf for day-care and 14,100 sf for trade school.
[3] Assumes 100 sf per person in day-care, 165 sf per person in trade school.
[4] Consistent with the Stevenson Commons EIS, the water consumption and wastewater generation rates for Community Facility utilizes the same CEQR rates as office space.
[5] Consumption rates obtained from the *2021 CEQR Technical Manual* Table 13-2 "Water Usage and Sewage Generation Rates for Use in Impact Assessment."

The incremental sanitary sewage generated by the With-Action condition, as compared with the No-Action condition, would be 502,210 gpd. This increase in wastewater generation would be approximately 0.59 percent of the 26th Ward WWTP capacity of 85 mgd.

In accordance with the New York City Plumbing Code (Local Law 33 of 2007), the Proposed Project would be required to utilize low-flow plumbing fixtures, which would reduce sanitary flows to the plant. Therefore, the With-Action condition would not result in a significant adverse impact to the City's sanitary sewage conveyance and treatment system.

Stormwater Flows

The With-Action condition consists of the addition of ten proposed buildings and new streets, sidewalks, and new publicly accessible open space. **Table 11-6** summarizes the surface areas and weighted runoff coefficient for the With-Action conditions.

Table 11-6 With-Action Surface Coverage

Affected Outfall	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scope	Total
26W-003[2]	Area (%)	57%	35%	0%	8%	100%
	Surface Area (sf)	254,540	155,550	0	38,940	449,030
	Runoff Coefficient[1]	1.00	0.85	0.85	0.20	-

Source: DCP Building Footprint; aerial photographs
Notes:
[1] Runoff coefficients for each surface type as per NYC DEP
[2] Source: CSO Locations in New York City's Waterways, CSO Locations in New York City's Waterways (arcgis.com)

The NYC DEP Flow Volume Calculation Matrix was completed for the existing and the With-Action conditions. The calculations from the Flow Volume Calculation Matrix help to determine the change in wastewater flow volumes to the combined sewer system from existing With-Action conditions and include four rainfall volume scenarios with varying durations. The summary tables of the Flow Volume Calculation Matrix are included in **Table 11-7** and **Table 11-8**.

Table 11-7 NYC DEP Flow Volume Matrix – Existing Conditions

Rainfall (inches)[1]	Duration (hours)	Total Area (acres)[2]	Weighted Runoff Coefficient[3]	Stormwater Runoff (MG)[4]	Sanitary to CSS (MG)[5]	Total Volume to CSS (MG)
0.00	3.80	10.31	0.83	0.000	0.001	0.001
0.40	3.80	10.31	0.83	0.090	0.001	0.091
1.20	11.30	10.31	0.83	0.280	0.004	0.284
2.50	19.50	10.31	0.83	0.580	0.007	0.587

Notes:
[1] Storm event rainfalls per NYC DEP Volume Calculation Matrix.
[2] Total surface area onsite for Projected Development sites within subcatchment area.
[3] Runoff coefficients for surface type area as per NYC DEP.
[4] Stormwater runoff derived from NYC DEP Volume Calculation Matrix.
[5] Sanitary volumes derived using methodology and consumption rates per the *2021 CEQR Technical Manual*
MG = million gallons

Table 11-8 NYC DEP Flow Volume Matrix – With-Action Conditions

Rainfall (inches)[1]	Duration (hours)	Total Area (acres)[2]	Weighted Runoff Coefficient[3]	Stormwater Runoff (MG)[4]	Sanitary to CSS (MG)[5]	Total Volume to CSS (MG)
0.00	3.80	10.31	0.88	0.000	0.081	0.081
0.40	3.80	10.31	0.88	0.100	0.081	0.181
1.20	11.30	10.31	0.88	0.300	0.241	0.541
2.50	19.50	10.31	0.88	0.620	0.415	1.035

Notes:
[1] Storm event rainfalls per NYC DEP Volume Calculation Matrix.
[2] Total surface area onsite for Projected Development sites within subcatchment area.
[3] Runoff coefficients for surface type area as per NYC DEP.
[4] Stormwater runoff derived from NYC DEP Volume Calculation Matrix.
[5] Sanitary volumes derived using methodology and consumption rates per the *2021 CEQR Technical Manual*
MG = million gallons

As shown in **Table 11-7**, depending on the rainfall volume and duration, the total volume to the combined sewer system from the Development Site under the existing conditions would be between approximately 0.001 mgd and 0.587 mgd. As shown in **Table 11-8**, for the With-Action condition, the combined sewer system flow would be between 0.081 mgd and 1.035 mgd.

Table 11-9 compares the estimated stormwater flows under existing and With-Action conditions using the NYC DEP Flow Volume Calculation Matrix. As shown in the table, depending on the rainfall volume and duration, the With-Action increment would be between 0.080 and 0.448 mgd. Typically, an increase of five percent or more at the site over existing conditions would warrant further review by NYC DEP, in which the implementation of BMPs would help mitigate that increase. Although the five percent threshold is exceeded, these increments represent only a 0.09 to 0.53 percent increase of the 26th Ward WWTP capacity.

Table 11-9 Existing and With-Action Combined Stormwater Runoff Generation

		Total Volume to Combined Sewer System (MG)		
Rainfall (inches)[1]	Duration (hours)	Existing Conditions	With-Action Condition	Increment
0.00	3.80	0.001	0.081	0.080
0.40	3.80	0.091	0.181	0.090
1.20	11.30	0.284	0.541	0.257
2.50	19.50	0.587	1.035	0.448

The Flow Volume Matrix calculations do not reflect the use of any sanitary and stormwater source control BMPs to reduce sanitary flow and stormwater runoff volumes to the combined sewer system. As noted above, the Proposed Project would incorporate low-flow plumbing fixtures to reduce sanitary flow in accordance with the New York City Plumbing Code. In addition, stormwater BMPs would be required as part of the NYC DEP site connection approval process in order to bring each of the proposed buildings into compliance with the required stormwater release rate. Based on the NYC DEP Guidelines for

the Criteria for Detention Facility Design, dated November 19, 2012, for new developments, the required stormwater release rate for the Proposed Project would be the greater of 0.25 cubic feet per second (cfs) or 10 percent of the allowable flow, unless the allowable flow is less than 0.25 cfs, in which case the stormwater release rate is equal to the allowable flow.[3] To achieve this release rate, stormwater could be managed by utilizing one or a combination of detention or infiltration techniques identified in the *NYC Green Infrastructure Plan*. Green technologies, such as green and blue roofs, subsurface detention and infiltration, and permeable pavement, could be implemented to retain or release stormwater with slowed discharge rates to control peak runoff rates. Specific BMP methods will be determined with further refinement of the building design and in consultation with NYC DEP.

The incorporation of the appropriate sanitary flow and stormwater source control BMPs that would be required as part of the site connection approval process, with the review and approval of NYC DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Development Site. Sewer treatment capacity at the 26th Ward WWTP is enough to handle wastewater flow resulting from the Proposed Project.

Additionally, as part of the site connection approval process, a hydraulic analysis of the existing sewer system may be required to determine whether the existing sewer system is capable of supporting higher density development and the related increase in wastewater flow. In addition, there may be a need to prepare a drainage proposal to support the hydraulic analysis calculation, demonstrating the sewer demand of the project relative to existing sewers and their capacity. This analysis would be undertaken prior to construction of the Proposed Project and would be coordinated with NYC DEP for review and approval. Therefore, there would be no significant adverse impacts on wastewater treatment or stormwater conveyance infrastructure.

[3] Source: https://www1.nyc.gov/assets/dep/downloads/pdf/about/water-and-sewer-forms/criteria-determination-detention-facility-volume.pdf

12

Solid Waste and Sanitation Services

This chapter analyzes the effects of the Proposed Actions on solid waste and sanitation services. According to the *2021 CEQR Technical Manual*, a solid waste assessment determines whether a Proposed Project has the potential to cause a substantial increase in solid waste production that may overburden available waste management capacity, or otherwise be inconsistent with the City's Solid Waste Management Plan (SWMP) or other stated policy related to the City's integrated solid waste management system.

Introduction

The Applicant, Innovative Urban Living, LLC, is seeking several discretionary approvals from the City Planning Commission (CPC), including a zoning map amendment, zoning text amendments, and various special permits collectively referred to as the "Proposed Actions."

The Proposed Actions would facilitate the development of a mixed-use, purpose-built community on the campus of the existing Christian Cultural Center (CCC) facility, including income-based affordable housing, a performing arts center (PAC), a grocery store, local retail, and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood (the Proposed Project). In comparison to the No-Action condition, the Proposed Actions would result in an incremental increase of 2,050 affordable residential units; approximately 110,570 gross square feet (gsf) of commercial uses including a 14,300 sf grocery store, 65,670 sf retail, a trade school

(approximately 14,100 gsf) to be located in one wing of the existing CCC building, new Performing Arts Center (approximately 16,500 gsf); a total of approximately 100,904 gsf of community facility space including general community facility space to include a day care (approximately 12,320 gsf) and other community facility uses such as a senior center or medical office (approximately 9,900 gsf), and the remainder of the existing CCC facility (78,684 gsf) (resulting in an incremental increase of 8,120 gsf of community facility space); public and private open space; and accessory parking.

This chapter provides an assessment of existing and future conditions with and without the Proposed Actions for the Development Site, which are described in detail below.

Principal Conclusions

The Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services. The Proposed Actions would generate an increment above the No-Action condition of approximately 56.94 tons per week of solid waste but would not directly affect a solid waste management facility. Approximately 73 percent of the additional solid waste generated by the Proposed Actions would be handled by the New York City Department of Sanitation (DSNY), and 27 percent would be handled by private carters. Overall, the uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately 3.36 DSNY truck loads per week and 1.24 commercial carter truck loads per week. Although this would be an increase compared with conditions in the future without the Proposed Actions, the additional solid waste resulting from the Proposed Actions would be a negligible increase relative to the approximately 9,000 tons of waste handled by commercial carters every day or the 12,260 tons per day handled by DSNY, and it would also represent approximately 0.036 percent of the City's anticipated future weekly commercial and DSNY-managed waste generation in 2025, as projected in the Solid Waste Management Plan (SWMP). As such, the Proposed Actions would not result in an increase in solid waste that would overburden available waste management capacity. The Proposed Actions would also not conflict with, or require any amendments to, the City's solid waste management objectives as stated in the SWMP. Therefore, the Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services.

The Proposed Actions are also not expected to directly affect operations at the DSNY garage located on the block bounded by Cozine Avenue, Milford Street, Flatlands Avenue, and Montauk Avenue. Under the Proposed Actions, it is anticipated that there would be no geometric changes nor operational changes (e.g., roadway closures, reversals, etc.) to the street network used by sanitation trucks to access the DSNY garage. In addition, there would be no changes to curbside parking regulations on block fronts along Cozine Avenue, Milford Street, Flatlands Avenue, and Montauk Avenue that are currently used for garage operations. (Sidewalks and curbside space adjacent to the DSNY garage are routinely used for sanitation truck and employee auto parking as well as for the storage of snowplow blades and other equipment.)

Methodology

According to the *2021 CEQR Technical Manual*, projects with a generation rate of less than 50 tons (100,000 pounds) of solid waste per week would not result in a significant adverse

impact to the City's waste management capacity, and do not warrant detailed analysis. Because the Proposed Actions would result in a net increase of more than 50 tons per week, an assessment of solid waste and sanitation services is warranted. As the analysis of solid waste/sanitation services is a density-based technical analysis, this assessment accounts only for the anticipated development on the Development Site.

To assess the Proposed Actions' potential impacts on solid waste and sanitation services, this chapter:

- Describes the existing solid waste management services on the Development Site and estimates solid waste generation under Existing Conditions and in the No-Action Condition (for the 2031 analysis year) using solid waste generation rates for typical land uses and activities provided in the *2021 CEQR Technical Manual*.
- Forecasts solid waste generation by the Proposed Project induced by the Proposed Action based on CEQR guidelines.
- Assesses the effects of the Proposed Actions' incremental solid waste generation on municipal and private sanitation services.

Assessment

Existing Conditions

Description of Solid Waste Sanitation Services

It is estimated that approximately 50,000 tons per day of public and private sector solid waste is generated in the City (or approximately 350,000 tons per week). DSNY is responsible for the collection and disposal of residential and institutional solid waste in the City, while private carters collect solid waste from commercial and manufacturing uses. In addition to collecting municipal solid waste, refuse, and designated recyclable materials generated by residential and institutional uses, including schools, some nonprofit institutions, and many City and State agencies, DSNY also collects waste from City litter baskets, street-sweeping operations, and lot cleaning activities. In total, the DSNY collection fleet comprises over 2,000 waste collection trucks, with the typical collection truck for refuse carrying approximately 12.5 tons of waste material and the typical recycling truck carrying about 11.5 tons of paper or approximately 10.0 tons of metal, glass, and plastic containers. In total, DSNY collects approximately 10,500 tons per day of residential and institutional refuse and approximately 1,760 tons per day of recyclables.

DSNY delivers most of the refuse it collects to public or private transfer facilities throughout the City where it is unloaded, and, after sorting and compaction, is transported to landfills or waste-to-energy facilities. As New York City has no public or private local disposal facilities, solid wastes that are not recycled, reused, or converted to a useful product locally must be exported from the City for disposal. Designated recyclable materials are delivered to privately-operated materials recovery facilities (MRFs) in the City and surrounding communities.

Commercial carters pick up solid waste from businesses, manufacturers, and offices, and transport the waste material to transfer stations where the recyclable material is separated

from the solid waste. The solid waste is then consolidated into larger trucks for transport and disposal in landfills outside of the City, while the recyclable material is sold and transported to manufacturing facilities. In total, more than 100 private carters are licensed to serve New York City, with the typical commercial carter carrying between 12 and 15 tons of waste material per truck.

Under New York City's mandatory Recycling Law (Title 16 of the NYC Administrative Code, Chapter 3), DSNY has established and enforces rules requiring that certain designated recyclable materials be separated from household waste for separate collection. New York City residents are required to separate aluminum foil, glass, plastic, and metal containers, and newspapers and other paper waste from household waste for separate collection. Commercial establishments are also subject to mandatory recycling requirements. Businesses must separate certain types of paper waste, cardboard, metal items, and construction wastes. Food and beverage establishments must recycle metal, glass, and plastic containers, and aluminum foil, in addition to meeting the commercial recycling requirements.

As required by New York State law, DSNY developed the SWMP to address management of expected future demands for the City's solid waste. The first SWMP was approved by the New York City Council in 1992, and the current plan was adopted in 2006 and covers the period through 2025. The SWMP estimates public- and private-sector waste quantities that must be managed over the planning period and identifies processing, transfer, and disposal capacity that will be necessary for such waste. According to the SWMP, the City's commercial solid waste generation will increase to approximately 74,000 tons per week by the year 2025. The amount of DSNY-managed waste is expected to increase to approximately 139,600 tons per week.

In addition, the SWMP includes a Long-Term Export Program for residential waste. The Long-Term Export Program will be implemented through (1) the development of four converted marine transfer stations (MTS); (2) the award of up to five contracts with private transfer stations for barge or rail export of DSNY-managed waste for disposal; and (3) an intergovernmental agreement to dispose of a portion of Manhattan's DSNY-managed waste at a Port Authority waste-to-energy facility in New Jersey.

With respect to commercial waste, the SWMP (1) provides the capacity for barge export of certain amounts of commercial refuse from the four converted DSNY MTSs; (2) provides for barge export of construction and demolition waste from the existing DSNY MTS at West 59th Street; and (3) requires rail export of commercial refuse from the three private transfer stations that also contract to take DSNY refuse.

DSNY's voluntary organics collection and composting program provides curbside collection or convenient neighborhood drop-off locations. The program decreases the City's reliance on landfills, which release methane—a powerful greenhouse gas (GHG)—from the decomposition of organic waste, reduces air emissions from City refuse sent to waste-to-energy plants and from long-distance waste transport, and reduces related fossil fuel use.

In addition, pursuant to Local Law 146 of 2013, DSNY enforces commercial food waste composting rules for larger food waste generators such as food manufacturers or wholesalers; larger hotels with food service establishments; arenas; food service establishments larger than 15,000 sf; chain food service establishments with at least 100

locations in New York City; and retail food stores larger than 25,000 sf. Covered businesses must keep their organic waste (generally from kitchens, spoilage and surplus food—not post-consumer waste) separate from other waste and arrange to have it converted to useful products such as compost or biogas rather than landfilled or incinerated. This can be done either via collection by private carters or self-transport for off-site conversion, or by managing the conversion on-site using in-vessel composting or aerobic or anaerobic digestion.

Solid Waste Generation on the Development Site

The Development Site is currently occupied by the approximately 92,784-gsf CCC. Based on the citywide average rates for solid waste generation used in the SWMP (and provided in Table 14-1 of the *CEQR Technical Manual*), the existing use on the Development Site generates a total of approximately 0.85 tons of solid waste per week. As shown in **Table 12-1**, all of the existing solid waste generated by the CCC is handled by private carters.

Table 12-1 Existing Solid Waste Generation on the Development Site

Use	Area (gsf)	Population	Solid Waste Generation Rate (lbs/wk)[2]	Solid Waste Generation lbs/wk	Solid Waste Generation tons/wk
CCC	92,784	130[1]	13 Per employee	1,690	0.85
Total Solid Waste Generation				**1,690**	**0.85**
Solid Waste Handled by Private Carters				**1,690**	**0.85**
Solid Waste Handled by DSNY				--	--

Notes:
[1] Existing community facility (non-school) employees were provided by the Applicant.
[2] Solid waste generation is based on citywide average waste generation rates presented in Table 14-1 of the *CEQR Technical Manual*, and estimates of workers by use, as follows:
All community facility uses: 13 lbs/wk. per employee.

No-Action Condition

Under the baseline, or No-Action condition, it is assumed that the Development Site would remain in its existing condition with only the CCC operational on the site, surrounded by accessory non-attended surface parking and vacant land serving as overflow parking.

It is anticipated that solid waste will remain unchanged under future No-Action conditions as compared to existing conditions, with approximately 1,690 pounds of solid waste generated per week (see **Table 12-2**). All waste will continue to be handled by a private carter. Therefore, there will be no change in waste generation or handling under future No-Action conditions.

Table 12-2 No-Action Solid Waste Generation on the Development Site

Use	Area (gsf)	Population	Solid Waste Generation Rate (lbs/wk)[2]	Solid Waste Generation lbs/wk	Solid Waste Generation tons/wk
CCC	92,784	130[1]	13 Per employee	1,690	0.85
Total Solid Waste Generation				**1,690**	**0.85**
Solid Waste Handled by Private Carters				**1,690**	**0.85**
Solid Waste Handled by DSNY				--	--

Notes:
[1] Existing community facility (non-school) employees were provided by the Applicant.
[2] Solid waste generation is based on citywide average waste generation rates presented in Table 14-1 of the *CEQR Technical Manual*, and estimates of workers by use, as follows:
All community facility uses: 13 lbs/wk. per employee.

With-Action Condition

As detailed in **Chapter 1, Project Description**, the With-Action condition would include approximately 2,200,538 gsf of development (4.29 FAR) within 10 new buildings, of which eight would be predominantly residential. This would include: approximately 1,645,820 gsf of residential space accommodating up to 2,050 residential units; approximately 100,904 gsf of community facility space including a day care (12,320 gsf), general community facility space to include a senior center or medical office (approximately 9,900 gsf), and the remainder of the existing CCC facility (78,684 gsf); approximately 110,570 gsf of commercial space including a grocery store (approximately 14,300 gsf) and local retail space (approximately 65,670 gsf), a 14,100 gsf trade school, and an approximately 16,500 gsf PAC. Additionally, approximately 343,244 gsf of parking, including approximately 145,684 gsf of residential parking and approximately 197,560 gsf of public parking that would accommodate the CCC, trade school, retail uses, community facility uses and the PAC. The Proposed Project would also include publicly accessible open space, consisting of green space and a campus quadrangle, a playground for the childcare facility, and an active recreational space to be located on top of the parking garage structure. Private open space will also be provided on-site, including residential building courtyards. The Proposed Actions would result in an overall increase in solid waste generation, as discussed below.

Based on the citywide average rates for solid waste generation, the total solid waste generation due to the Proposed Actions would be approximately 57.79 tons per week, which represents a 56.94-ton increment in weekly waste generation relative to the No-Action condition. Given that approximately 350,000 tons of public and private sector solid waste is generated in the City per week under existing conditions, the incremental increase of 56.94 tons per week would represent approximately 0.016 percent of the City's current solid waste generation. It would also represent approximately 0.026 percent of the City's anticipated future weekly commercial and DSNY-managed waste generation in 2025 (estimated at 213,600 tons per week), as projected in the SWMP.

Residential uses would generate 42.03 tons of solid waste per week under the With-Action condition (refer to **Table 12-3**). Solid waste generated by residential uses would be collected

by DSNY trucks and would be served by existing DSNY collection routes. As a general practice, DSNY adjusts its operations to service the community. Residents will be required to participate in the City's recycling program for paper, metals, and certain types of plastics and glass.

Table 12-3 With-Action Solid Waste Generation on the Development Site

Use	Area (gsf)	Population	Solid Waste Generation Rate (lbs/wk)[2]		Solid Waste Generation lbs/wk	Solid Waste Generation tons/wk
CCC	78,684	130[1]	13	employee	1,690	0.85
Other Community Facility	22,220	67	13	employee	867	0.43
PAC	16,500	50	13	employee	644	0.32
Trade School	14,100	42	13	employee	550	0.28
General Retail	65,670	197	79	employee	15,563	7.78
Food Store	14,300	43	284	employee	12,212	6.11
Residential	1,645,820	2,050	41	household	84,050	42.03
Non-Attended Parking	0	N/A	N/A		0	0
				Total Solid Waste Generation	**115,575**	**57.79**
				Solid Waste Handled by Private Carters	**31,525**	**15.76**
				Solid Waste Handled by DSNY	**84,050**	**42.03**

Notes:
[1] Existing community facility (non-school) employees were provided by the client. Employee count is not anticipated to change as a consequence of the trade school using a portion of the existing CCC building.
[2] Solid waste generation is based on citywide average waste generation rates presented in Table 14-1 of the *CEQR Technical Manual*, and estimates of workers by use, as follows:
Residential use: 41 lbs/wk per dwelling unit.
General retail: 79 lbs/wk per employee; assume 3 employees per 1,000 sf.
Food Store: 284 lbs/wk per employee; assume 3 employees per 1,000 sf.
All community facility uses, trade school and PAC: 13 lbs/wk. per employee; assume 3 employees per 1,000 sf for all non-church community facility uses.

As shown in **Table 12-4**, compared to the No-Action condition, the Proposed Actions would result in an approximately 42.03-ton increase in weekly solid waste handled by DSNY. This would represent approximately 0.02 percent of the City's anticipated future waste generation handled by DSNY (estimated at 213,600 tons per week), as projected in the SWMP. Based on the typical DSNY collection truck capacity of approximately 12.5 tons, the new residential uses introduced by the Proposed Actions would be expected to generate solid waste equivalent to approximately 3.36 truckloads per week. This increase represents less than 0.16 percent of DSNY's fleet of 2,100 waste collection trucks and is therefore not expected to overburden the DSNY's solid waste handling services.

This location receives DSNY residential collection by Brooklyn Sanitation District 05 two times per week, with recycling (metal, glass, plastic, paper) collected once per week.

Table 12-4 Comparison of Weekly Solid-Waste Generation on the Development Site (Existing, No-Action, and With-Action Conditions)

	Existing Condition	No-Action Condition	With-Action Condition	Increment (No-Action to With-Action)
Total Solid Waste Generation (tons/wk)	0.85	0.85	57.79	56.94
Solid Waste Handled by Private Carters (tons/wk)	0.85	0.85	15.76	14.92
Solid Waste Handled by DSNY (tons/wk)	0.00	0.00	42.03	42.03

As also shown in **Table 12-4**, compared to the No-Action condition, the Proposed Actions would result in an approximately 14.92-ton increase in weekly solid waste handled by private carters. This would represent less than approximately 0.02 percent of the City's anticipated future commercial waste generation (estimated at 74,000 tons per week), as projected in the SWMP. Based on the typical commercial carter capacity of between 12 and 15 tons of waste material per truck, the Proposed Actions would require 1.24 additional collection trucks per week compared to the No-Action condition (assuming a 12-ton truck).

There are more than 100 private carting businesses authorized to serve New York City, and it is expected that their collection fleets of over 4,000 private carting trucks would be sufficiently flexible to accommodate this increased demand for solid waste collection. The net increment in commercial solid waste handled by private carters represents less than 0.05 percent of the over 4,000 licensed private carting trucks in the City and would therefore not overburden the City's waste management system.

Overall, the uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately 3.36 DSNY truck loads per week and 1.24 commercial carter truck loads per week. This increase would represent less than 0.16 percent of DSNY's collection fleet and less than 0.03 percent of the private carting fleet and would therefore not overburden existing DSNY or commercial solid waste handling services. Therefore, the Proposed Actions would not overburden the City's solid waste management capacity and would not have significant adverse impacts on solid waste and sanitation services. Furthermore, the Proposed Actions would not conflict with the SWMP or have a direct effect on a solid waste management facility. As a result, no significant adverse impact on the City's solid waste and sanitation services would occur.

Under the Proposed Actions, it is anticipated that there would be no geometric changes nor operational changes (e.g., roadway closures, reversals, etc.) to the street network used by sanitation trucks to access the garage located on the block bounded by Cozine Avenue, Milford Street, Flatlands Avenue, and Montauk Avenue. In addition, there would be no changes to curbside parking regulations on block fronts along the DSNY garage which are currently used for garage access and operations. (Sidewalks and curbside space adjacent to the DSNY garage are routinely used for sanitation truck and employee auto parking as well as for the storage of snow plow blades and other equipment.) Therefore, the Proposed Actions are not expected to directly affect operations at the DSNY garage.

On-Site Solid Waste Handling and Storage

Proposed Project solid waste and recycling would be separated by tenants. A single refuse chute would be provided at each building core which would connect to trash compactors at the ground floor. Trash would be compacted into bags within a refuse storage room adjacent to back of house building service areas. Adjacent to each floor's refuse chute, recycling bins would be provided for the tenants to leave their recyclables for building porter pickup on a daily basis to be moved to the refrigerated refuse storage room through the service elevator in off-peak hours.

Refuse storage rooms would be located at the cellar or ground floor in each of the building's back of house service area. Refuse would be removed from each individual building's refuse storage rooms via back of house service corridors and placed on the sidewalk on Pennsylvania Avenue (for Buildings 1 and 2), Flatlands Avenue (for Buildings 3 through 6), and Louisiana Avenue (for Buildings 7 through 10) for DSNY pickup. Refuse for Buildings 1 and 2, and Buildings 5 through 10 would be placed in front of each building's frontage. Refuse for Buildings 3 and 4 would be placed in the same pile along the Building 3 frontage. Given that trash collection in this area of Brooklyn occurs twice weekly, it is anticipated that the refuse pile associated with each building would have a footprint of approximately 133 sf (approximately 3.5 feet wide and approximately 38 feet long) with a volume of approximately 465 cubic feet. As described above, refuse piles for Buildings 3 and 4 would be combined and would therefore have an approximate footprint of 266 sf with an approximate volume of 931 cubic feet. Refuse bags would be placed on the sidewalk in the evening on the day prior to collection (for a period of about 12 hours). DSNY collection normally occurs Mondays and Thursdays between 8 to 9 AM and 6 to 7 PM within Brooklyn District 05. Recyclables would be placed out to the left or right side of the area designated for residential waste collection if the collection of waste and recycling would occur on the same day.

The commercial waste from the site's commercial spaces would be put at the curb in front of the building frontage in which the retail space exists (Pennsylvania Avenue for Buildings 1 and 2; Flatlands Avenue for Buildings 3, 5, and 6; and Louisiana Avenue for Buildings 7 through 10). The waste would be set out at the earliest an hour or two before closing and would remain on the curb until collection, which is typically before 7 AM the following day.

For the CCC, trade school, community facility spaces, and PAC, the refuse would be transferred from refuse rooms/closets in each program space to a centralized refrigerated trash room between the PAC and garage or within the structured parking garage for storage until private carting collection, which is typically before 7 AM the following day.

The refuse and recycling set out for collection would be carefully managed to minimize effects upon pedestrian and vehicular traffic. Refuse movement and cleanup post-DSNY pick-up would be carefully managed by the building management to ensure that there is no mess on the sidewalk once the refuse and recycling is removed. With these solid waste management measures in place, it is anticipated that the solid waste generated by the Proposed Project would not have negative effects on the public health and community character of the neighborhood.

13

Transportation

This chapter assesses the potential for the Proposed Project to result in significant adverse impacts on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, cyclists, transit users, and motorists), and on- and off- street parking.

Introduction

The Proposed Project is located in the East New York section of Brooklyn, along the south side of Flatlands Avenue between Louisiana Avenue and Pennsylvania Avenue. **Figure 13-1** shows the location of the Development Site. The Development Site is currently occupied by the 92,784 sf Christian Cultural Center (CCC) building that includes an approximately 3,550-seat church, and open areas surrounding the church that are primarily used for parking during church services.

The Proposed Project would consist of 2,050 residential dwelling units (DUs) and approximately 65,670 square feet (sf) of local retail space, 14,300 sf of food store space, 52,820 sf of community facility space, 81,740 sf (1.88 acres) of publicly accessible passive open space, and 312,114 sf of on-site above-grade surface parking and below-grade garage parking (approximately 886 parking spaces). The community facility space is assumed to consist of approximately 12,320 sf of daycare space, 16,500 sf performing arts center (PAC) (with up to 299 seats), a 14,100-sf trade school which would be developed within the eastern wing of the existing CCC building, and 9,900 sf of other community facility space (assumed to be medical office for conservative traffic analysis purposes). A portion of the existing 92,784 sf CCC building would be adapted to house the proposed trade school resulting in approximately 78,684 sf of CCC church space and 14,100 sf of trade school space. The church seating capacity is expected to remain the same (3,550 seats) as only existing limited use church ancillary spaces are planned to be adapted. The site plan and development program are shown in **Figure 13-2** and **Table 13-1**, respectively.

Figure 13-1 Project Location

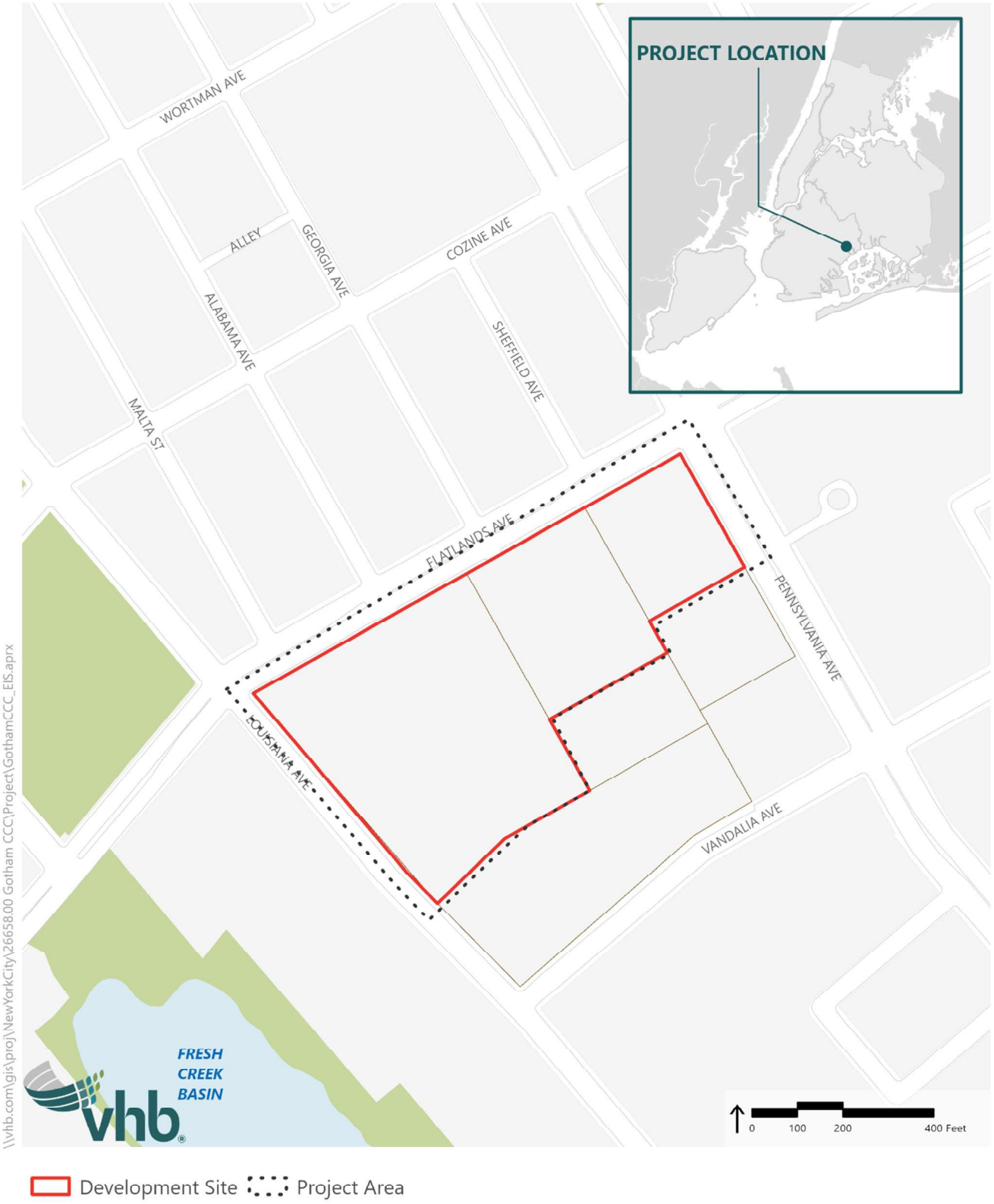


Figure 13-2 Site Plan



Table 13-1 Development Increment for Analysis

Use	Analysis Increment
Residential	2,050 DUs
Local Retail	65,670 sf
Food Store	14,300 sf
Daycare	12,320 sf
Medical Office	9,900 sf
Performing Arts Center	16,500 sf (approximately 299 seats)
Trade School	14,100 sf
Publicly Accessible Passive Open Space	81,740 sf (1.88 acres)
Non-Residential Accessory Parking	172,150 sf (approximately 500 parking spaces)
Residential Accessory Parking	139,964 sf (approximately 386 parking spaces)

Principal Conclusions

Traffic

The Proposed Project would generate a total of 668 vehicles per hour (vph) (277 "ins" and 442 "outs") in the weekday AM peak hour, 536 vph (268 "ins" and 268 "outs") in the weekday midday peak hour, 722 vph (402 "ins" and 320 "outs") in the weekday PM peak hour, 771 vph (380 "ins" and 391 "outs) in the Saturday peak hour, and 789 vph (379 "ins" and 410 "outs") in the Sunday peak hour. Of the 13 intersections analyzed, the Proposed Project would result in significant adverse traffic impacts at nine intersections during the weekday AM peak hour, seven intersections during the weekday midday peak hour, nine intersections during the weekday PM peak hour and seven intersections during the Saturday peak hour. A subset of seven intersections was analyzed for the Sunday peak hour (coinciding with CCC church services) and significant traffic impacts were identified at four of these seven intersections. The identification and evaluation of traffic capacity improvements needed to mitigate potential significant adverse traffic impacts created by the Proposed Projected are presented in **Chapter 20, Mitigation**.

Parking

The Proposed Project would provide approximately 886 on-site parking spaces between four garages – three underground garages with a total capacity of approximately 386 spaces located under Buildings 1 and 2, Buildings 3 and 4, and Building 9, and an approximately 500-space garage which would be located next to the CCC and performing arts center buildings and would be used for CCC church services, and community facility and commercial uses.

While the project's overall projected parking demand would be accommodated during the day there would be an anticipated residential shortfall of 418 parking spaces during the overnight or early morning hours, 194 parking spaces during the weekday morning and 65 parking spaces during the Saturday afternoon periods. Based on the results of the quarter-mile parking inventory survey, there would be enough available on-street parking to

accommodate the projected parking shortfall during these periods. Adequate parking supply would be provided for the other uses that include local retail, food store, and community facility uses.

An approximately 500-space parking garage would be developed as part of the project and would accommodate the majority of the church's on-site parking demand of 810 spaces during the 10 AM to 11 AM Sunday peak hour. The church parking overflow would be accommodated by the surrounding on-street parking within a quarter mile from the site (a five-minute walk) with a modest projected excess demand of 29 spaces that could be accommodated by surrounding on-street parking just beyond a five-minute walk of the Development Site. The parking demand for the proposed new uses would be expected to exceed the on-site parking by 191 spaces which would also need to be accommodated by surrounding on-street parking beyond a five-minute walk of the Development Site (total shortfall of 220 spaces). The Proposed Project would also provide shuttle bus service for CCC visitors from the subway stations which could potentially reduce the amount of church and residential-related parking demand.

Subways

Three fare control areas were analyzed at the Rockaway Parkway L subway station during the commuting peak hours. The analysis determined that all station elements that were analyzed would operate at acceptable levels of service with the exception of the Glenwood Road fare control during the AM peak hour. As part of the recent station renovations, there is no fence or other barrier behind the Glenwood Road fare control and the vast majority of subway riders were observed to not use the fare control and instead walk directly into the station without paying the fare. The analysis of this fare control area conservatively assumes that all subway riders would use the fare control and not evade the fare, and the fare control would be significantly impacted as a result of the Proposed Project.

A subway line haul analysis was conducted for the L subway line and determined that the subway line would operate at over-capacity conditions during the commuting peak hours. However, the project would result in an increase of 1.63 passengers per car in the Manhattan-bound direction during the AM peak hour and 1.53 passengers per car in the Brooklyn-bound direction during the PM peak hour; these increases are below the five subway passengers per car threshold that are considered a significant impact per the *CEQR Technical Manual* criteria. Therefore, significant subway line haul impacts are not expected as a result of the project.

Buses

Bus line haul analyses were conducted for three bus routes (B82, B82 SBS and B83) based on the *CEQR Technical Manual's* screening assessment. The With-Action condition analysis determined that there would be adequate supply for the Proposed Project's projected demand for the B82 and B82 SBS in the eastbound direction during the AM peak hour, and the B82 (both directions) and B82 SBS in the westbound direction during the PM peak hour. However, the Proposed Project would result in a capacity shortfall for the bus routes listed below; these bus routes would be significantly impacted.

› The B82 bus route in the westbound direction during the AM peak hour

- The B82 SBS bus route in the westbound direction during the AM peak hour, and in the eastbound direction during the PM peak hour
- The B83 bus route in both directions during both the AM and PM peak hours

The identification and evaluation of bus service improvements needed to mitigate potential significant adverse bus impacts created by the Proposed Projected are presented in **Chapter 20, Mitigation**.

Pedestrians

Pedestrian analyses were performed for nine sidewalk elements, 14 crosswalk elements, and 13 corner elements at key intersections for the weekday AM, midday, PM, and Saturday peak hours. Of the 36 pedestrian elements analyzed, the Proposed Project would result in significant adverse impacts at one pedestrian element (one crosswalk) during the weekday AM and midday peak hours, two pedestrian elements (two crosswalks) during the weekday PM peak hour, and four pedestrian elements (three crosswalks and one sidewalk) during the Saturday peak hour. Due to the confluence of pedestrian activities from the Proposed Project and the church services, the Proposed Project would result in significant pedestrian impacts at 12 of the 14 pedestrian elements analyzed for the Sunday peak hour (three sidewalks, five crosswalks, and four corner analysis locations). Mitigation measures that could be implemented to mitigate these significant adverse pedestrian impacts are discussed in **Chapter 20, Mitigation**.

Vehicular and Pedestrian Safety

Nine of the 13 traffic analysis locations have been identified as high crash-locations according to New York City Department of Transportation (NYC DOT) criteria. The intersection of Pennsylvania Avenue and Stanley Avenue had at least five bicycle and/or pedestrian crashes recorded within a consecutive 12-month period and was identified as a high-crash location. In addition to this intersection, eight traffic analysis locations are located along the Pennsylvania Avenue, Linden Boulevard, and Rockaway Parkway corridors which have been identified by NYC DOT as priority corridors as part of the NYC Vision Zero Program and therefore are considered high-crash locations per the *CEQR Technical Manual* criteria.

Methodology

According to the 2021 *CEQR Technical Manual* procedures for transportation analysis, a two-tiered screening process is undertaken to determine whether a quantified analysis is necessary. The first step, the Level 1 (Trip Generation) screening, determines whether the volume of peak hour person and vehicle trips generated by the Proposed Project would remain below the minimum thresholds for further study. These thresholds are:

- 50 peak hour vehicle trip ends;
- 200 peak hour subway/rail or bus transit riders; and
- 200 peak hour pedestrian trips.

If the Proposed Project results in increments that would exceed any of these thresholds, a Level 2 (Trip Assignment) screening assessment is performed. Under this assessment, project-generated trips that exceed Level 1 thresholds are assigned to and from the site through their respective networks (streets, bus and subway lines, sidewalks, etc.) based on expected origin-destination patterns and travel routes.

Level 1 Screening Assessment

The travel demand factors used to calculate the projected number of trips were obtained primarily from the *2021 CEQR Technical* Manual, American Community Survey (ACS) journey-to-work data, New York City Department of Transportation (NYC DOT) surveys, and information from other New York City environmental impact studies such as the *E*ast *New York Rezoning FEIS (2016)* and *Brooklyn ~~Development~~Developmental Center Mixed-Use FEIS (2021)*. **Table 13-2** and **Table 13-3** provide the travel demand assumptions used for the weekday AM, midday, and PM peak hours; **Table 13-4** and **Table 13-5** provide the travel demand assumptions used for the Saturday and Sunday peak hours.

Table 13-2 Weekday Travel Demand Characteristics – Residential, Retail, PAC, and Trade School

Rates	Residential	Local Retail	Food Store	Performing Arts Center	Trade School
Daily Person Trip Gen Rate (Weekday)	8.18[1] *per DU*	329[1] *per 1,000 sf*	256[1] *per 1,000 sf*	27[5] *per 1,000 sf*	26.6[1] *per 1,000 sf*
Linked Trip Credit	0%	5%	5%	0%	0%
Temporal Distribution					
Weekday AM Peak	9%[3]	5%[3]	4%[3]	1%[5]	16%[1]
Weekday Midday Peak	6%[3]	8%[3]	7%[3]	16%[5]	10.7%[7]
Weekday PM Peak	8%[3]	11%[3]	11%[3]	13%[5]	26%[1]
Modal Split					
Auto	30%[2, 6]	11%[3]	30%[8]	19.5%[5]	20%[9]
Taxi	0%[2, 6]	0%[3]	3%[8]	10%[5]	1%[9]
Bus	18%[2, 6]	2%[3]	5%[8]	20%[5]	24%[9]
Subway (via bus)	23%[2, 6]	3%[3]	5%[8]	20%[5]	47%[9]
Subway (via shuttle)	23%[2, 6]	-	-	-	-
Walk	6%[2, 6]	84%[3]	57%[8]	30.5%[5]	8%[9]
Vehicle Occupancy					
Auto	1.04[2]	2.00[4]	2.00[8]	1.60[5]	1.10[9]
Taxi	1.04[2]	2.00[4]	2.00[8]	1.20[5]	1.10[9]
Shuttle Bus	25[6]	-	-	-	
Directional Split (In/Out)					
Weekday AM Peak	22%/78%[3]	53%/50%[3]	51%/49%[3]	61%/39%[5]	94%/6%[7]
Weekday Midday Peak	50%/50%[3]	50%/50%[3]	51%/49%[3]	55%/45%[5]	46%/54%[7]
Weekday PM Peak	63%/37%[3]	50%/50%[3]	50%/50%[3]	29%/71%[5]	44%/56%[7]
Daily Delivery Trip Gen (Weekday)	0.06[1] *per DU*	0.35[1] *per 1,000 sf*	0.35[1] *per 1,000 sf*	0.14[5] *per 1,000 sf*	0.29[7] *per 1,000 sf*
Delivery Temporal Distribution					
Weekday AM Peak	12%[1]	8%[1]	10%[1]	6%[5]	9.6%[7]
Weekday Midday Peak	9%[1]	11%[1]	8%[1]	6%[5]	11%[7]
Weekday PM Peak	2%[1]	2%[1]	5%[1]	1%[5]	1%[7]
Delivery Trip Directional Split (In/Out) - 50%/50%					

Source:
[1] *2021 CEQR Technical Manual*
[2] 2013 - 2017 American Community Survey's journey to work data for Brooklyn census tracts 982, 1018, 1058.01, 1058.04, and 1104
[3] New York City Department of Transportation survey information for residential use, local retail use, and food store use (in Brooklyn non-transit zone)
[4] *East New York Rezoning FEIS,* 2016
[5] *Spofford Campus FEIS*
[6] VHB Assumptions developed in consultation with NYC DOT and DCP
[7] *Downtown Jamaica Redevelopment Plan FEIS,* 2007
[8] *Brooklyn ~~Development~~Developmental Center Mixed-Use FEIS* (2021)
[9] *Melrose Commons FEIS,* 2011

Table 13-3 Weekday Travel Demand Characteristics – Daycare, Medical Office, and Open Space

Rates	Daycare Children	Daycare Parents	Daycare Staff	Medical Office	Passive Open Space
Daily Person Trip Gen Rate (Weekday)	22[1] *per 1,000 sf*	44[1] *per 1,000 sf*	6[1] *per 1,000 sf*	76[1] *per 1,000 sf*	44[5] *Per acre*
Linked Trip Credit	0%	0%	0%	0%	0%
Temporal Distribution					
Weekday AM Peak	25%[1]	25%[1]	25%[1]	11%[1]	3%[5]
Weekday Midday Peak	0%[1]	0%[1]	2.5%[1]	13%[1]	14%[5]
Weekday PM Peak	25%[1]	25%[1]	25%[1]	9%[1]	14%[5]
Modal Split					
Auto	-	-	50%[4]	58%[1]	20%[6]
Auto Pick-up/Drop-off	30%[2]	-	-	-	-
Taxi	0%[2]	-	1%[4]	15%[1]	1%[6]
Bus	18%[2]	18%[2]	18%[4]	8%[1]	11%[6]
Subway	46%[2]	46%[2]	21%[4]	7%[1]	12%[6]
Walk	6%[2]	6%[2]	10%[4]	12%[1]	56%[6]
Vehicle Occupancy					
Auto	1.00[1]	-	1.13[4]	1.50[1]	2.90[6]
Taxi	1.00[1]	-	1.13[4]	1.50[1]	3.00[3]
Directional Split (In/Out)					
Weekday AM Peak	100%/0%[1]	50%/50%[1]	100%/0%[1]	62%/38%[1]	59%/41%[1]
Weekday Midday Peak	50%/50%[1]	50%/50%[1]	50%/50%[1]	47%/53%[1]	55%/45%[1]
Weekday PM Peak	0%/100%[1]	50%/50%[1]	0%/100%[1]	35%/65%[1]	55/45%[1]
Daily Delivery Trip Gen (Weekday)	0.07[3] *per 1,000 sf*	- -		0.4[3] *per 1,000 sf*	0.01[6] *Per acre*
Delivery Temporal Distribution					
Weekday AM Peak	9.6%[3]	-	-	9.7%[3]	6%[6]
Weekday Midday Peak	11.0%[3]	-	-	7.8%[3]	6%[6]
Weekday PM Peak	1.0%[3]	-	-	5.1%[3]	1%[6]
Delivery Trip Directional Split (In/Out) - 50%/50%					

Source:
[1] New York City Department of Transportation surveys
[2] Based on residential journey to work assumptions
[3] *East New York Rezoning FEIS, 2016*
[4] 2006 - 2010 American Community Survey Special Tabulation: Transportation Planning (NYCDCP) reverse journey to work data (CTPP Part 3 Table A302103) for Brooklyn census tracts 982, 1018, 1058.01, 1058.04, and 1104
[5] *2021 CEQR Technical Manual*
[6] *300 Huntington EAS, 2020*

Table 13-4 Weekend Travel Demand Characteristics – Residential, Retail, PAC, and Trade School

Rates	Residential	Local Retail	Food Store	Performing Arts Center	Trade School
Daily Person Trip Gen Rate (Saturday/Sunday)	9.08/8.54[1, 3] *per DU*	358/314[1, 3] *per 1,000 SF*	300/284[1, 3] *per 1,000 SF*	2.7/2.7[5, 8] *per seat*	13.5/13.5[1, 8] *per 1,000 SF*
Linked Trip Credit	0%	5%	5%	0%	0%
Temporal Distribution					
Saturday Peak	8%[3]	12%[3]	9%[1]	10%[5]	16%[1]
Sunday Peak	9%[3]	12.7%[3]	10%[3]	10%[8]	16%[8]
Modal Split					
Auto	30%[2, 6]	11%[3]	30%[11]	19.5%[5]	20%[9]
Taxi	0%[2, 6]	0%[3]	3%[11]	10%[5]	1%[9]
Bus	18%[2, 6]	2%[3]	5%[11]	20%[5]	24%[9]
Subway (via bus)	23%[2, 6]	3%[3]	5%[11]	20%[5]	47%[9]
Subway (via shuttle)	23%[2, 6]	-	-	-	-
Walk	6%[2, 6]	84%[3]	57%[11]	30.5%[5]	8%[9]
Vehicle Occupancy					
Auto	1.04[2]	2.00[4]	2.00[11]	2.90[5]	1.10[9]
Taxi	1.04[2]	2.00[4]	2.00[11]	2.30[5]	1.10[9]
Shuttle Bus	25[6]	-	-	-	
Directional Split (In/Out)					
Saturday Peak	51%/49%[3]	50%/50%[3]	50%/50%[11]	0%/100%[5]	57%/43%[7]
Sunday Peak	48%/52%[3]	51%/49%[3]	51%/49%[11]	0%/100%[8]	57%/43%[8]
Daily Delivery Trip Gen (Saturday/Sunday)	0.02/0.02[1, 8] *per DU*	0.04/0.35[1, 10] *per 1,000 SF*	0.04/0.04[1, 8] *per 1,000 SF*	0.04/0.04[5, 8] *per 1,000 SF*	0/0[7, 8] *per 1,000 SF*
Delivery Temporal Distribution					
Saturday Peak	9%[1]	11%[1]	10%[1]	11%[5]	0%[7]
Sunday Peak	9%[8]	0%[10]	10%[8]	11%[8]	0%[8]
Delivery Trip Directional Split (In/Out) - 50%/50%					

Source:

[1] *2021 CEQR Technical Manual*

[2] 2013 - 2017 American Community ~~Survey's~~Survey (ACS) journey to work data for Brooklyn census tracts 982, 1018, 1058.01, 1058.04, and 1104

[3] New York City Department of Transportation survey information for residential use, local retail use, and food store use (in Brooklyn non-transit zone)

[4] *East New York Rezoning FEIS, 2016*

[5] *Spofford Campus FEIS*

~~[6] VHB Assumptions~~

[6] Adjustments were made to the ACS Data (2, above), in consultation with DOT, to account for projected shifts to Shuttle Bus

[7] *Downtown Jamaica Redevelopment Plan FEIS, 2007*

[8] Assumed similar travel demand assumptions for the Saturday and Sunday peak hours

[9] *Melrose Commons FEIS, 2011*

[10] *Brooklyn Bridge Park Project FEIS, 2005*

[11] *Brooklyn ~~Development~~Developmental Center Mixed-Use FEIS (2021)*

Table 13-5 Weekend Travel Demand Characteristics – Daycare, Medical Office, and Open Space

Rates	Daycare Children	Daycare Parents	Daycare Staff	Medical Office	Passive Open Space
Daily Person Trip Gen Rate (Saturday/Sunday)	22/22[1, 7] *per 1,000 sf*	44/44[1, 7] *per 1,000 sf*	6/6[1, 7] *per 1,000 sf*	39/39[1,7] *per 1,000 sf*	62/62[5, 7] *Per acre*
Linked Trip Credit	0%	0%	0%	0%	0%
Temporal Distribution					
Saturday Peak	25%[1]	25%[1]	25%[1]	17%[1]	16%[5]
Sunday Peak	25%[7]	25%[7]	25%[7]	17%[7]	16%[7]
Modal Split					
Auto	-	-	50%[4]	58%[1]	20%[6]
Auto Pick-up/Drop-off	30%[2]	-	-	-	-
Taxi	0%[2]	-	1%[4]	15%[1]	1%[6]
Bus	18%[2]	18.0%[2]	18%[4]	8%[1]	11%[6]
Subway	46%[2]	46.0%[2]	21%[4]	7%[1]	12%[6]
Walk	6%[2]	6.0%[2]	10%[4]	12%[1]	56%[6]
Vehicle Occupancy					
Auto	1.00[1]	-	1.13[4]	1.50[1]	2.90[6]
Taxi	1.00[1]	-	1.13[4]	1.50[1]	3.00[3]
Directional Split (In/Out)					
Saturday Peak	0%/100%[1]	50%/50%[1]	0%/100%[1]	49%/51%[1]	55%/45%[6]
Sunday Peak	0%/100%[7]	50%/50%[7]	0%/100%[7]	49%/51%[7]	55%/45%[7]
Daily Delivery Trip Gen (Saturday/Sunday)	0.0/0.0[3, 7] *per 1,000 sf*	- -	- -	0.0/0.0[3,7] *per 1,000 sf*	0.01/0.01[6, 7] *Per acre*
Delivery Temporal Distribution					
Saturday Peak	0%[3]	-	-	0%[3]	0%[6]
Sunday Peak	0%[7]	-	-	0%[7]	0%[7]
Delivery Trip Directional Split (In/Out) - 50%/50%					

Source:
[1] New York City Department of Transportation surveys
[2] Based on residential journey to work assumptions
[3] *East New York Rezoning FEIS, 2016*
[4] 2006 - 2010 American Community Survey Special Tabulation: Transportation Planning (NYCDCP) reverse journey to work data (CTPP Part 3 Table A302103) for Brooklyn census tracts 982, 1018, 1058.01, 1058.04, and 1104
[5] *2021 CEQR Technical Manual*
[6] *300 Huntington EAS, 2020*
[7] Assumed similar travel demand assumptions for the Saturday and Sunday peak hours

Residential

For the residential use, trip generation rates of 8.18 daily person trips per DU for weekday and 9.08 daily person trips per DU for Saturday were obtained from the *2021 CEQR Technical Manual*. Temporal distributions of 9 percent, 6 percent, 8 percent, and 8 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively, were provided by NYC

DOT. The Sunday trip generation rate of 8.54 daily person trips per DU and the Sunday peak hour temporal distribution of 9 percent was based on NYC DOT's latest surveys of residential uses.

Once completed, the Proposed Project would provide shuttle bus service for residents to the East 105th Street subway station (served by the L subway line) and the Pennsylvania Avenue subway station (served by the No. 3 subway line). Visitors to the CCC will also have access to shuttle buses to be provided by the Applicant. It is expected that the shuttle buses would have a 25-seat capacity.

Modal splits of 30 percent by auto, 18 percent by bus, 46 percent by subway, and 6 percent by walk and vehicle occupancies of 1.04 persons per auto or taxi during the peak hours were based on the 2013-2017 ACS journey to work data for Brooklyn census tracts 982, 1018, 1058.01, 1058.04, and 1104. The modal splits ~~assumed~~ were adjusted to reflect a lower auto share due to the proposed shuttle bus access. Also, due to the distance of the subway stations from the project, it is assumed that residents would either use public bus or shuttle bus service to access the subway; half of the residential subway trips are assumed to use the shuttle bus service and the other half are assumed to use public bus service. The directional distributions of 22 percent "in" for the weekday AM peak hour, 50 percent "in" for the weekday midday peak hour, 63 percent "in" for the weekday PM peak hour, 51 percent "in" for the Saturday peak hour, and 48 percent "in" during the Sunday peak hour were based on NYC DOT surveys.

For residential delivery trips, trip generation rates of 0.06 and 0.02 daily delivery trips per DU for the weekday and Saturday peak hours, respectively, and temporal distributions of 12 percent, 9 percent, 2 percent, and 9 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively, were obtained from the *2021 CEQR Technical Manual*. Sunday peak hour delivery trips were assumed to be similar to the Saturday peak hour.

Local Retail

For the local retail use, trip generation rates of 329 daily person trips per 1,000 sf for weekday and 358 daily person trips per 1,000 sf for Saturday were obtained from the *2021 CEQR Technical Manual*, and a trip generation rate of 314 daily person trips per 1,000 sf for Sunday was provided by NYC DOT. A linked trip credit of 5 percent was assumed. Weekday, Saturday, and Sunday peak hour directional and temporal distributions were based on NYC DOT surveys. The temporal distributions used were 5 percent, 8 percent, 11 percent, 12 percent, and 12.7 percent for the weekday AM, midday, PM, Saturday, and the Sunday peak hours, respectively, and the directional distributions used were 53 percent "in", 50 percent "in", 50 percent "in", 50 percent "in", and 51 percent "in" for the weekday AM, midday, PM, Saturday, and Sunday peak hours, respectively. The modal splits of 11 percent by auto, 2 percent by bus, 3 percent by subway (via bus), and 84 percent by walk were based on NYC DOT surveys of local retail use in Brooklyn non-transit zones, and vehicle occupancies of 2.00 persons per auto or taxi were obtained from the *East New York Rezoning FEIS (2016)*.

For retail delivery trips, trip generation rates of 0.35 and 0.04 daily delivery trips per 1,000 sf for the weekday and Saturday peak hours, respectively, and a temporal distribution of 8 percent, 11 percent, 2 percent, and 11 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively, were obtained from the *2021 CEQR Technical Manual*. A

trip generation rate of 0.35 daily delivery trips per DU, and temporal distribution of 0 percent during the Sunday peak hour was obtained from the *Brooklyn Bridge Park Project FEIS (2005)*.

Food Store

The food store use was assumed to be similar to that of a FRESH food or smaller food store to serve the local area. Trip generation rates of 256 daily person trips per 1,000 sf for weekday and 300 daily person trips per 1,000 sf for Saturday were obtained from the *2021 CEQR Technical Manual* and a linked trip credit of 5 percent was assumed. A trip generation rate of 284 daily person trips per 1,000 sf for Sunday was provided by NYC DOT. The temporal distribution and directional split were also provided by NYC DOT while the modal split and vehicle occupancy were obtained from the *Brooklyn ~~Development~~Developmental Center Mixed-Use FEIS (2021)*. The temporal distributions used for the AM, midday, PM, Saturday, and Sunday peak hours were 4 percent, 7 percent, 11 percent, 9 percent and 10 percent, respectively, and the directional splits used were 51 percent "in", 51 percent "in", 50 percent "in", 50 percent "in" and 51 percent "in" for the weekday AM, midday, PM, Saturday and Sunday peak hours, respectively. The modal splits of 30 percent by auto, 3 percent by taxi, 5 percent by bus, 5 percent by subway (via bus), and 57 percent by walk, and vehicle occupancies of 2.00 persons per auto or taxi, were used for all peak hours.

Food store delivery trips were assumed to be similar to the local retail use. Trip generation rates of 0.35 and 0.04 daily delivery trips per 1,000 sf for weekday and weekend, respectively, and a temporal distribution of 10 percent, 8 percent, 5 percent, and 10 percent for the weekday AM, midday, PM, and weekend peak hours, respectively, were obtained from the *2021 CEQR Technical Manual*.

Performing Arts Center

The performing arts center would serve local community groups, including the CCC, and will serve as a venue for shows and events, and for community meetings. Travel demand factors for the performing arts center use were obtained from the *Spofford Campus EIS (2018)*; although the performing arts center would not be expected to have events during church service, the Sunday peak hour assumed the same trip generation assumptions as the Saturday peak hour to provide a conservative analysis. Trip generation rates of 27 daily person trips per 1000 sf for weekdays and 2.7 daily person trips per seat for the weekend were used. The temporal distributions used for the AM, midday, PM, weekend peak hours were 1 percent, 16 percent, 13 percent, and 10 percent, respectively, and the directional splits used were 61 percent "in", 55 percent "in", 29 percent "in", and 0 percent "in" for the weekday AM, midday, PM, and weekend peak hours, respectively. The modal splits of 19.5 percent by auto, 10 percent by taxi, 20 percent by bus, 20 percent by subway (via bus), and 30.5 percent by walk were used during all peak hours. Vehicle occupancies of 1.60 persons per auto and 1.20 per taxi were used during the weekday peak hours and vehicle occupancies of 2.90 persons per auto and 2.30 per taxi were used during the weekend peak hours. For performing arts center delivery trips, a trip generation rate of 0.14 and 0.04 daily delivery trips per 1000 sf for weekday and weekday, respectively, and a temporal distribution of 6 percent, 6 percent, 1 percent, and 11 percent for the weekday AM, midday, PM, and weekend peak hours, respectively.

Trade School

A trip generation rate of 26.6 daily person trips per 1,000 sf for weekdays and 13.5 daily person trips per 1,000 sf for Saturdays were obtained from the *2021 CEQR Technical Manual*. Weekday and Saturday temporal distributions of 16 percent, 26 percent, and 16 percent for the weekday AM, PM, and Saturday peak hours, respectively, were obtained from the *2021 CEQR Technical Manual*. Since a weekday midday peak hour temporal distribution is not provided in the *2021 CEQR Technical Manual*, it was assumed to be 10.7 percent which was obtained from the professional school use found in the *Downtown Jamaica Redevelopment Plan FEIS (2007)*. The Sunday peak hour travel characteristics were assumed to be similar to the Saturday peak hour. Modal splits and vehicle occupancy were based on the professional school use from the *Melrose Commons FEIS (2011)*. The modal splits assumed were 20 percent by auto, 1 percent by taxi, 24 percent by bus, 47 percent by subway (via bus), and 8 percent by walk. Vehicle occupancies of 1.10 persons per auto or taxi were assumed. Directional distributions of 94 percent "in", 46 percent "in", 44 percent "in", and 57 percent "in" for the weekday AM, midday, PM, and weekend peak hours, respectively, were assumed from the *Downtown Jamaica Redevelopment Plan FEIS (2007)*. For trade school delivery trips, a trip generation rate of 0.29 daily trucks per 1,000 sf for the weekday and a temporal distribution of 9.6 percent, 11 percent, and 1 percent for the weekday AM, midday, and PM peak hours, respectively, were obtained from the *Downtown Jamaica Redevelopment Plan FEIS (2007)*. No delivery trips were assumed during the weekend.

Daycare

Children

Trip generation rates of 22 daily person trips per 1,000 sf for daycare children trips was assumed for both weekdays and weekends, and a temporal distribution of 25 percent was used for the weekday AM, PM, Saturday, and Sunday peak hours; no trips are expected during the weekday midday peak hour. The directional distributions used were 100 percent "in" during the weekday AM peak hour, and 0 percent "in" during the weekday PM and weekend peak hours. The trip generation rates and temporal and directional distributions were based on NYC DOT surveys of daycare facilities. Peak hour modal splits of 30 percent by auto pick-up and drop-off, 18 percent by bus, 36 percent by subway (via bus), and 6 percent by walk were based on the journey to work assumptions used for the residential use. Vehicle occupancies of 1.00 person per and taxi were assumed based on NYC DOT guidance.

Parent

Trip generation rates, and temporal and directional distributions for daycare parent pick-up and drop-off trips were based on NYC DOT surveys of daycare facilities. A trip generation rate of 44 daily person trips per 1,000 sf was assumed for the weekday and weekend, and temporal distributions of 25 percent (50 percent "in") was assumed for the weekday AM, PM, Saturday, midday and Sunday peak hours; no trips are expected during the weekday midday peak hour. The modal split of 18 percent by bus, 46 percent by subway, and 6 percent by walk was assumed during the peak hours analyzed and were based the journey to work assumptions used for the residential use; auto pick-up and drop-off trips are accounted for in the daycare children trip generation estimates. No delivery trips are associated with this use.

Staff

Trip generation rates of 6 daily person trips per 1,000 sf for daycare staff was assumed for both weekdays and weekends, and a temporal distribution of 25 percent was used for the weekday AM, PM, Saturday, and Sunday peak hours and 2.5 percent for the weekday midday peak hour. The directional distributions used were 100 percent "in" during the weekday AM peak hour, and 0 percent "in" during the weekday PM and weekend peak hours. The trip generation rates and temporal and directional distributions were based on NYC DOT surveys of daycare facilities. A modal split of 50 percent by auto, 1 percent by taxi, 18 percent by bus, 21 percent by subway, and 10 percent by walk and vehicle occupancy of 1.13 for auto and taxi were obtained from the New York City Department of City Planning's Special Tabulation of American Community Survey 2006 – 2010 reverse journey to work data (CTPP Part 3 Table A302103) for Brooklyn Census Tracts 982, 1018, 1058.01, 1058.04, and 1104. No delivery trips are associated with this use.

Medical Office

For the medical office use, the trip generation, temporal distribution, modal split, vehicle occupancy and directional distributions were based on NYC DOT surveys of medical office facilities; the travel demand factors used for the Saturday peak hour were assumed for the Sunday peak hour. Trip generation rates of 76 daily person trips per 1,000 sf for weekdays and 39.0 daily person trips per 1,000 sf for the weekend. The temporal distributions were 11 percent, 13 percent, 9 percent, and 17 percent for the weekday AM, weekday midday, weekday PM, and weekend peak hours, respectively. For both weekdays and weekends, modal splits of 58 percent by auto, 15 percent by taxi, 8 percent by bus, 7 percent by subway, and 12 percent by walking were used. For all periods, an auto and taxi vehicle occupancy rate of 1.50 was used. The directional distributions were 62 percent "in" for the weekday AM peak hour, 47 percent "in" for the weekday midday peak hour, 35 percent "in" for the weekday PM peak hour, and 49 percent "in" for the weekend peak hours. For medical office delivery trips, trip generation rates of 0.40 per 1,000 sf for the weekday, and temporal distributions of 9.7 percent, 7.8 percent and 5.1 percent for the weekday AM, midday, and PM peak hours, respectively, were obtained from the *East New York Rezoning FEIS (2016)*. No delivery trips are expected during the weekends.

Passive Open Space

A trip generation rate of 44 daily person trips per acre for weekdays and 62 daily person trips per acre for Saturdays were obtained from the *2021 CEQR Technical Manual*. Weekday and Saturday temporal distributions of 3 percent, 14 percent, 14 percent, and 16 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively, were obtained from the *2021 CEQR Technical Manual*. Sunday peak hour travel characteristics were assumed to be similar to the Saturday peak hour. Modal splits and auto vehicle occupancies were based on the *300 Huntington EAS (2020)*. The modal splits assumed were 20 percent by auto, 1 percent by taxi, 11 percent by bus, 12 percent by subway, and 56 percent by walk. A vehicle occupancy of 2.90 persons per auto and 3.00 persons per taxi was assumed. Directional distributions of 59 percent "in", 55 percent "in", and 55 percent "in" for the weekday hours were provided by NYC DOT. Directional distributions of 55 percent "in" for the weekend peak hours were obtained from the *300 Huntington EAS (2020)*. For passive open space delivery trips, a trip generation rate of 0.01 daily trucks per acre for the weekday and weekend peak

hours was obtained from the *300 Huntington EAS (2020)*. Temporal distributions of 6 percent, 6 percent, 1 percent, and 0 percent for the weekday AM, midday, PM, and weekend peak hours, respectively, were also obtained from the *300 Huntington EAS (2020)*.

Level 1 Screening Results

Transit and Pedestrians

The total number of pedestrian trips generated by the Proposed Project are provided in **Table 13-6** and would be expected to exceed the *2021 CEQR Technical Manual* Level 1 screening thresholds for pedestrian and transit trips. The number of pedestrian trips generated by use is detailed in **Table 13-7** and **Table 13-8**.

- During the weekday AM peak hour, the project would generate 363 bus trips, 865 subway trips, and 2,293 pedestrian trips (walk plus bus and subway).[1]
- During the weekday midday peak hour, the project would generate 259 bus trips, 561 subway trips, and 2,442 pedestrian trips.
- During the weekday PM peak hour, the project would generate 389 bus trips, 871 subway trips, and 3,510 pedestrian trips.
- During the Saturday peak hour, the project would generate 408 bus trips, 911 subway trips, and 3,928 pedestrian trips.
- During the Sunday peak hour, the project would generate 422 bus trips, 949 subway trips, and 3,835 pedestrian trips.

Since the number of peak hour bus, subway, and pedestrian trips expected to be generated by the Proposed Project would exceed the CEQR thresholds of 200 pedestrian trips per hour, a Level 2 trip assignment is needed to determine whether detailed subway, bus, and pedestrian analyses are needed.

[1] Shuttle bus service to the local subway stations would be provided for project residents. Due to the distance between the nearby subway stations and the Proposed Project, for the residential use, 50 percent of subway trips are assumed to be made using shuttle buses provided by the Proposed Project, with the remaining 50 percent using public buses. Subway trips for other uses are assumed to take public bus to reach the subway stations. However, as requested by New York City Transit, to provide a conservative analysis for transit and pedestrian trips, it is assumed that all residential subway trips would use public bus and not the shuttle service.

Table 13-6 Trip Generation Summary – Person Trips

Mode	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto	231	446	677	319	319	638	461	384	845
Auto Pick-up/ Drop-off	20	0	20	0	0	0	0	20	20
Taxi	11	7	18	15	15	30	11	17	28
Bus	121	242	363	129	130	259	214	175	389
Subway (via bus)	194	324	518	166	165	331	297	263	560
Walk	541	524	1,065	813	809	1,622	1,128	1,122	2,250
Subway (via shuttle bus)	76	271	347	115	115	230	196	115	311
Total	**1,194**	**1,814**	**3,008**	**1,557**	**1,553**	**3,110**	**2,307**	**2,096**	**4,403**

Mode	Saturday Peak Hour			Sunday Peak Hour		
	In	Out	Total	In	Out	Total
Auto	452	474	926	448	485	933
Auto Pick-up/ Drop-off	0	20	20	0	20	20
Taxi	11	19	30	11	19	30
Bus	190	218	408	192	230	422
Subway (via bus)	263	309	572	263	324	587
Walk	1,289	1,320	2,609	1,237	1,227	2,464
Subway (via shuttle bus)	171	168	339	174	188	362
Total	**2,376**	**2,528**	**4,904**	**2,325**	**2,493**	**4,818**

Table 13-7 Weekday Trip Generation Summary by Land Use – Person Trips

	Residential	Local Retail	Food Store	Performing Arts Center	Trade School	Daycare Children	Daycare Parents	Daycare Staff	Medical Office	Open Space	Total
Weekday AM Peak Hour											
Auto Person Trips	452	113	41	1	12	0	0	9	49	0	677
Taxi Person Trips	0	0	4	0	1	0	0	0	13	0	18
Bus Person Trips	273	20	7	1	15	12	24	3	8	0	363
Subway Person Trips	347	32	7	1	29	31	62	4	5	0	518
Walk Person Trips	92	862	79	2	5	4	8	2	9	2	1065
Shuttle Person Trips	347	0	0	0	0	0	0	0	0	0	347
Auto Pick-up/Drop-off Person Trips	0	0	0	0	0	20	0	0	0	0	20
Total Person Trips	1,511	1,027	138	5	62	67	94	18	84	2	3,008
Weekday Midday Peak Hour											
Auto Person Trips	302	182	73	14	8	0	0	0	57	2	638
Taxi Person Trips	0	0	8	7	0	0	0	0	15	0	30
Bus Person Trips	180	34	12	14	9	0	0	0	8	2	259
Subway Person Trips	230	48	12	14	19	0	0	0	6	2	331
Walk Person Trips	60	1,380	139	22	3	0	0	0	11	7	1622
Shuttle Person Trips	230	0	0	0	0	0	0	0	0	0	230
Auto Pick-up/Drop-off Person Trips	0	0	0	0	0	0	0	0	0	0	0
Total Person Trips	1,002	1,644	244	71	39	0	0	0	97	13	3,110
Weekday PM Peak Hour											
Auto Person Trips	402	248	114	11	20	0	0	9	39	2	845
Taxi Person Trips	0	0	12	6	1	0	0	0	9	0	28
Bus Person Trips	243	46	20	11	23	12	24	3	5	2	389
Subway Person Trips	311	68	20	11	46	31	62	4	5	2	560
Walk Person Trips	82	1,896	218	18	7	4	8	2	8	7	2250
Shuttle Person Trips	311	0	0	0	0	0	0	0	0	0	311
Auto Pick-up/Drop-off Person Trips	0	0	0	0	0	20	0	0	0	0	20
Total Person Trips	1,349	2,258	384	57	97	67	94	18	66	13	4,403

Table 13-8 Weekend Trip Generation Summary by Land Use – Person Trips

	Residential	Local Retail	Food Store	Performing Arts Center	Trade School	Daycare Children	Daycare Parents	Daycare Staff	Medical Office	Open Space	Total
Saturday Peak Hour											
Auto Person Trips	447	296	110	16	6	0	0	9	38	4	926
Taxi Person Trips	0	0	12	8	0	0	0	0	10	0	30
Bus Person Trips	266	54	18	16	7	12	24	3	6	2	408
Subway Person Trips	339	82	18	16	14	31	62	4	4	2	572
Walk Person Trips	88	2,252	210	25	2	4	8	2	7	11	2609
Shuttle Person Trips	339	0	0	0	0	0	0	0	0	0	339
Auto Pick-up/Drop-off Person Trips	0	0	0	0	0	20	0	0	0	0	20
Total Person Trips	1,479	2,684	368	81	29	67	94	18	65	19	4,904
Sunday Peak Hour											
Auto Person Trips	472	272	116	16	6	0	0	9	38	4	933
Taxi Person Trips	0	0	12	8	0	0	0	0	10	0	30
Bus Person Trips	283	50	19	16	7	12	24	3	6	2	422
Subway Person Trips	362	73	19	16	14	31	62	4	4	2	587
Walk Person Trips	95	2,090	220	25	2	4	8	2	7	11	2464
Shuttle Person Trips	362	0	0	0	0	0	0	0	0	0	362
Auto Pick-up/Drop-off Person Trips	0	0	0	0	0	20	0	0	0	0	20
Total Person Trips	1,574	2,485	386	81	29	67	94	18	65	19	4,818

Traffic and Parking

Table 13-9 summarizes the total peak hour vehicular volumes ("ins" plus "outs") for the Proposed Project under the With-Action condition. The hourly vehicle trips generated by the Proposed Project would be 668 vehicles per hour (vph) during the weekday AM peak hour, 536 vph in the weekday midday peak hour, 722 vph in weekday PM peak hour, 771 vph in the Saturday peak hour, and 789 vph in the Sunday peak hour. The number of vehicle trips generated by use is detailed in **Table 13-10** and **Table 13-11**. Since the volume of vehicle trips generated by the Proposed Project would exceed the 50-vehicle trip threshold during all peak hours, a Level 2 trip assignment is needed to determine whether detailed traffic analyses would be needed.

Table 13-9 Trip Generation Summary – Vehicle Trips

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	177	391	568	236	236	472	356	274	630
Auto Pick-up/Drop-off	20	20	40	0	0	0	20	20	40
Taxi	11	11	22	20	20	40	18	18	36
Delivery Vehicle	8	8	16	7	7	14	0	0	0
Shuttle Bus	11	11	22	5	5	10	8	8	16
Total	**227**	**441**	**668**	**268**	**268**	**536**	**402**	**320**	**722**

	Saturday Peak Hour			Sunday Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	337	348	685	335	366	701
Auto Pick-up/Drop-off	20	20	40	20	20	40
Taxi	15	15	30	15	15	30
Delivery Vehicle	1	1	2	1	1	2
Shuttle Bus	7	7	14	8	8	16
Total	**380**	**391**	**771**	**379**	**410**	**789**

Table 13-10 Weekday Trip Generation Summary by Land Use – Vehicle Trips

	Residential	Local Retail	Food Store	Performing Arts Center	Trade School	Daycare Children	Daycare Parents	Daycare Staff	Medical Office	Open Space	Total
Weekday AM Peak Hour											
Auto Vehicle Trips	436	58	21	1	11	0	0	8	33	0	568
Taxi Vehicle Trips	0	0	4	0	2	0	0	0	16	0	22
Delivery Vehicle Trips	16	0	0	0	0	0	0	0	0	0	16
Shuttle Vehicle Trips	22	0	0	0	0	0	0	0	0	0	22
Auto Pick-up/Drop-off Vehicle Trips	0	0	0	0	0	40	0	0	0	0	40
Total Vehicle Trips	474	58	25	1	13	40	0	8	49	0	668
Weekday Midday Peak Hour											
Auto Vehicle Trips	288	92	37	9	8	0	0	0	38	0	472
Taxi Vehicle Trips	0	0	8	12	0	0	0	0	20	0	40
Delivery Vehicle Trips	14	0	0	0	0	0	0	0	0	0	14
Shuttle Vehicle Trips	10	0	0	0	0	0	0	0	0	0	10
Auto Pick-up/Drop-off Vehicle Trips	0	0	0	0	0	0	0	0	0	0	0
Total Vehicle Trips	312	92	45	21	8	0	0	0	58	0	536
Weekday PM Peak Hour											
Auto Vehicle Trips	387	126	58	7	18	0	0	8	26	0	630
Taxi Vehicle Trips	0	0	12	10	2	0	0	0	12	0	36
Delivery Vehicle Trips	0	0	0	0	0	0	0	0	0	0	0
Shuttle Vehicle Trips	16	0	0	0	0	0	0	0	0	0	16
Auto Pick-up/Drop-off Vehicle Trips	0	0	0	0	0	40	0	0	0	0	40
Total Vehicle Trips	403	126	70	17	20	40	0	8	38	0	722

Table 13-11 Weekend Trip Generation Summary by Land Use – Vehicle Trips

	Residential	Local Retail	Food Store	Performing Arts Center	Trade School	Daycare Children	Daycare Parents	Daycare Staff	Medical Office	Open Space	Total
Saturday Peak Hour											
Auto Vehicle Trips	431	150	56	6	6	0	0	8	26	2	685
Taxi Vehicle Trips	0	0	12	6	0	0	0	0	12	0	30
Delivery Vehicle Trips	0	0	0	2	0	0	0	0	0	0	2
Shuttle Vehicle Trips	14	0	0	0	0	0	0	0	0	0	14
Auto Pick-up/Drop-off Vehicle Trips	0	0	0	0	0	40	0	0	0	0	40
Total Vehicle Trips	445	150	68	14	6	40	0	8	38	2	771
Sunday Peak Hour											
Auto Vehicle Trips	456	138	59	6	6	0	0	8	26	2	701
Taxi Vehicle Trips	0	0	12	6	0	0	0	0	12	0	30
Delivery Vehicle Trips	0	0	0	2	0	0	0	0	0	0	2
Shuttle Vehicle Trips	16	0	0	0	0	0	0	0	0	0	16
Auto Pick-up/Drop-off Vehicle Trips	0	0	0	0	0	40	0	0	0	0	40
Total Vehicle Trips	472	138	71	14	6	40	0	8	38	2	789

Level 2 Screening Assessment

As shown above, the number of trips generated by the Proposed Project would exceed the *2021 CEQR Technical Manual* Level 1 screening thresholds for vehicular traffic, subways, buses, and pedestrians during the peak hours analyzed. Project-generated trips were assigned through the surrounding street network, subway stations and routes, bus routes, and pedestrian facilities based on expected routes to and from the Development Site.

Transit and Pedestrians

Transit and pedestrian trips were assigned through the pedestrian network based on logical and direct travel routes to and from the Development Site from neighborhood attractions, subway stations and/or bus stops, to determine if the number of additional pedestrian trips generated by the Proposed Project would exceed 200 peak hour pedestrian trips at key pedestrian elements (e.g. crosswalks, sidewalks, corner reservoir areas) approaching the site – the threshold for detailed pedestrian analysis. The Development Site is bordered by Flatlands Avenue to the north, Louisiana Avenue to the west, Pennsylvania Avenue to the east, and Vandalia Avenue to the south.

Bus transit options within the Development Site vicinity include the B6, B60, B82, B82 SBS, B83, and B103 bus routes. The B82 SBS only operates on the weekdays. The BM2 and BM5 bus routes also stop within the project vicinity but it is assumed that little to no trips would utilize these bus lines due to the infrequency at which they stop as well as the availability of other bus options that travel along similar, quicker routes. It is assumed that approximately 30 percent of project-generated bus trips would use the B82 and B82 SBS bus lines, which have stops along the Development Site's Flatlands Avenue and Pennsylvania Avenue frontages, and that 25 percent would use the B6 bus line, 20 percent each would use the B60 and B103 bus lines, and five percent would use the B83 bus line.

The closest subway stations are located over a half-mile from the Development Site. Because of this distance to the subway stations, it is expected that all subway trips would rely on connecting bus service to access the site. Two stations were identified to provide the vast majority of subway access to the site given their proximity to the site and their connection to bus routes: the Canarsie Rockaway Parkway station serving the L subway line; and the Pennsylvania Avenue station serving the No. 3 subway line. Approximately 80 percent of subway trips are assumed to use the L subway line (connecting via the B82 and B82 SBS bus routes), and the remaining subway trips were assumed to use the No. 3 subway line (connecting via the B83 bus route).[2]

Walk-only pedestrian trips were assigned based on the surrounding land uses, residential populations, and notable attractions in the area. Several large housing complexes are located within the Development Site vicinity including NYCHA Linden Houses to the northeast, NYCHA Breukelen Houses to the west, and Starrett City to the southeast. Local

[2] The Proposed Project would provide shuttle service to the East 105th Street L subway station and the Pennsylvania Avenue No. 3 line subway station, and it is assumed that half of the residential subway trips would use the shuttle service to reach the subway while the other half would use public buses. However, as requested by New York City Transit, for the purposes of a conservative transit analysis, it is assumed that all subway trips would use public buses to reach the subway stations. This assumption was also applied to the pedestrian analysis

commercial attractions within the Development Site vicinity include the shopping center on Louisiana Avenue opposite of the project to the southwest, and commercial retail stores along Pennsylvania Avenue to the northwest of the project.

Pedestrian volume increment maps for the weekday AM, midday, PM, Saturday and Sunday peak hours are shown in **Figure 13-3** through **Figure 13-7**.

Figure 13-3 Project-Generated Pedestrian Trips – Weekday AM Peak Hour



Figure 13-4 Project-Generated Pedestrian Trips – Weekday Midday Peak Hour



Figure 13-5 Project-Generated Pedestrian Trips – Weekday PM Peak Hour



Figure 13-6 Project-Generated Pedestrian Trips – Saturday Peak Hour



Figure 13-7 Project-Generated Pedestrian Trips – Sunday Peak Hour



Traffic

Project-generated vehicle trips shown in **Table 13-9** were assigned through the surrounding street network based on expected routes to the Development Site, the configuration of the street network, and the anticipated entrances to the Development Site and parking facilities on-site. Access to the Development Site would be available along Flatlands Avenue, Louisiana Avenue, and southbound Pennsylvania Avenue.

Residential

Residential vehicle trip assignments were based on the 2012-2016 American Community Survey's journey to work data for Brooklyn census tracts 982, 1018, 1058.01, 1058.04, and 1104. Approximately 58 percent of project-generated vehicle trips were identified to be destined for other sections of Brooklyn. Of the remaining trips, approximately 8 percent of vehicle trips were destined to Manhattan, 27 percent to Queens, 3 percent to Long Island, and 4 percent to the Bronx and Westchester.

Approximately 23 percent of the outbound trips were assigned to the west along Flatlands Avenue, 31 percent were assigned to the north along Pennsylvania Avenue, and 16 percent were assigned along westbound Linden Boulevard (via Pennsylvania Avenue, and other roadways such as Georgia Avenue and Malta Street). Approximately 16 percent of the trips were assigned to the south and west via the Belt Parkway towards other parts of Brooklyn and Manhattan and 8 percent were assigned to the north towards Queens and Long Island. The remaining trips (6 percent) would travel along eastbound Flatlands Avenue.

Inbound trips were assigned along similar general routes; approximately 23 percent of the trips were assigned from the west along Flatlands Avenue, 31 percent were assigned from the north along Pennsylvania Avenue, and 16 percent were assigned along eastbound Linden Boulevard (to Louisiana Avenue). Approximately 16 percent of the trips were assigned to the Belt Parkway originating from the south and west, and 8 percent would approach the Development Site from the northeast. The remaining trips (6 percent) would travel along westbound Flatlands Avenue towards the project.

Local Trips

Local vehicle trip assignments were applied to land uses that would serve the immediately surrounding areas such as local retail, food store, performing arts center, daycare (children trips), medical office, and passive open space uses. Therefore, vehicle trips were generally assigned from local origins within a one-mile radius of the Development Site based on population densities.

Worker Trips

Worker vehicle assignments (i.e., trade school and daycare staff) were based on the 2012-2016 ACS Special Tabulation: Census Transportation Planning reverse journey to work data (CTPP Part 3 Table A302103) for Brooklyn census tracts 982, 1018, 1058.01, 1058.04, and 1104. Most trips would be expected to originate from within Brooklyn (50 percent). Of the remaining trips, approximately 25 percent of the trips would be expected to originate from Queens, 15 percent from Long Island, 4 percent from Staten Island and southern parts of

New Jersey, and 6 percent from points north (such as the Bronx, Westchester, and northern parts of New Jersey).

Approximately 39 percent of the project trips were assigned along the Belt Parkway to the Development Site (19 percent from the south and west, and 20 percent from the north). Approximately 26 percent of school staff trips were assigned from the north via Pennsylvania Avenue, 20 percent from the west via Linden Boulevard (accessing the project via Louisiana Avenue), and 10 percent from the west via Flatlands Avenue. The remaining trips (5 percent) were assigned from the east via westbound Flatlands Avenue. Worker trips leaving the project were assigned along similar routes.

Project-generated volume increment maps are shown in **Figure 13-8** through **Figure 13-22**.

Figure 13-8 Project-Generated Vehicle Trips – Weekday AM Peak Hour (North Study Area)



Figure 13-9 Project-Generated Vehicle Trips – Weekday AM Peak Hour (South Study Area)



Figure 13-10 Project-Generated Vehicle Trips – Weekday AM Peak Hour (Project Area)

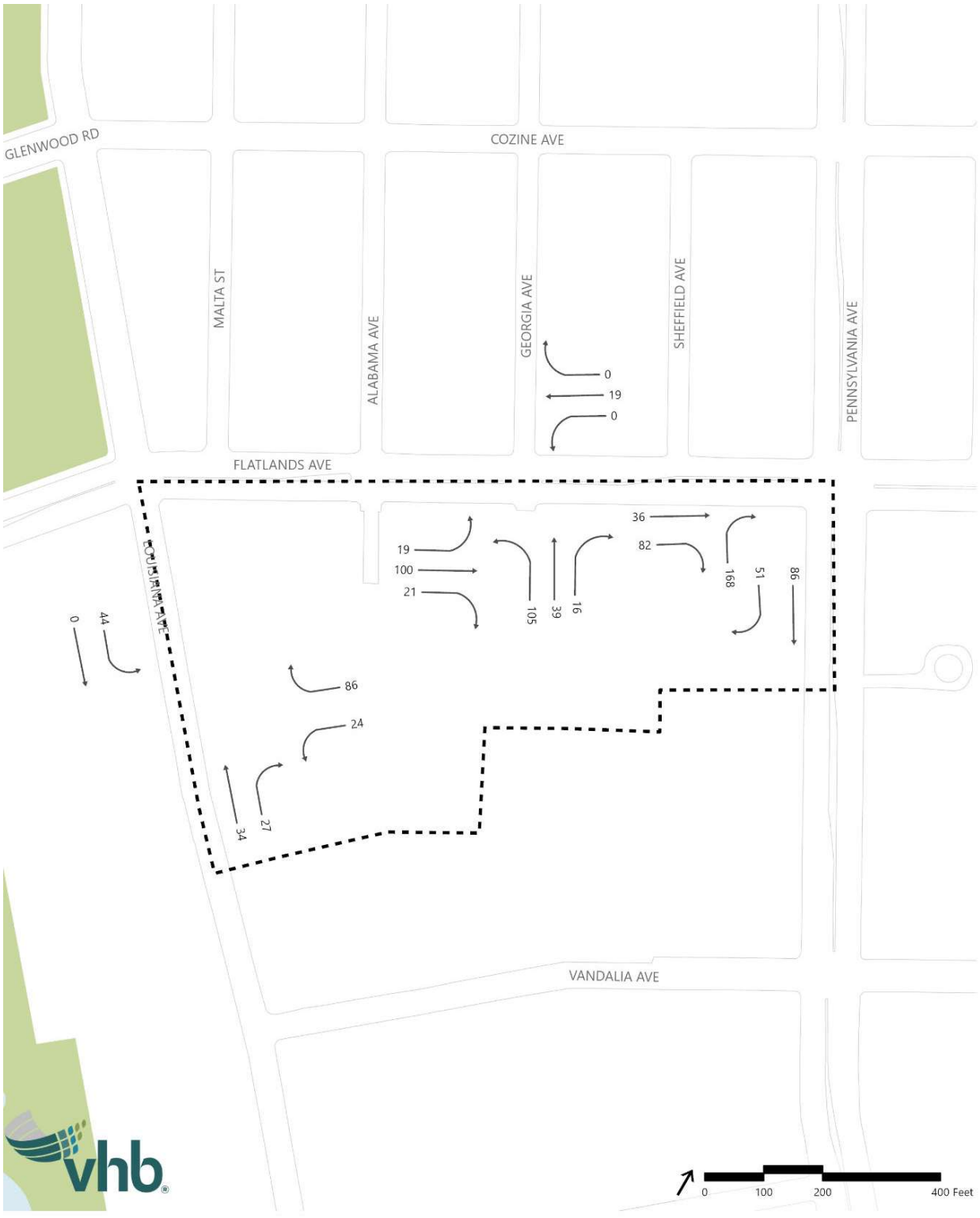


Figure 13-11 Project-Generated Vehicle Trips – Weekday Midday Peak Hour (North Study Area)



Figure 13-12 Project-Generated Vehicle Trips – Weekday Midday Peak Hour (South Study Area)



Figure 13-13 Project-Generated Vehicle Trips – Weekday Midday Peak Hour (Project Area)

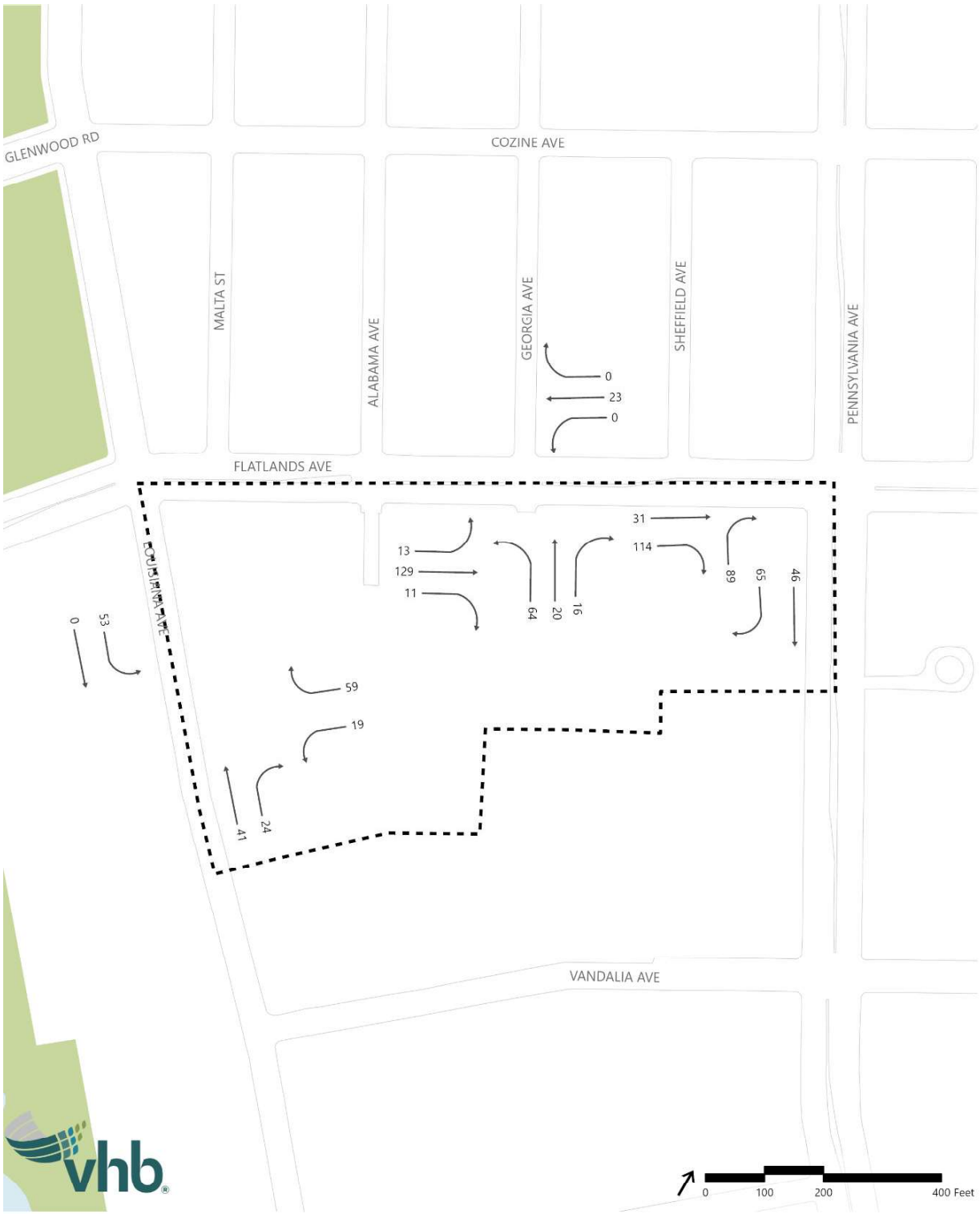


Figure 13-14 Project-Generated Vehicle Trips – Weekday PM Peak Hour (North Study Area)



Figure 13-15 Project-Generated Vehicle Trips – Weekday PM Peak Hour (South Study Area)



Figure 13-16 Project-Generated Vehicle Trips – Weekday PM Peak Hour (Project Area)

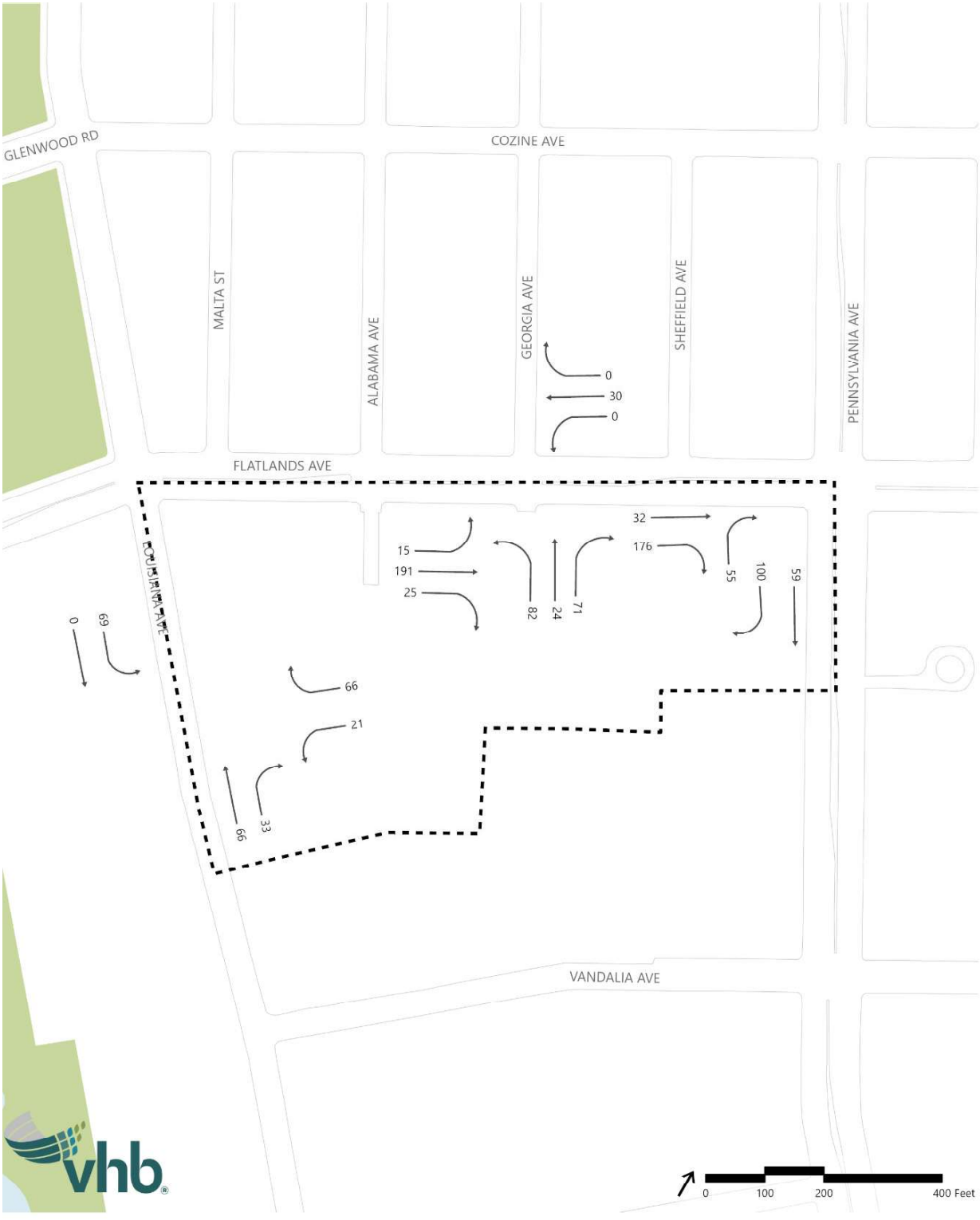


Figure 13-17 Project-Generated Vehicle Trips – Saturday Peak Hour (North Study Area)



Figure 13-18 Project-Generated Vehicle Trips – Saturday Peak Hour (South Study Area)



Figure 13-19 Project-Generated Vehicle Trips – Saturday Peak Hour (Project Area)

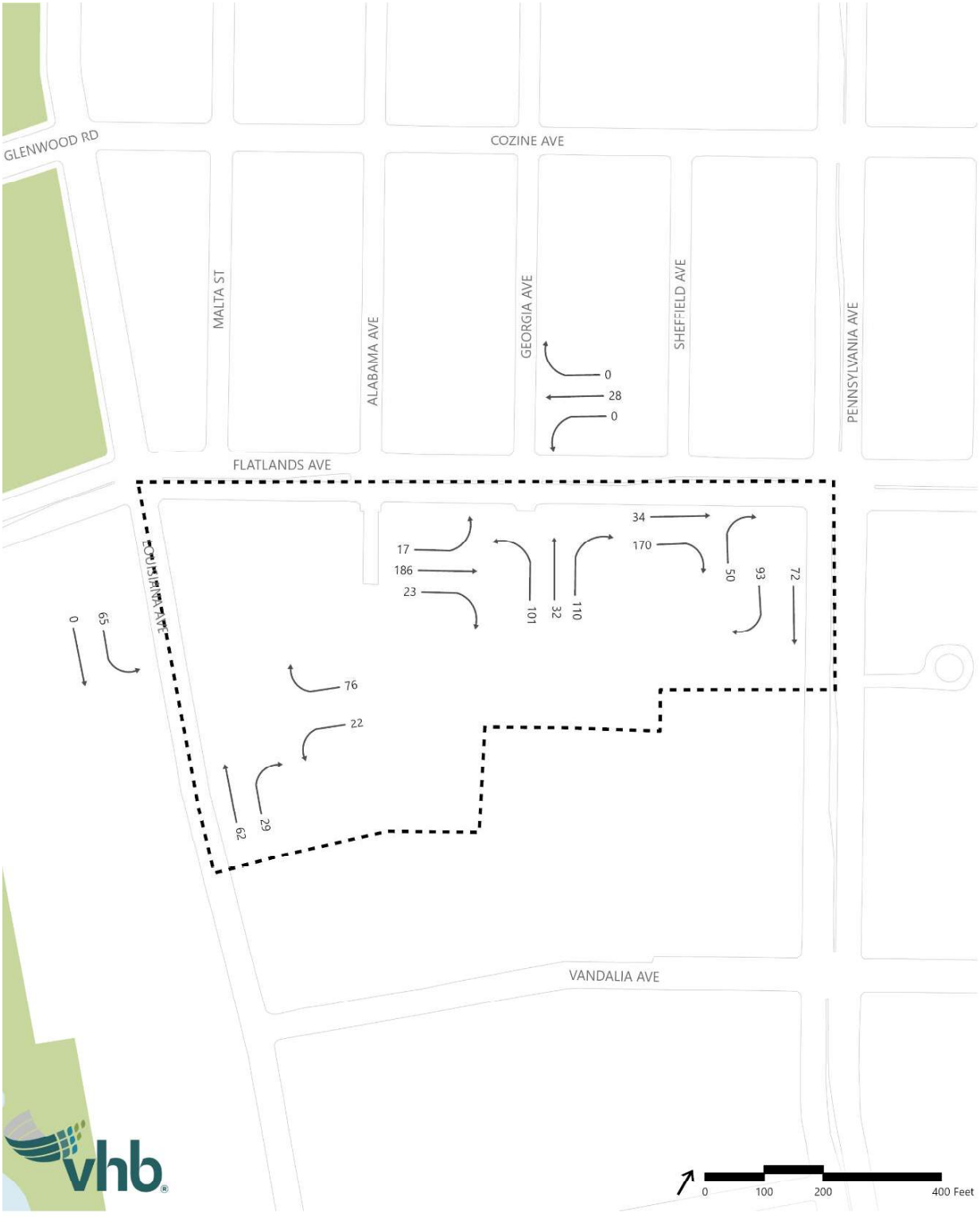


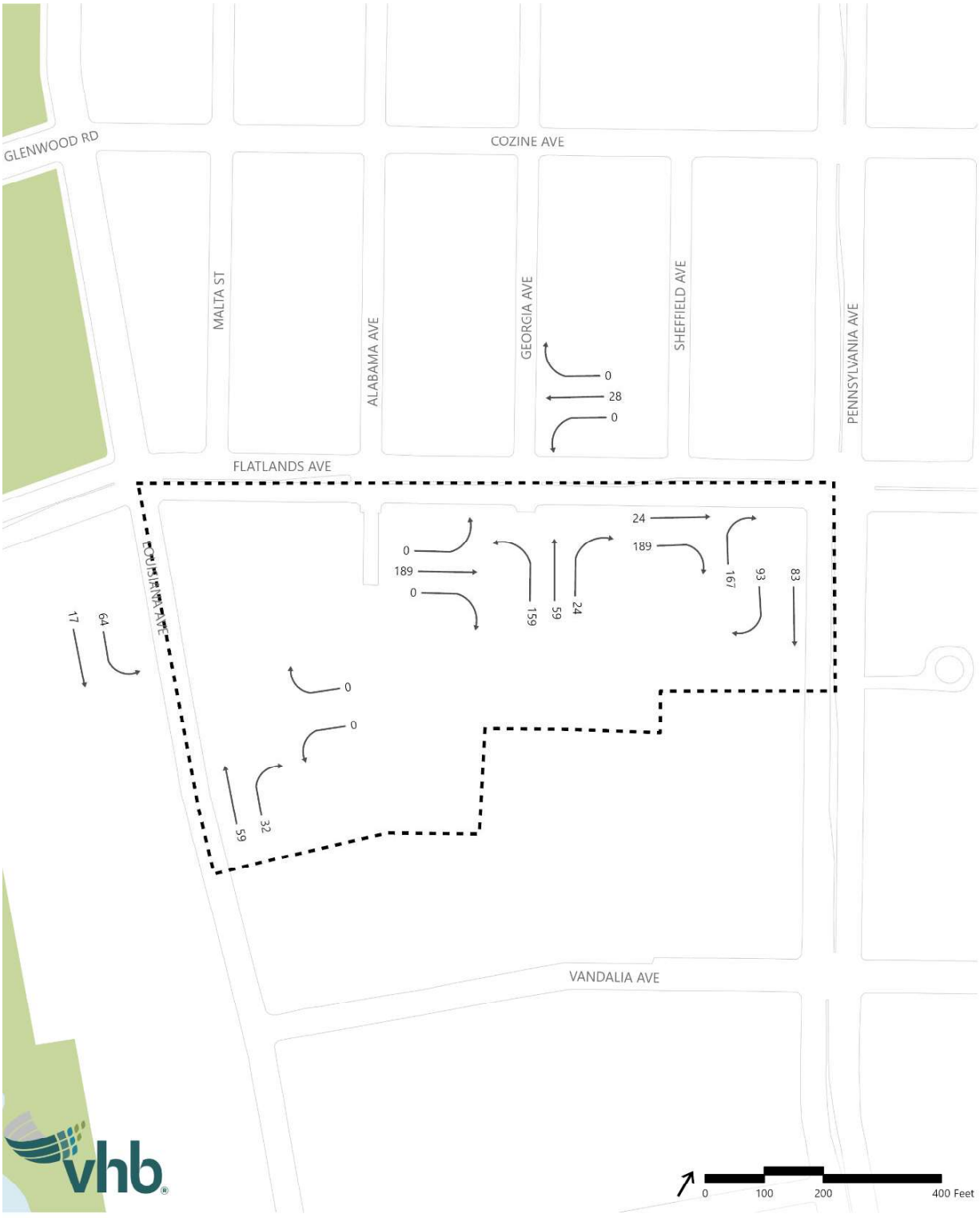
Figure 13-20 Project-Generated Vehicle Trips – Sunday Peak Hour (North Study Area)



Figure 13-21 Project-Generated Vehicle Trips – Sunday Peak Hour (South Study Area)



Figure 13-22 Project-Generated Vehicle Trips – Sunday Peak Hour (Project Area)



Level 2 Screening Results

Traffic

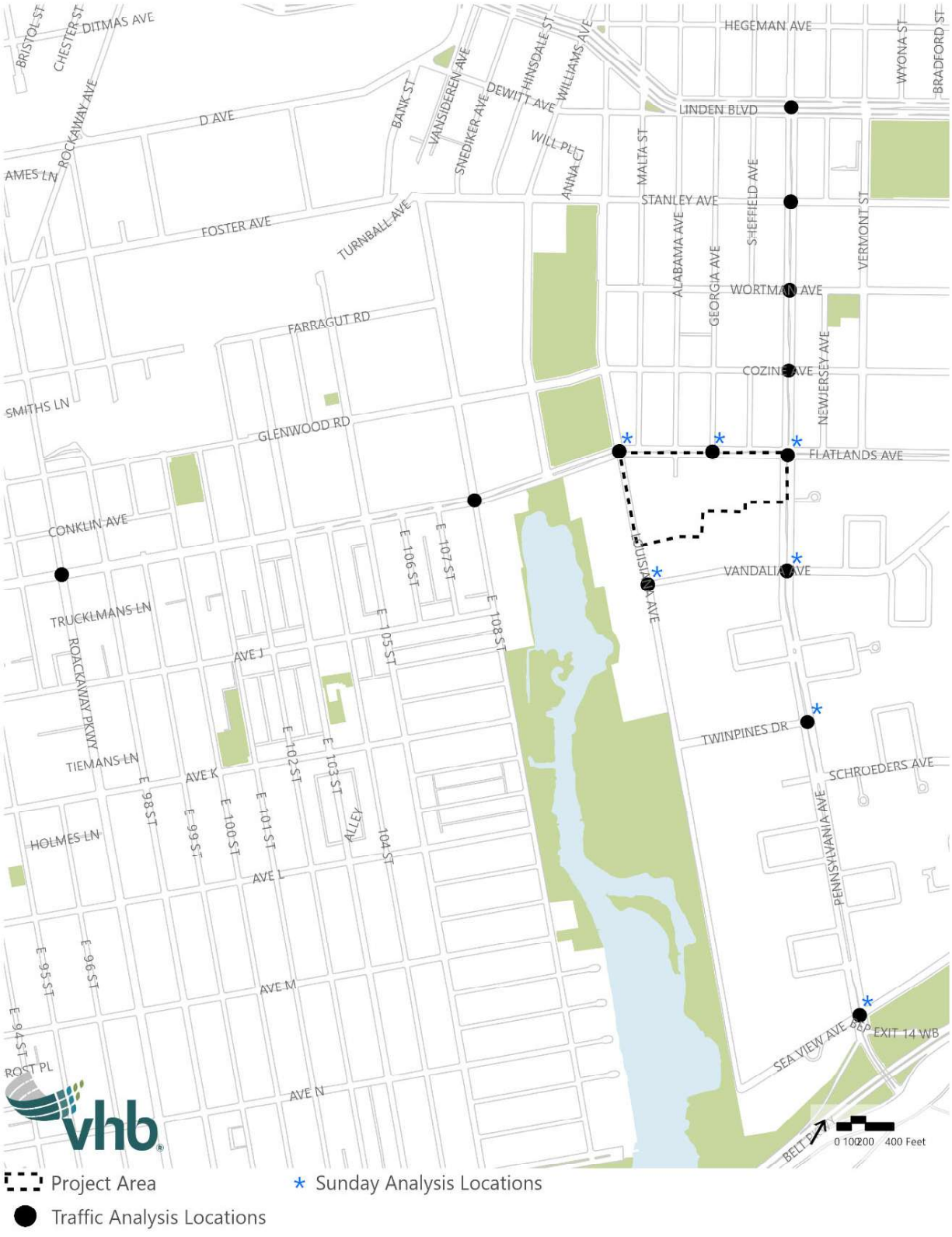
Based on the vehicular traffic assignments described above, the following 13 intersections were identified for analysis for the weekday AM, midday, PM, and Saturday peak hours, and are shown in **Figure 13-23**:

- Pennsylvania Avenue and Seaview Avenue
- Pennsylvania Avenue and Twin Pines Drive
- Pennsylvania Avenue and Vandalia Avenue
- Pennsylvania Avenue and Flatlands Avenue
- Pennsylvania Avenue and Cozine Avenue
- Pennsylvania Avenue and Wortman Avenue
- Pennsylvania Avenue and Stanley Avenue
- Pennsylvania Avenue and Linden Boulevard
- Louisiana Avenue and Vandalia Avenue
- Louisiana Avenue and Flatlands Avenue
- Flatlands Avenue and Georgia Avenue/Site Driveway
- Flatlands Avenue and East 108th Street
- Flatlands Avenue and Rockaway Parkway

During the Sunday peak hour, which coincides with church services, a subset of seven intersections that experience an increase in traffic due to church services are analyzed. These are intersections closest to the church and the Development Site which would be expected to be the focus of the greatest potential issues between church-related traffic and project-generated traffic. These seven intersections include Pennsylvania Avenue with Seaview Avenue, Twin Pines Drive, Vandalia Avenue, and Flatlands Avenue, Louisiana Avenue with Flatlands Avenue and Vandalia Avenue, and the intersection of Flatlands Avenue and Georgia Avenue/Site Driveway.

The proposed driveways along Pennsylvania Avenue, Louisiana Avenue, and at the intersection of Flatlands Avenue and Sheffield Avenue were also included for analysis in the With-Action condition.

Figure 13-23 Traffic Analysis Locations



Subways

Based on the subway transit assignments, an analysis of the Rockaway Parkway (L subway line) station is needed for the weekday AM and PM peak hours. The three station fare control areas that will be used be project-generated trips will be analyzed in addition to a line-haul analysis for the L subway line. The study area subway and bus options are shown in **Figure 13-24**.

Buses

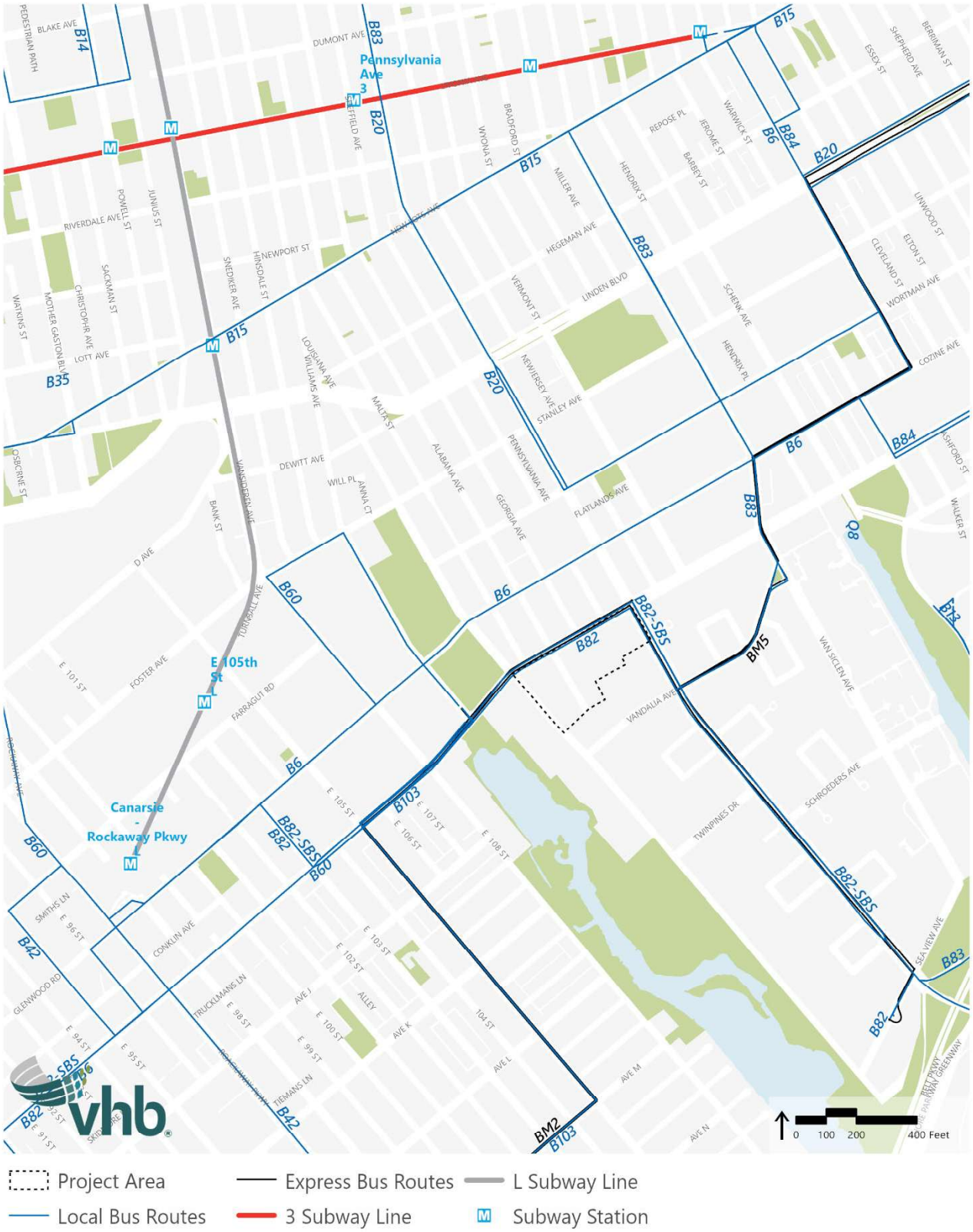
As shown in **Table 13-12**, three bus routes, the B82, B82 SBS, and B83, are expected to experience 50 or more new passenger trips in one direction in at least one peak hour, as a result of project-generated bus trips and bus-to-subway trips, and will therefore require further analysis.

Table 13-12 Project-Generated Bus Trips By Route

		Weekday AM Peak Hour			Weekday PM Peak Hour		
Bus Route	**Direction**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
B6 (west of site)	EB	21	0	21	46	0	46
	WB	0	48	48	0	35	35
B60	EB	21	0	21	46	0	46
	WB	0	48	48	0	35	35
B82	EB	147	0	147	325	0	325
	WB	0	341	341	0	238	238
B82 SBS	EB	94	0	94	325	0	325
	WB	0	219	219	0	153	153
B83 (north of site)	NB	0	127	127	0	88	88
	SB	54	0	54	121	0	121
B103	EB	21	0	21	46	0	46
	WB	0	48	48	0	35	35

Note: Highlighted cells denote 50 or more incremental trips per direction

Figure 13-24 Transit Study Area



Pedestrians

Based on the pedestrian assignments described above, detailed pedestrian level of service analyses are needed at the following pedestrian elements (crosswalks, corners, and sidewalks):

Crosswalk and Corners

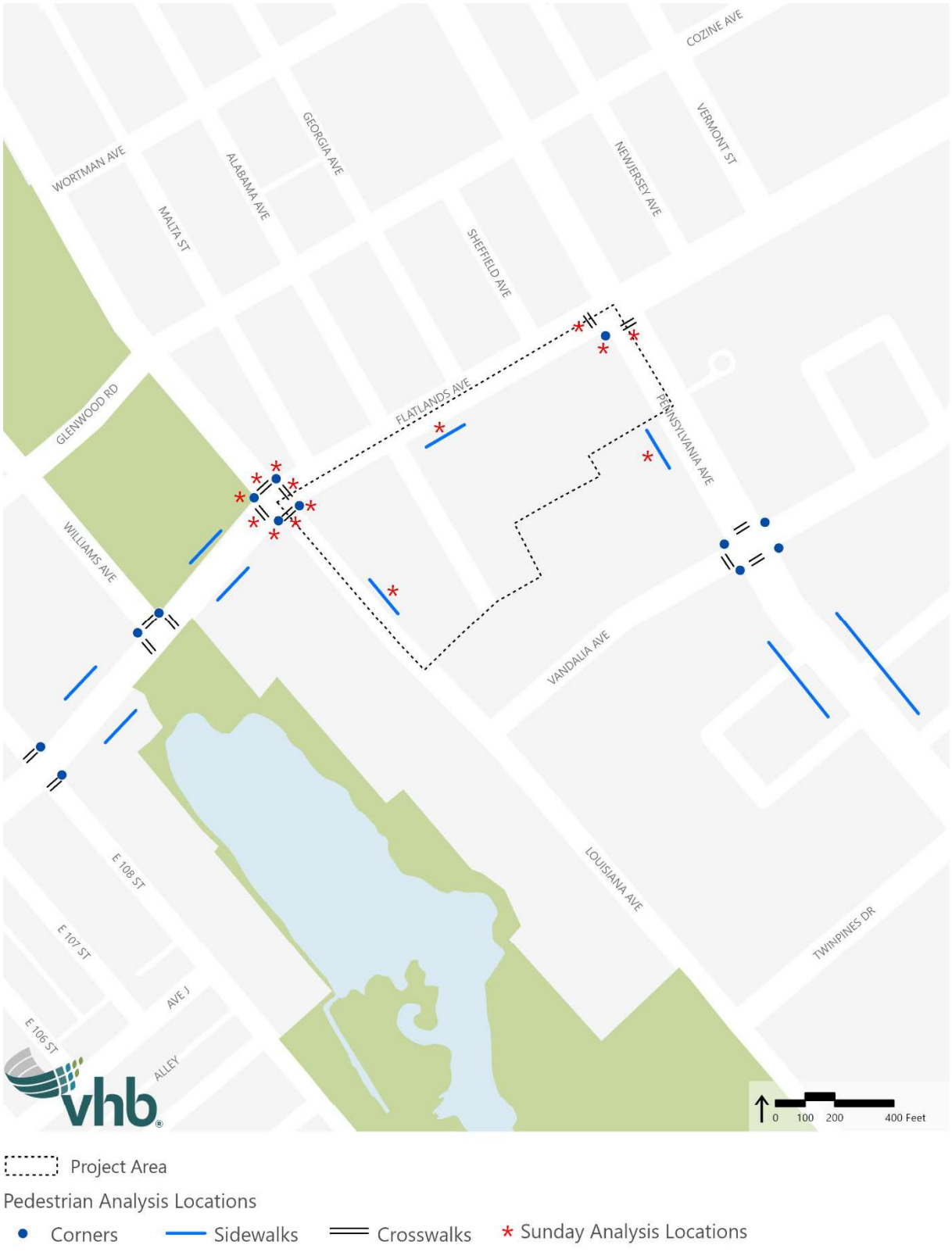
- Pennsylvania Avenue and Flatlands Avenue – south and west crosswalks, and southwest corner
- Pennsylvania Avenue and Vandalia Avenue – north, south and west crosswalks, and all corners
- Flatlands Avenue and Louisiana Avenue – all crosswalks and corners
- Flatlands Avenue and Williams Avenue – all crosswalks and corners
- Flatlands Avenue and East 108th Street – north and south crosswalks, and northeast and southeast corners

Sidewalks

- South sidewalks of Flatlands Avenue between Pennsylvania and Louisiana Avenues
- North and south sidewalks of Flatlands Avenue between Louisiana and Williams Avenues
- North and south sidewalks of Flatlands Avenue between Williams Avenue and East 108th Street
- West sidewalk of Pennsylvania Avenue between Flatlands and Vandalia Avenues
- East and west sidewalks of Pennsylvania Avenue between Vandalia Avenue and Twin Pine Drive
- East sidewalk of Louisiana Avenue between Flatlands and Vandalia Avenues

The pedestrian study area is shown in **Figure 13-25**. Pedestrian analyses will be performed at these elements for the weekday AM, midday, PM, and Saturday peak hours. The sidewalk elements along the Development Site's Flatlands Avenue, Pennsylvania Avenue, and Louisiana Avenue frontages, and crosswalks and corner elements at the intersection of Pennsylvania Avenue and Flatlands Avenue, and Flatlands Avenue and Louisiana Avenue will also be analyzed for the Sunday peak hour (coinciding with church services).

Figure 13-25 Pedestrian Analysis Locations



Detailed Analysis Methodology

This section describes the methodology used for the detailed traffic, subway, bus, and pedestrian analyses.

Traffic

The operation of all signalized and unsignalized intersection analysis locations were assessed using Synchro software which are based on methodologies presented in the *Highway Capacity Manual (HCM)*. The HCM procedures evaluate the levels of service (LOS) for signalized and unsignalized intersections using average stop control delay, in seconds per vehicle, as described below.

- LOS A describes operations with very low delays, i.e., 10.0 seconds or less per vehicle. This occurs when signal progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.
- LOS B describes operations with delays in excess of 10.0 seconds up to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.
- LOS C describes operations with delays in excess of 20.0 seconds up to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The number of vehicles stopping is noticeable at this level, although many still pass through the intersection without stopping.
- LOS D describes operations with delays in excess of 35.0 seconds up to 55.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.
- LOS E describes operations with delays in excess of 55.0 seconds up to 80.0 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios.
- LOS F describes operations with delays in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with cycle failures. Poor progression and long cycle lengths may also contribute to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

Based on the *CEQR Technical Manual* guidelines, LOS A, B, and C are considered clearly acceptable conditions, LOS D is generally considered tolerably acceptable in dense urban environments, and LOS E and F indicate congestion. These guidelines are applicable to individual traffic movements and overall intersection levels of service.

For unsignalized intersections, delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line: LOS A describes operations with very low delay, i.e., 10.0 seconds or less per vehicle; LOS B describes operations with delays in excess of 10.0 seconds up to 15.0 seconds; LOS C has delays in excess of 15.0 seconds up to 25.0 seconds; LOS D, excess of 25.0 seconds up to 35.0 seconds

per vehicle; LOS E, excess of 35.0 seconds up to 50.0 seconds per vehicle. LOS F describes operation with delays in excess of 50.0 seconds per vehicle. This condition exists when there are insufficient gaps of suitable size in a major vehicular traffic stream to allow side street traffic to cross safely. Based on *CEQR Technical Manual* guidelines, LOS A, B, C, and D are considered acceptable for unsignalized intersections.

Significant Impact Criteria

The assessment of potential significant traffic impacts of a Proposed Project is based on significant impact criteria defined in the *CEQR Technical Manual*. If a lane group in the future With-Action condition is within acceptable LOS A, B, C, or D, the impact is not considered significant.

For a lane group at With-Action LOS E, an increase in projected delay of 5.0 or more seconds compared to the No-Action condition is considered a significant impact. For a lane group at With-Action LOS F, an increase in projected delay of 4.0 or more seconds compared to the No-Action condition is considered a significant impact. For unsignalized intersections, for the minor street to generate a significant impact, a total approach volume of 90 passenger car equivalents (PCEs) must be identified in the With-Action condition in any peak hour.

Parking

The parking analysis identifies the extent to which off-street parking is available and utilized under existing and future conditions. It takes into consideration anticipated changes in area parking supply and provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from additional demand generated by the Proposed Project. This analysis typically encompasses a study area within a quarter mile of the Development Site. If the analysis concludes that there would be a shortfall in parking within the quarter-mile study area, the study area may be extended to a half-mile to identify additional parking supply.

For a Development Site located outside of the New York City Central Business District (CBD) areas, such as this project, a parking shortfall that exceeds the number of available on-street and off-street parking spaces within a quarter-mile of the Development Site may be considered significant. Additional factors, such as the availability and extent of transit in the area and the patterns of automobile usage by area residents, could be considered to determine the significance of the identified parking shortfall. If there is an adequate parking supply within a half-mile of the Development Site, the projected parking shortfall may not be considered significant.

Transit

The *CEQR Technical Manual* provides methodologies to assess several components of transit operations including the line-haul capacities of bus and subways lines, and the capacity of subway station circulation elements including stairways, escalators, passageway, and fare controls (turnstiles, high entry/exit turnstiles [HEETs], and high exit turnstiles [HXTs]).

Subways

Subway Station Elements

Subway station elements are assessed based on the ratio of passenger volume and the capacity of the element (the v/c ratio). The v/c ratio criteria are used to determine the levels of service which are shown in **Table 13-13**. LOS A and LOS B depict free flow and fluid flow conditions, respectively, at a subway station element. Station elements operating at LOS C still exhibit fluid flow, but pedestrian activities begin to become somewhat restricted. When conditions become crowded and there is restriction to walking speeds, the station element is considered to be operating at LOS D. At LOS E the station element is considered to be congested. There is shuffling and frequent interactions between pedestrians which result in some queueing. Severe congestion with constant queuing signifies that a station element is operating at LOS F.

Table 13-13 Level-of-Service Criteria for Subway Station Elements

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

Source: *CEQR Technical Manual*

Stairways and passageways are analyzed based on the width of the station element and the 15-minute pedestrian flow passing through. These analyses also take into account pedestrian surging resulting from an arriving train or platooning volumes from a major attraction such as a stadium or school (the effect of surging can reduce capacity by up to 25 percent) and friction from pedestrian interactions (the effect of friction can reduce capacity by up to 10 percent). Other station elements including escalators and turnstiles are measured against the operational capacities designated by New York City Transit (NYCT).

Significant Impact Criteria

Significant impacts to stairs and passageways are determined by the width increment threshold (WIT) between the No-Action and With-Action conditions for elements operating at v/c ratios greater than 1.0 in the With-Action condition. The WIT for significant impacts is detailed in **Table 13-14** below. If a stairway or passageway is significantly impacted, mitigation measures identified would need to restore the levels of service back to the No-Action levels of service or to a v/c ratio of 1.0. For escalators and turnstile elements, a With-Action v/c ratio of 1.0 or greater when the No-Action v/c ratio was less than 1.0 is considered a significant impact. For these elements where the No-Action v/c ratio is already in excess of 1.0, an incremental change in the v/c ratio of 0.01 would be considered a significant impact.

Table 13-14 Significant Impact Guidance for Stairs and Passageways

No-Action v/c Ratio	Width Increment Threshold (WIT) for Significant Impacts (Inches)	
	Stairway	Passageway
1.00 to 1.09	8.0	13.0
1.10 to 1.19	7.0	11.5
1.20 to 1.29	6.0	10.0
1.30 to 1.39	5.0	8.5
1.40 to 1.49	4.0	6.0
1.50 to 1.59	3.0	4.5
1.60 and up	2.0	3.0

Source: *CEQR Technical Manual*

Subway Line-Haul Capacity

Line-haul capacity analyses address the ability of a subway line to accommodate passenger loads at the maximum load point, or the point where the addition of project-generated passengers would be the highest. These analyses are needed when the With-Action increase in passengers surpasses the *CEQR Technical Manual* threshold. For subway cars, the threshold is five or more passengers per subway train car.

NYCT operates six different types of subway train cars with maximum peak period loading capacities ranging from 110 passengers to 175 passengers per car. The capacity of each car assumes full occupancy of all seats and approximately 3 square feet of standing room per passenger.

Significant Impact Criteria

For subway line-haul conditions, *CEQR Technical Manual* criteria specify that any increases in load levels that remain within practical capacity limits are generally not considered significant. However, significant adverse subway line-haul impacts can occur if a Proposed Project is expected to generate an increment averaging five or more riders per subway car on lines projected to carry loads at or exceeding guideline capacity. This is based on the general assumption that when subways are at or above practical capacity, the addition of even five or more riders per car is perceptible.

Buses

The operating conditions for bus service are measured in terms of the number of passengers carried per bus at the maximum load point for each route. This is determined by dividing the peak hour passenger count by the number of buses during that hour. The bus load levels are compared with NYCT loading guidelines of 54 passengers for a 40-foot standard bus and 85 passengers for a 60-foot articulated bus. The bus analyses focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the bus system is usually highest.

Significant Impact Criteria

According to the *CEQR Technical Manual* and NYCT guidelines, additional bus service along a route is recommended when load levels exceed maximum capacity at the route's maximum load point. A significant impact is considered at the route's maximum load point where an increase in bus load levels would exceed the maximum capacity. NYCT's general policy is to provide additional bus service where demand warrants increased service, considering fiscal and operational constraints.

Pedestrians

Pedestrian level of service standards are determined on the basis of walking speed, pedestrian spacing, and probabilities of pedestrian and vehicular conflict, and are assessed based on the methodologies presented in the *2010 Highway Capacity Manual* and the *CEQR Technical Manual*. These standards are primarily based on the space needs of people involved in various activities and are widely used for planning and design of facilities for pedestrians. Analysis of crosswalks, street corners, and sidewalks along key walking paths to and from the Development Site will be performed to assess the adequacy of these pedestrian elements.

To evaluate sidewalks, the pedestrian flow per unit width (p/ft/min) is calculated based on the pedestrian flow and the effective walkway width[3]. The analysis of sidewalk conditions should consider "platoon" flow as is considered more representative of pedestrian activities within New York City. Platooning occurs when pedestrians move in groups or "platoons" as a result of pedestrian metering from a traffic signal or from attractions such as subway stations or bus stops. The ratio of the walking speed[4] over the pedestrian flow per unit width determines the average pedestrian space (sf/p).

Crosswalk conditions are expressed as a measurement of the area available (the area consists of the crosswalk width multiplied by the crossing distance) and available pedestrian crossing time. The pedestrian flow is compared to the "time-space" available to determine the crosswalk level of service, which is expressed as square feet per pedestrian (sf/p). This analysis also takes account of pedestrian conflicts in the crosswalk with turning vehicles.

Similar to crosswalks, street corners must provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the other street or passing around the corner). The analysis applies a measure of time and space availability based on the area of the corner reservoir, pedestrian crossing time available, and the estimated time used by circulating pedestrians.

The level of service standards for pedestrian elements are based on the time and space available per pedestrian during the analysis period. Level of service grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. **Table 13-15** defines the level of service criteria for crosswalks, corner area, and sidewalk conditions, as per the *2010*

[3] The effective walkway width is the space along the walkway that pedestrians could use that is free of obstruction. This width also takes account of the "shy distance" (the space between pedestrians and the obstacle such as a wall or building façade).

[4] The typical average pedestrian walking speed specified in the *CEQR Technical Manual* is 4.4 feet per second (ft/s). For intersections with school crosswalks or that are located within the Senior Pedestrian Focus Areas, an average pedestrian walking speed of 3.3 ft/s is used.

HCM. The *CEQR Technical Manual* identifies acceptable levels of service in non-CBD areas (such as the area in this study) as LOS C or better, and mid-LOS D or better for CBD areas.

Table 13-15 Level-of-Service Criteria for Pedestrian Elements

LOS	Sidewalks (Platoon Flow)	Corner Reservoirs and Crosswalks
A	> 530 sf/p	> 60 sf/p
B	> 90 and ≤ 530 sf/p	> 40 and ≤ 60 sf/p
C	> 40 and ≤ 90 sf/p	> 24 and ≤ 40 sf/p
D	> 23 and ≤ 40 sf/p	> 15 and ≤ 24 sf/p
E	> 11 and ≤ 23 sf/p	> 8 and ≤ 15 sf/p
F	≤ 11 sf/p	≤ 8 sf/p

Significant Impact Criteria

The identification of significant pedestrian impacts is dependent on the area type (CBD or non-CBD) and is determined by the decrease of time and space available for pedestrians between the No-Action and With-Action conditions. The *CEQR Technical Manual* identifies significant impacts for the pedestrian sidewalk, crosswalk, and corner elements on a sliding scale detailed below. With-Action pedestrian level of service that is considered acceptable (LOS C or better in non-CBD areas, and mid-LOS D or better in CBD areas) would not have a potential for significant impacts.

For sidewalks, the assessment of potential significant impacts is based on a sliding-scale formula provided in the *CEQR Technical Manual*. Consideration as to whether the sidewalk being analyzed is in a CBD or non-CBD condition is necessary.

For sidewalks the formula used to determine the decrease in pedestrian space from the No-Action to With-Action condition that would trigger a significant impact is $Y \geq (X / 9.5) – 0.321$, where Y is the decrease in pedestrian space (sf/p) to be considered a potential significant impact and X is the No-Action pedestrian space (sf/p). If the decrease in pedestrian space is greater than Y and the With-Action level of service is considered to be unacceptable, the sidewalk is considered to be significantly impacted. **Table 13-16** provides a summary of the sliding-scale guidelines provided in the *CEQR Technical Manual*.

For corners and crosswalks, the assessment of potential significant impacts is also based on a sliding-scale formula provided in the *CEQR Technical Manual*. The formula used to determine the decrease in pedestrian space from the No-Action to With-Action condition that would trigger a significant impact is $Y \geq (X / 9.0) – 0.31$, where Y is the decrease in pedestrian space (sf/p) to be considered a potential significant impact and X is the No-Action pedestrian space (sf/p). If the decrease in pedestrian space is greater than Y and the With-Action level of service is considered to be unacceptable, the corner or crosswalk is considered to be significantly impacted. **Table 13-17** provides a summary of the sliding-scale guidelines provided in the *CEQR Technical Manual*.

Table 13-16 Significant Impact Criteria for Sidewalks - Non-CBD Areas

No-Action Ped Space (sf/p)	With-Action Ped Space Reduction (sf/p)	No-Action Ped Space (sf/p)	With-Action Ped Space Reduction (sf/p)
>44.3	With-Action Condition <40.0	24.5 to 25.3	≥ 2.3
43.5 to 44.2	≥ 4.3	23.5 to 24.4	≥ 2.2
42.5 to 43.4	≥ 4.2	22.6 to 23.4	≥ 2.1
41.6 to 42.4	≥ 4.1	21.6 to 22.5	≥ 2.0
40.6 to 41.5	≥ 4.0	20.7 to 21.5	≥ 1.9
39.7 to 40.5	≥ 3.9	19.7 to 20.6	≥ 1.8
38.7 to 39.6	≥ 3.8	18.8 to 19.6	≥ 1.7
37.8 to 38.6	≥ 3.7	17.8 to 18.7	≥ 1.6
36.8 to 37.7	≥ 3.6	16.9 to 17.7	≥ 1.5
35.9 to 36.7	≥ 3.5	15.9 to 16.8	≥ 1.4
34.9 to 35.8	≥ 3.4	15.0 to 15.8	≥ 1.3
34.0 to 34.8	≥ 3.3	14.0 to 14.9	≥ 1.2
33.0 to 33.9	≥ 3.2	13.1 to 13.9	≥ 1.1
32.1 to 32.9	≥ 3.1	12.1 to 13.0	≥ 1.0
31.1 to 32.0	≥ 3.0	11.2 to 12.0	≥ 0.9
30.2 to 31.0	≥ 2.9	10.2 to 11.1	≥ 0.8
29.2 to 30.1	≥ 2.8	9.3 to 10.1	≥ 0.7
28.3 to 29.1	≥ 2.7	8.3 to 9.2	≥ 0.6
27.3 to 28.2	≥ 2.6	7.4 to 8.2	≥ 0.5
26.4 to 27.2	≥ 2.5	6.4 to 7.3	≥ 0.4
25.4 to 26.3	≥ 2.4	<6.4	≥ 0.3

Source: 2021 CEQR Technical Manual

Table 13-17 Significant Impact Criteria for Corners and Crosswalks - Non-CBD Areas

No-Action Ped Space (sf/p)	With-Action Ped Space Reduction (sf/p)	No-Action Ped Space (sf/p)	With-Action Ped Space Reduction (sf/p)
>26.6	With-Action Condition <24.0		
25.8 to 26.6	≥ 2.6	14.1 to 14.9	≥ 1.3
24.9 to 25.7	≥ 2.5	13.2 to 14.0	≥ 1.2
24.0 to 24.8	≥ 2.4	12.3 to 13.1	≥ 1.1
23.1 to 23.9	≥ 2.3	11.4 to 12.2	≥ 1.0
22.2 to 23.0	≥ 2.2	10.5 to 11.3	≥ 0.9
21.3 to 22.1	≥ 2.1	9.6 to 10.4	≥ 0.8
20.4 to 21.2	≥ 2.0	8.7 to 9.5	≥ 0.7
19.5 to 20.3	≥ 1.9	7.8 to 8.6	≥ 0.6
18.6 to 19.4	≥ 1.8	6.9 to 7.7	≥ 0.5
17.7 to 18.5	≥ 1.7	6.0 to 6.8	≥ 0.4
16.8 to 17.6	≥ 1.6	5.1 to 5.9	≥ 0.3
15.9 to 16.7	≥ 1.5	< 5.1	≥ 0.2
15.0 to 15.8	≥ 1.4		

Source: 2021 CEQR Technical Manual

Vehicle and Pedestrian Safety

An evaluation of vehicular and pedestrian safety is necessary for locations within the traffic and pedestrian study areas that have been identified as high-crash locations, where five or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent three-year period for which data are available or at locations along a Vision Zero Priority Corridor or Intersection. For these locations, crash trends are identified to determine whether projected vehicular and pedestrian traffic would further impact safety at these locations. The determination of potential significant safety impacts depends on the type of area where the Proposed Project is located, traffic volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety are identified.

Existing Conditions

Traffic

Roadway Network

The Development Site abuts and is surrounded by three roadways in the East New York section of Brooklyn -- Flatlands Avenue, Pennsylvania Avenue, and Louisiana Avenue. Additionally, the Development Site is located near Vandalia Avenue, which extends parallel to Flatlands Avenue just to the south of the Development Site.

The key east-west roadway within the study area is Flatlands Avenue which features a center median that bisects traffic and generally consists of two travel lanes plus a parking lane in each direction with dedicated left turn lanes at selected intersections. The uses along Flatlands Avenue between Rockaway Parkway and Pennsylvania Avenue generally consists of single-story homes, cultural and institutional facilities, retail/commercial uses, and open space. Several bus routes travel along Flatlands Avenue including the B6, B82, and B103.

Pennsylvania Avenue, also referred to as Granville Payne Avenue to the east of the Development Site, is a key north-south roadway in this section of the borough and provides access to the Belt Parkway south of the Development Site and to the Jackie Robinson Parkway to the north. Pennsylvania Avenue generally consists of two travel lanes and a parking lane in each direction with dedicated left turn lanes at selected intersections. The sections of Pennsylvania Avenue south of Flatlands Avenue also feature dedicated bus-only lanes. Within the study area, Pennsylvania Avenue is characterized by low-rise commercial stores including auto body and fast-food establishments between Linden Boulevard and Flatlands Avenue. Between Flatlands Avenue and the Belt Parkway, Pennsylvania Avenue travels through mid-rise and high-rise residential developments including the Starrett City housing complex. Multiple bus routes travel along Pennsylvania Avenue, including the BM2, B82, B82 SBS, and the B83.

Louisiana Avenue runs parallel to Pennsylvania Avenue to the west of the Development Site and provides two-way traffic (generally one travel lane in each direction) with on-street parking from Glenwood Road to Seaview Avenue.

Approximately one-half mile to the north of the Development Site is a key intersection at Linden Boulevard and Pennsylvania Avenue. Linden Boulevard, also known as New York State Route 27, generally has three travel lanes in each direction in the mainline section, for a total of six lanes, with dedicated left turn lanes at selected intersections. On-street parking is permitted along the Linden Boulevard service road, which is generally one travel lane in each direction.

Rockaway Parkway is a north-south roadway located approximately 3/4-mile west of the Development Site. Rockaway Parkway generally consists of one travel lane with parking and a dedicated left turn lane south of Flatlands Avenue. North of Flatlands Avenue, the roadway narrows and features one travel and one dedicated bus-only lane in each direction. The B42 bus route travels along Rockaway Parkway between the Rockaway Parkway L subway station and Canarsie Pier.

Traffic Volumes

Traffic counts were conducted in November 2020 for the weekday AM, midday, PM, and Saturday peak periods using manual intersection counts and 24-hour Automatic Traffic Recorder (ATR) machine counts during the COVID-19 pandemic. With guidance from NYC DOT and concurrence from DCP, these November 2020 data were adjusted based on historical traffic count data from NYC DOT's traffic database to reflect pre-pandemic levels based on a comparison of traffic volumes between normal pre-pandemic conditions and conditions during the pandemic. An adjustment factor of 1.16 was applied to the with-COVID count data during the weekday AM peak hour based on the comparison with the historical data. However, with-COVID traffic volumes for the weekday midday, PM, and Saturday peak hours were determined to be higher than or similar to the historical data.

Therefore no adjustments were applied for the these peak hours. These volumes were used along with observations of traffic conditions to determine levels of service for the weekday peak hours of 7:30 AM to 8:30 AM, 1:00 PM to 2:00 PM, 4:00 PM to 5:00 PM, and Saturday 2:45 to 3:45 PM.

Due to the pandemic, the CCC church services were held remotely during the November 2020 counts and Sunday peak period counts were not conducted. The CCC resumed in-person services in September 2021, and manual intersection counts and 24-hour ATR machine counts were conducted during the Sunday peak period in September 2021 for the set of seven intersections that experience an increase in traffic due to church services. As church services have not returned to full occupancy, the traffic volumes were adjusted to develop full occupancy, pre-pandemic traffic volumes. An online travel survey was conducted to identify the travel patterns of the CCC's congregation, and used to adjust the September 2021 existing traffic count data, with guidance from NYC DOT and concurrence from DCP, to develop the Sunday peak traffic volume to be used in the analyses. These volumes were compared to the historical data and found to be higher than the historical pre-pandemic levels therefore no further adjustments were needed to the volume. The peak hour of 9:45 AM to 10:45 AM was identified based on the church service times (services are held at 8 AM and 10:30 AM), travel survey results, and historical traffic count data.

During the Sunday church service period, CCC staff are stationed at the Development Site driveways to monitor and direct church-related traffic. During the church service arrival period, traffic cones are implemented to prevent left turns into the site (only right turns are allowed) and the CCC staff direct motorists to areas where parking is available. Entry access for worshippers is provided through the driveways located along Flatlands Avenue while service staff could use the Louisiana Avenue driveway to enter. All three driveways are used for service dismissal to clear out the parking lots as quickly as possible so that arrivals for the next service would have spaces to park. Traffic cones are also implemented during service dismissal so that only right turn exits are allowed.

Northbound Pennsylvania Avenue traffic volumes between Linden Boulevard and Flatlands Avenue range from approximately 1,200 to 1,300 vph during the weekday AM peak hour and 830 vph to 1,000 vph during the weekday midday and PM, and Saturday peak hours. Northbound Pennsylvania Avenue volumes between Flatlands Avenue and the Belt Parkway Ramps range from approximately 1,350 to 1,500 vph during the weekday AM peak hour, and 780 to 910 vph during the weekday midday and PM, and Saturday peak hours. During the Sunday peak hour, northbound Pennsylvania Avenue traffic volumes between Flatlands Avenue and the Belt Parkway ramps range from approximately 930 to 1,130 vph.

Southbound Pennsylvania Avenue traffic volumes between Linden Boulevard and Flatlands Avenue range from approximately 780 to 865 vph during the weekday AM peak hour, 825 to 930 vph during the weekday midday peak hour, 1,025 to 1,130 vph during the weekday PM peak hour and 960 to 1,060 vph during the Saturday peak hour. Southbound Pennsylvania Avenue traffic volumes between Flatlands Avenue and the Belt Parkway Ramps range from approximately 705 to 925 vph during the weekday AM and midday, and Saturday peak hours, and 960 to 1,080 vph during the weekday PM peak hours. During the Sunday peak hour, southbound Pennsylvania Avenue traffic volumes between Flatlands Avenue and the Belt Parkway ramps range from approximately 830 to 960 vph.

Westbound Flatlands Avenue traffic volumes between Pennsylvania Avenue and Rockaway Parkway during the weekday AM and midday peak hours generally range from 585 to 730 vph. During the weekday PM peak hour, volumes range between 800 and 1,030 vph. During the Saturday peak hour, volumes generally range from 850 vph to about 1,200 vph. Approaching Pennsylvania Avenue, westbound Flatlands Avenue volumes are approximately 485 vph in the weekday AM peak hour, 680 vph in the weekday midday and PM peak hours and 840 vph in the Saturday peak hour. During the Sunday peak hour, westbound Flatlands Avenue traffic volumes along the Development Site frontage ranges from approximately 570 to 730 vph.

Eastbound Flatlands Avenue traffic volumes between Pennsylvania Avenue and Rockaway Parkway, during the weekday AM peak hour, range from 450 to 665 vph. During the midday peak hour, traffic volumes range from about 600 to 850 vph. During the weekday PM and Saturday peak hours, traffic volumes range from 700 to 1,050 vph. East of Pennsylvania Avenue, eastbound Flatlands Avenue traffic volumes are approximately 500 vph in the weekday AM peak hour, 700 vph in the weekday midday peak hour, and approximately 950 in the weekday PM and Saturday peak hours. Eastbound Flatlands Avenue traffic volumes are highest during the Sunday peak hour, traffic volumes along the Development Site frontage ranges from approximately 1,160 to 1,400 vph with the highest volumes near the driveway at Georgia Avenue.

Northbound Louisiana Avenue traffic volumes between Glenwood Road/Corzine Avenue and Seaview Avenue, during the weekday AM, midday, and PM peak hours, range from approximately 100 to 330 vph. During the Saturday peak hour, volumes are only slightly higher, ranging from 115 to 405 vph. During the Sunday peak hour, northbound Louisiana Avenue traffic volumes along the Development Site frontage range from approximately 545 to 650 vph.

Southbound Louisiana Avenue traffic volumes between Glenwood Road/Cozine Avenue and Flatlands Avenue are modest during the weekday AM and midday peak hours – approximately 50 vph. South of Flatlands Avenue, traffic volumes during these two peak hours range from 275 to 345 vph. During the weekday PM and Saturday peak hours, volumes are higher, ranging from 245 to 500 vph. During the Sunday peak hour, southbound Louisiana Avenue traffic volumes along the Development Site frontage ranges from approximately 350 to 415 vph.

Westbound Linden Boulevard traffic volumes approaching Pennsylvania Avenue are highest during the weekday AM peak hours (approximately 1785 vph). Traffic volumes along this approach are approximately 1,415 vph during the weekday midday and PM peak hours, and approximately 1,250 vph during the Saturday peak hour. In the eastbound direction, Linden Boulevard traffic approaching Pennsylvania Avenue is highest in the weekday PM peak hour (approximately 2,065 vph). Traffic volumes along this approach is approximately 1,040 vph during the weekday AM peak hour, and 1,390 to 1,475 vph during the weekday midday and Saturday peak hours.

Northbound Rockaway Parkway traffic volumes at the intersection with Flatlands Avenue range from approximately 340 to 485 vph during the weekday AM, midday, PM, and Saturday peak hours. Southbound Rockaway Parkway traffic volumes range from approximately 300 to 385 vph during the same four traffic analysis peak hours.

Vandalia Street, to the south of the Development Site between Pennsylvania Avenue and Louisiana Avenue, carries traffic volumes of 100 to 150 vph in each direction on this basic residential street. Traffic volumes along westbound Vandalia Avenue are highest in the Sunday peak hour (approximately 320 vph) but are similar to other peak hours in the eastbound direction.

Existing traffic volumes are shown in **Figure 13-26** through **Figure 13-33**.

Figure 13-26 Existing Traffic Volumes – Weekday AM Peak Hour (North Study Area)



Figure 13-27 Existing Traffic Volumes – Weekday AM Peak Hour (South Study Area)



Figure 13-28 Existing Traffic Volumes – Weekday Midday Peak Hour (North Study Area)



Figure 13-29 Existing Traffic Volumes – Weekday Midday Peak Hour (South Study Area)



Figure 13-30 Existing Traffic Volumes – Weekday PM Peak Hour (North Study Area)



Figure 13-31 Existing Traffic Volumes – Weekday PM Peak Hour (South Study Area)



Figure 13-32 Existing Traffic Volumes – Saturday Peak Hour (North Study Area)



Figure 13-33 Existing Traffic Volumes – Saturday Peak Hour (South Study Area)

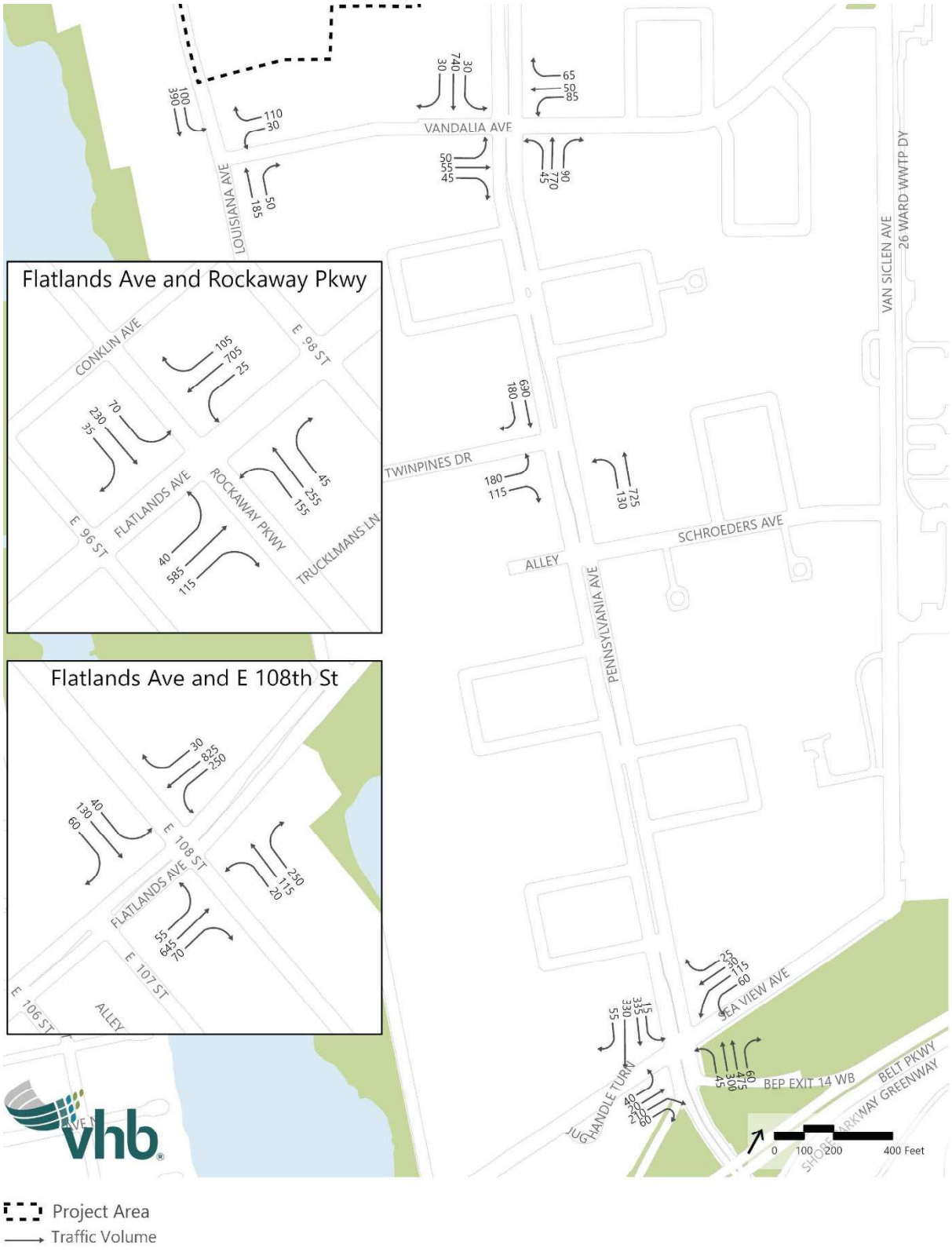


Figure 13-34 Existing Traffic Volumes – Sunday Peak Hour



Levels of Service

Table 13-18 and **Table 13-19** provide an overview of the levels of service that characterize existing "overall" intersection conditions and individual traffic movements, respectively, during the weekday AM, midday, PM, Saturday, and Sunday peak hours. Detailed existing traffic levels of service are provided in **Table 13-20** for the weekday and Saturday peak hours, and **Table 13-21** for the Sunday peak hour.

Table 13-18 Year 2020 Existing Traffic Levels of Service Summary – Overall Intersections

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
Intersections at Overall LOS A/B/C	11	12	11	11	4
Intersections at Overall LOS D	1	1	1	2	2
Intersections at Overall LOS E	1	0	1	0	0
Intersections at Overall LOS F	0	0	0	0	1

Note: Includes 12 signalized intersections and 1 unsignalized intersection for the weekday and Saturday peak hours, and 6 signalized intersections and 1 unsignalized intersection for the Sunday peak hour

Table 13-19 Year 2020 Existing Traffic Level of Service Summary – Traffic Movements

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
Traffic Movements at LOS A/B/C	48	54	45	58	31
Traffic Movements at LOS D	28	25	31	23	11
Traffic Movements at LOS E	10	9	14	9	3
Traffic Movements at LOS F	6	5	3	2	5
Number of Individual Traffic Movements	92	93	93	92	50

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left turn movements. The Sunday peak hour analysis addressed a subset of seven out of the 13 traffic analysis locations.

Table 13-20 Year 2020 Existing Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS																	
Pennsylvania Avenue and Seaview Avenue																	
Seaview Avenue	EB	LT	0.26	40.3	D	LT	0.18	28.9	C	LT	0.22	36.0	D	LT	0.15	17.3	B
		R	0.64	49.9	D	R	0.46	33.1	C	R	0.84	57.7	E	R	0.57	24.8	C
	WB	LTR	0.56	38.4	D	LTR	0.46	35.3	D	LTR	0.50	36.2	D	LTR	0.54	24.1	C
Pennsylvania Avenue	NB	L	0.56	61.3	E	L	0.41	56.8	E	L	0.29	55.6	E	L	0.37	40.4	D
		T	0.78	33.1	C	T	0.44	22.1	C	T	0.41	21.4	C	T	0.58	28.4	C
	SB	L	0.21	72.8	E	L	0.22	70.9	E	L	0.20	50.2	D	L	0.13	52.3	D
		TR	0.59	34.9	C	TR	0.59	27.7	C	TR	0.70	12.2	B	TR	0.73	33.3	C
Shore Parkway Westbound Off-Ramp	NB	TR	0.65	26.0	C	TR	0.33	19.9	B	TR	0.37	20.3	C	TR	0.58	27.1	C
Overall Intersection[2]		-	-	**34.3**	**C**	-	-	**27.1**	**C**	-	-	**24.7**	**C**	-	-	**28.9**	**C**
Pennsylvania Avenue and Twin Pines Drive																	
Twin Pines Drive	EB	LR	0.27	30.5	C	LR	0.61	37.7	D	LR	0.68	41.4	D	LR	0.52	24.1	C
Pennsylvania Avenue	NB	L	0.59	8.7	A	L	0.47	15.7	B	L	0.59	42.1	D	L	0.53	18.9	B
		T	0.77	8.1	A	T	0.43	10.6	B	T	0.38	28.8	C	T	0.50	7.7	A
	SB	T	0.40	18.5	B	T	0.44	5.1	A	T	0.49	8.5	A	T	0.43	6.5	A
		R	0.16	15.8	B	R	0.26	4.8	A	R	0.26	6.2	A	R	0.36	5.9	A
Overall Intersection[2]		-	-	**12.6**	**B**	-	-	**12.5**	**B**	-	-	**21.7**	**C**	-	-	**10.3**	**B**

Table 13-20 Year 2020 Existing Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Vandalia Avenue																	
Vandalia Avenue	EB	LTR	0.27	38.0	D	LTR	0.40	44.0	D	LTR	0.39	42.5	D	LTR	0.37	25.0	C
	WB	LTR	0.68	46.5	D	LTR	0.70	48.3	D	LTR	0.77	54.9	D	LTR	0.59	31.0	C
Pennsylvania Avenue	NB	L	0.42	44.7	D	L	0.90	106.8	F	L	0.44	36.4	D	L	0.38	50.1	D
		T	0.86	10.6	B	T	0.46	7.3	A	T	0.53	13.8	B	T	0.66	30.2	C
		R	0.17	3.2	A	R	0.20	6.6	A	R	0.19	10.9	B	R	0.23	23.0	C
	SB	L	0.19	29.3	C	L	0.37	66.4	E	L	0.52	39.6	D	L	0.25	46.1	D
		T	0.43	17.1	B	T	0.46	35.8	D	T	0.57	18.7	B	T	0.57	36.5	D
		R	0.08	15.1	B	R	0.08	27.8	C	R	0.06	13.4	B	R	0.07	29.7	C
Overall Intersection[2]		-	-	**17.3**	**B**	-	-	**28.8**	**C**	-	-	**22.6**	**C**	-	-	**32.4**	**C**
Pennsylvania Avenue and Flatlands Avenue																	
Flatlands Avenue	EB	L	0.50	38.8	D	L	0.62	47.8	D	L	0.50	44.8	D	L	0.59	41.6	D
		T	0.39	35.3	D	T	0.56	38.5	D	T	0.73	43.3	D	T	0.61	28.4	C
		R	0.10	24.2	C	R	0.30	27.4	C	R	0.34	28.0	C	R	0.18	18.8	B
	WB	L	0.24	31.8	C	L	0.38	39.0	D	L	0.43	47.1	D	L	0.40	31.8	C
		T	0.43	36.2	D	T	0.51	37.4	D	T	0.59	39.2	D	T	0.70	30.6	C
		R	0.26	26.5	C	R	0.38	28.9	C	R	0.25	26.4	C	R	0.29	20.3	C
Pennsylvania Avenue	NB	L	0.88	39.5	D	L	0.46	45.1	D	L	0.72	36.0	D	L	0.93	67.4	E
		T	0.93	22.6	C	T	0.55	28.0	C	T	0.53	24.5	C	T	0.57	19.0	B
		R	0.20	8.9	A	R	0.29	23.2	C	R	0.33	23.7	C	R	0.36	15.4	B
	SB	L	0.74	62.0	E	L	0.63	38.3	D	L	0.58	23.4	C	L	0.98	64.9	E
		T	0.57	42.7	D	T	0.61	18.3	B	T	0.69	14.6	B	T	0.65	14.0	B
		R	0.35	40.1	D	R	0.39	15.0	B	R	0.50	13.9	B	R	0.65	18.6	B
Overall Intersection[2]		-	-	**33.0**	**C**	-	-	**30.6**	**C**	-	-	**28.9**	**C**	-	-	**28.5**	**C**

Table 13-20 Year 2020 Existing Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Cozine Avenue																	
Cozine Avenue	EB	LTR	0.86	55.7	E	LTR	0.83	48.5	D	LTR	0.90	58.3	E	LTR	1.03	81.9	F
	WB	LTR	0.48	33.1	C	LTR	0.53	34.6	C	LTR	0.61	36.8	D	LTR	0.83	44.6	D
Pennsylvania Avenue	NB	L	0.43	9.2	A	L	0.30	9.2	A	L	0.27	11.6	B	L	0.38	8.7	A
		TR	0.76	13.4	B	TR	0.58	9.0	A	TR	0.52	10.3	B	TR	0.47	5.7	A
	SB	L	0.41	18.0	B	L	0.26	6.8	A	L	0.29	8.7	A	L	0.26	5.3	A
		TR	0.59	10.6	B	TR	0.62	10.6	B	TR	0.66	16.2	B	TR	0.60	10.0	A
Overall Intersection[2]		-	-	**19.4**	**B**	-	-	**17.9**	**B**	-	-	**23.1**	**C**	-	-	**23.8**	**C**
Pennsylvania Avenue and Wortman Avenue																	
Wortman Avenue	EB	LTR	0.66	43.7	D	LTR	0.67	44.4	D	LTR	0.84	56.8	E	LTR	0.63	32.3	C
	WB	LTR	0.41	35.9	D	LTR	0.40	35.3	D	LTR	0.60	41.4	D	LTR	0.52	28.8	C
Pennsylvania Avenue	NB	L	0.60	81.5	F	L	0.55	57.9	E	L	0.55	57.3	E	L	0.49	35.4	D
		TR	0.91	16.9	B	TR	0.72	33.6	C	TR	0.61	28.7	C	TR	0.70	24.1	C
	SB	L	0.40	57.0	E	L	0.43	73.1	E	L	0.53	72.1	E	L	0.58	42.7	D
		TR	0.60	17.1	B	TR	0.66	9.4	A	TR	0.70	13.2	B	TR	0.77	26.4	C
Overall Intersection[2]		-	-	**23.0**	**C**	-	-	**27.2**	**C**	-	-	**29.1**	**C**	-	-	**27.1**	**C**

Table 13-20 Year 2020 Existing Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Stanley Avenue																	
Stanley Avenue	EB	LTR	0.83	67.5	E	LTR	0.70	52.8	D	LTR	0.71	52.3	D	LTR	0.71	37.2	D
	WB	LTR	0.79	61.1	E	LTR	0.78	57.2	E	LTR	0.83	65.0	E	LTR	0.91	55.1	E
Pennsylvania Avenue	NB	L	0.72	81.9	F	L	0.54	71.6	E	L	0.55	56.4	E	L	0.51	64.6	E
		TR	0.79	7.0	A	TR	0.61	5.8	A	TR	0.52	11.4	B	TR	0.64	9.9	A
	SB	L	0.25	39.7	D	L	0.46	49.3	D	L	0.48	59.6	E	L	0.44	25.6	C
		TR	0.59	35.2	D	TR	0.54	22.4	C	TR	0.64	15.9	B	TR	0.71	35.6	D
Overall Intersection[2]		-	-	**29.6**	**C**	-	-	**23.9**	**C**	-	-	**24.8**	**C**	-	-	**30.6**	**C**
Pennsylvania Avenue and Linden Boulevard																	
Linden Boulevard Main Line	EB	L	0.65	74.4	E	L	0.96	119.7	F	L	0.73	79.4	E	L	0.75	78.8	E
		T	0.54	36.7	D	T	0.67	39.5	D	T	0.97	59.9	E	T	0.73	32.9	C
	WB	L	0.84	101.6	F	L	0.87	105.3	F	L	0.83	95.4	F	L	0.92	107.4	F
		T	0.92	49.7	D	T	0.74	41.5	D	T	0.56	37.0	D	T	0.70	32.1	C
Pennsylvania Avenue	NB	L	1.05	81.0	F	L	1.02	84.6	F	L	0.98	96.6	F	L	1.00	69.3	E
		T	1.04	82.9	F	T	0.84	32.7	C	T	0.67	48.2	D	T	0.67	45.5	D
		R	0.21	46.4	D	R	0.38	21.2	C	R	0.32	42.6	D	R	0.35	44.0	D
	SB	L	0.85	79.2	E	L	0.72	56.9	E	L	0.66	50.5	D	L	0.62	38.5	D
		TR	0.77	43.9	D	TR	0.66	39.6	D	TR	0.79	44.4	D	TR	0.78	36.0	D
Linden Boulevard Eastbound Service Rd	EB	T	0.54	39.5	D	T	0.55	39.6	D	T	0.76	48.4	D	T	0.60	33.4	C
		R	0.37	27.7	C	R	0.43	28.8	C	R	0.48	30.1	C	R	0.44	23.7	C
Linden Boulevard Westbound Service Rd	WB	TR	0.91	66.7	E	T	1.02	88.9	F	T	1.05	93.6	F	TR	0.78	43.1	D
		-	-	-	-	R	0.19	32.3	C	R	0.17	31.9	C	-	-	-	-
Overall Intersection[2]		-	-	**56.7**	**E**	-	-	**49.3**	**D**	-	-	**56.1**	**E**	-	-	**39.9**	**D**

Table 13-20 Year 2020 Existing Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Louisiana Avenue and Vandalia Avenue																	
Vandalia Avenue	WB	LR	0.31	16.7	B	LR	0.36	21.9	C	LR	0.29	14.4	B	LR	0.35	17.7	B
Louisiana Avenue	NB	TR	0.30	13.3	B	TR	0.27	7.2	A	TR	0.27	9.6	A	TR	0.30	9.1	A
	SB	LT	0.47	11.2	B	LT	0.51	11.8	B	LT	0.71	16.3	B	LT	0.66	14.8	B
Overall Intersection[2]		-	-	**12.9**	**B**	-	-	**12.6**	**B**	-	-	**14.4**	**B**	-	-	**13.8**	**B**
Louisiana Avenue and Flatlands Avenue																	
Flatlands Avenue	EB	L	0.04	20.3	C	L	0.08	19.5	B	L	0.29	30.4	C	L	0.27	35.1	D
		T	0.42	22.8	C	T	0.54	25.0	C	T	0.63	27.1	C	T	0.69	28.9	C
		R	0.35	22.8	C	R	0.44	24.6	C	R	0.35	22.7	C	R	0.38	24.9	C
	WB	L	0.23	21.4	C	L	0.31	26.0	C	L	0.36	31.2	C	L	0.38	30.0	C
		TR	0.50	24.1	C	TR	0.41	22.5	C	TR	0.58	25.7	C	TR	0.89	38.2	D
Louisiana Avenue	NB	L	0.62	42.4	D	L	0.66	43.9	D	L	0.87	70.0	E	L	0.82	49.5	D
		TR	0.25	36.7	D	TR	0.27	37.1	D	TR	0.34	38.2	D	TR	0.39	28.7	C
	SB	L	0.04	28.8	C	L	0.02	29.0	C	L	0.08	31.3	C	L	0.12	21.6	C
		TR	0.16	35.4	D	TR	0.12	34.8	C	TR	0.62	46.4	D	TR	0.64	35.8	D
Overall Intersection[2]		-	-	**26.8**	**C**	-	-	**27.7**	**C**	-	-	**33.0**	**C**	-	-	**34.8**	**C**
Flatlands Avenue and East 108th Street																	
Flatlands Avenue	EB	L	0.11	11.9	B	L	0.16	13.4	B	L	0.18	16.1	B	L	0.27	25.6	C
		TR	0.37	14.9	B	TR	0.49	17.7	B	TR	0.59	19.1	B	TR	0.62	23.2	C
	WB	L	0.31	14.9	B	L	0.41	21.1	C	L	0.71	39.9	D	L	0.92	57.8	E
		TR	0.40	15.4	B	TR	0.39	16.1	B	TR	0.51	17.4	B	TR	0.75	26.5	C
East 108th Street	NB	LTR	0.96	83.1	F	LTR	0.93	77.2	E	LTR	0.84	63.9	E	LTR	0.94	59.2	E
	SB	LTR	0.52	45.1	D	LTR	0.61	48.1	D	LTR	0.81	61.6	E	LTR	0.58	30.6	C
Overall Intersection[2]		-	-	**30.0**	**C**	-	-	**28.9**	**C**	-	-	**29.5**	**C**	-	-	**34.4**	**C**

Table 13-20 Year 2020 Existing Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatlands Avenue and Rockaway Parkway																	
Flatlands Avenue	EB	L	0.22	35.6	D	L	0.23	33.4	C	L	0.30	42.6	D	L	0.27	35.5	D
		TR	0.58	34.6	C	TR	0.72	37.3	D	TR	0.85	45.5	D	TR	0.94	50.7	D
	WB	L	0.10	30.0	C	L	0.15	33.0	C	L	0.14	38.2	D	L	0.16	31.3	C
		TR	0.69	37.5	D	TR	0.60	33.6	C	TR	0.79	41.5	D	TR	0.96	52.2	D
Rockaway Parkway	NB	L	0.42	28.5	C	L	0.43	28.5	C	L	0.48	28.4	C	L	0.62	29.1	C
		TR	0.65	32.2	C	TR	0.45	27.8	C	TR	0.42	26.0	C	TR	0.51	22.3	C
	SB	LT	0.83	53.9	D	LT	0.66	43.8	D	LT	0.69	43.3	D	LT	0.94	64.3	E
		R	0.35	34.9	C	R	0.28	34.4	C	R	0.35	34.8	C	R	0.19	26.9	C
Overall Intersection[2]		-	-	**37.8**	**D**	-	-	**35.0**	**D**	-	-	**40.2**	**D**	-	-	**47.0**	**D**
UNSIGNALIZED INTERSECTIONS																	
Flatlands Avenue and Georgia Avenue																	
Flatlands Avenue	EB	LTR	-	1.3	A	LTR	-	1.2	A	LTR	-	1.6	A	LTR	-	1.1	A
	WB	L	-	0.0	A	L	-	0.0	A	L	-	0.0	A	L	-	0.0	A
		TR	-	0.0	A	TR	-	0.0	A	TR	-	0.0	A	TR	-	0.0	A
Overall Intersection[2]		-	-	**0.3**	**A**	-	-	**0.3**	**A**	-	-	**0.4**	**A**	-	-	**0.3**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Table 13-21 Year 2020 Existing Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS					
Pennsylvania Avenue and Seaview Avenue					
Seaview Avenue	EB	LT	0.07	16.3	B
		R	0.41	21.1	C
	WB	LTR	0.28	18.9	B
Pennsylvania Avenue	NB	L	0.29	39.9	D
		T	1.00	64.6	E
	SB	L	0.07	53.6	D
		TR	0.91	44.3	D
Shore Parkway Westbound Off-Ramp	NB	TR	0.42	24.3	C
Overall Intersection[2]		-	-	**42.0**	**D**
Pennsylvania Avenue and Twin Pines Drive					
Twin Pines Drive	EB	LR	0.34	20.7	C
Pennsylvania Avenue	NB	L	1.05	90.9	F
		T	0.64	14.6	B
	SB	T	0.54	5.3	A
		R	0.26	3.6	A
Overall Intersection[2]		-	-	**18.0**	**B**
Pennsylvania Avenue and Vandalia Avenue					
Vandalia Avenue	EB	LTR	0.23	22.8	C
	WB	LTR	0.40	26.1	C
Pennsylvania Avenue	NB	L	0.98	101.3	F
		T	0.67	35.5	D
		R	0.18	28.1	C
	SB	L	0.11	39.9	D
		T	0.68	28.8	C
		R	0.37	24.8	C
Overall Intersection[2]		-	-	**34.9**	**C**

Table 13-21 Year 2020 Existing Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Flatlands Avenue					
Flatlands Avenue	EB	L	1.02	78.4	E
		T	0.63	29.2	C
		R	0.89	46.3	D
	WB	L	0.36	29.0	C
		T	0.36	24.4	C
		R	0.25	19.8	B
Pennsylvania Avenue	NB	L	1.00	76.6	E
		T	0.61	17.4	B
		R	0.28	11.3	B
	SB	L	0.80	53.9	D
		T	0.57	27.5	C
		R	0.55	32.9	C
Overall Intersection[2]		-	-	**37.1**	**D**
Louisiana Avenue and Vandalia Avenue					
Vandalia Avenue	WB	LR	0.72	27.3	C
Louisiana Avenue	NB	TR	0.38	9.9	A
	SB	LT	0.48	11.3	B
Overall Intersection[2]		-	-	**15.8**	**B**
Louisiana Avenue and Flatlands Avenue					
Flatlands Avenue	EB	L	0.10	20.7	C
		T	0.78	32.3	C
		R	0.76	51.8	D
	WB	L	0.49	35.3	D
		TR	0.53	25.6	C
Louisiana Avenue	NB	L	0.85	53.7	D
		TR	1.24[3]	160.0	F
	SB	L	1.45[3]	258.8	F
		TR	0.70	39.4	D
Overall Intersection[2]		-	-	**82.7**	**F**

Table 13-21 Year 2020 Existing Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS
UNSIGNALIZED INTERSECTIONS					
Flatlands Avenue and Georgia Avenue/Site Driveway					
Flatlands Avenue	EB	LTR	-	4.2	A
	WB	L	-	0.0	A
		TR	-	0.0	A
Site Driveway	NB	LTR	-	73.5	F
Overall Intersection[2]		-	-	**9.9**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] The movement v/c ratio exceeds 1.05 due to demand generated by existing CCC church traffic, per consultation with NYC DOT

The summary overview of existing conditions indicates that:

- In the weekday AM peak hour, one intersection operates at overall LOS E or F. "Overall" LOS E or F means that serious congestion exists – either one specific traffic movement has severe delays or two or more of the specific traffic movements at the intersection are at LOS E or F with significant delays (the overall intersection level of service is a weighted average of all individual traffic movements). Sixteen individual traffic movements out of 92 movements analyzed are at LOS E or F (e.g., left turns from one street to another, through traffic on one street passing through the intersection, etc.).
- In the weekday midday peak hour, no intersections operate at overall LOS E or F, and 14 out of 93 individual traffic movements operate at LOS E or F.
- In the weekday PM peak hour, one intersection operates at overall LOS E or F, and 17 out of 93 individual traffic movements operate at LOS E or F.
- In the Saturday peak hour, no ~~intersection~~intersections operate at overall LOS E or F, and 11 out of 92 individual traffic movements operate at LOS E or F.
- In the Sunday peak hour, one intersection operates at overall LOS E or F, and eight out of 50 individual traffic movements operate at LOS E or F.

Traffic movements operating at unacceptable levels of service (LOS E or F) are listed below. The majority of these movements are left and right turns from the key roadways in the area (e.g., Pennsylvania Avenue and Flatlands Avenue) or along the minor street approach along these key roadways.

- Pennsylvania Avenue and Seaview Avenue
  - Eastbound Seaview Avenue right turn movement (weekday PM)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, and PM)
  - Northbound Pennsylvania Avenue through movement (Sunday)
  - Southbound Pennsylvania Avenue left turn movement (weekday AM and midday)
- Pennsylvania Avenue and Twin Pines Drive
  - Northbound Pennsylvania Avenue left turn movement (Sunday)

- Pennsylvania Avenue and Vandalia Avenue
  - Northbound Pennsylvania Avenue left turn movement (weekday midday and Sunday)
  - Southbound Pennsylvania Avenue left turn movement (weekday midday)
- Pennsylvania Avenue and Flatlands Avenue
  - Eastbound Flatlands Avenue left turn movement (Sunday)
  - Northbound Pennsylvania Avenue left turn movement (Saturday and Sunday)
  - Southbound Pennsylvania Avenue left turn movement (weekday AM and Saturday)
- Pennsylvania Avenue and Cozine Avenue
  - Eastbound Cozine Avenue approach (weekday AM, PM, and Saturday)
- Pennsylvania Avenue and Wortman Avenue
  - Eastbound Wortman Avenue approach (weekday PM)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, and PM)
  - Southbound Pennsylvania Avenue left turn movement (weekday AM, midday, and PM)
- Pennsylvania Avenue and Stanley Avenue
  - Eastbound Stanley Avenue approach (weekday AM)
  - Westbound Stanley Avenue approach (weekday AM, midday, PM, and Saturday)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, PM, and Saturday)
  - Southbound Pennsylvania Avenue left turn movement (weekday PM)
- Pennsylvania Avenue and Linden Boulevard
  - Eastbound Linden Boulevard Main Line left turn movement (weekday AM, midday, PM, and Saturday)
  - Eastbound Linden Boulevard Main Line through movement (weekday PM)
  - Westbound Linden Boulevard Main Line left turn movement (weekday AM, midday, PM, and Saturday)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, PM, and Saturday)
  - Northbound Pennsylvania Avenue through movement (weekday AM)
  - Southbound Pennsylvania Avenue left turn movement (weekday AM and midday)
  - Westbound Linden Boulevard Service Road shared through-right movement (weekday AM)
  - Westbound Linden Boulevard Service Road through movement (weekday midday and PM)
- Louisiana Avenue and Flatlands Avenue
  - Northbound Louisiana Avenue left turn movement (weekday PM)
  - Northbound Louisiana Avenue shared through-right movement (Sunday)
  - Southbound Louisiana Avenue left turn movement (Sunday)

- Flatlands Avenue and East 108th Street
  - Westbound Flatlands Avenue left turn movement (Saturday)
  - Northbound East 108th Street approach (weekday AM, midday, PM, and Saturday)
  - Southbound East 108th Street approach (weekday PM)
- Flatlands Avenue and Rockaway Parkway
  - Southbound Rockaway Parkway shared left-through movement (Saturday)
- Flatlands Avenue and Georgia Avenue/Site Driveway
  - Northbound Site Driveway approach (Sunday)

Parking

A detailed inventory of on-street parking within approximately a quarter mile of the Development Site was conducted on a typical weekday, Saturday, and Sunday when church is in service. Per the *CEQR Technical Manual,* the quarter-mile distance is considered an acceptable walking distance to and from parking.

On-street parking regulations, capacities and occupancies were inventoried for a quarter-mile radius on a block-by-block basis. The majority of streets within the study area have non-metered parking or "No Parking" restrictions at certain times due to street cleaning regulations or truck loading (i.e., No Parking 9:30 AM – 11 AM Monday and Thursday). Metered parking spaces are provided on the commercial shopping strip along Pennsylvania Avenue between Flatlands Avenue and Stanley Avenue, and along the minor streets approaching Pennsylvania Avenue. There are approximately 2,800 legal on-street parking spaces within the entire parking study area (with approximately 40 additional spaces available after school hours and during the weekends). On weekdays, approximately 74 percent of on-street parking spaces are occupied during the weekday AM and PM periods, 72 percent are occupied during the weekday midday period, 66 percent are occupied during the weekday overnight period, and 68 percent are occupied during the Saturday period.

Within the Development Site there are about 385 marked surface spaces on the western portion of the site surrounding the CCC, and approximately 350 to 440 unmarked spaces on the undeveloped eastern portion of the site. Existing on-site parking is mainly used during church services which typically occur on Tuesday evenings and Sunday mornings/midday; during other times, on-site parking is lightly utilized. During the Sunday peak hour (10 AM to 11 AM), the on-site parking demand is approximately 810 parking spaces. Approximately 86 percent of the approximately 2,840 on-street parking spaces are occupied during this time.

Subways

The closest subway stations are located over a half-mile from the Development Site. The East 105th Street subway station is the closest station and provides service to the L subway line, while the Rockaway Parkway station (service to the L subway line) and Pennsylvania Avenue station (service to the No. 3 subway line) are within ¾-mile to a mile from the Development Site. Because of this distance to the subway stations, it is expected that all subway trips

would rely on connecting bus service or shuttle service to access the site.[5] Based on the subway transit assignments, the Rockaway Parkway L subway station was identified for analysis during the weekday AM and PM commuter peak hours.

Subway Station Elements

The L subway line operates between the Canarsie-Rockaway Parkway station in Brooklyn and the Eighth Avenue /14th Street station in Manhattan. As discussed in the trip assignments, approximately 80 percent of project-generated subway trips are assumed to use the L subway line connecting to it via the B82 and B82 SBS bus route.

The Rockaway Parkway subway station operates with a single, center platform and was renovated in 2020 with ADA improvements and upgrades to the adjacent bus terminal which serves the B6, B42, B82, and B82 SBS bus routes. That station provides free transfers between the L subway line and the B42 bus route, as well westbound B6, B82, and B82 SBS bus routes.

There are three fare control areas located along Rockaway Parkway, to the Canarsie Municipal Parking Field, and along Glenwood Road; the Rockaway Parkway and Glenwood Road fare controls would be used by project-generated trips and were therefore identified for analysis. The Rockaway Parkway fare control area is split between two sets of turnstile arrays – a five-turnstile array at the station's entrance and a four-turnstile array leading to the bus terminal. The Glenwood Road fare control consists of one high entry-exit turnstile (HEET) and one high exit only turnstile (HXT).

Pedestrian counts were conducted at the subway station elements identified above in June 2021 during the COVID-19 pandemic and were adjusted to reflect pre-pandemic levels based on guidance provided by NYCT. **Table 13-22** shows the results of the level of service analyses at the analyzed fare control areas. The fare control areas generally operate at LOS A during the AM and PM peak hours with the exception of the Glenwood Road fare control which operates at LOS D during the AM peak hour. As part of the recent station renovations, there is no fence or other barrier behind the Glenwood Road fare control and the vast majority of subway riders were observed to not use the fare control and instead walk directly into the station without paying the fare. For the purposes of a conservative analysis, NYCT recommended that all subway riders accessing the station at this fare control be assumed to use the fare control. It is assumed that condition will be resolved in the future conditions.

[5] The Proposed Project would provide shuttle service to the East 105th Street L subway station and the Pennsylvania Avenue No. 3 line subway station. However, as requested by New York City Transit, for the purposes of a conservative transit analysis, it is assumed that all subway trips would use public buses to reach the subway stations.

Table 13-22 Existing Subway Station Levels of Service

Peak Hour	Control Element	Pedestrian Volume (15-min) In	Pedestrian Volume (15-min) Out	Surging Factor	Friction Factor	v/c Ratio	LOS
AM	Rockaway Parkway (Bus Terminal) 4 Turnstiles	91	32	0.75	0.90	0.08	A
	Rockaway Parkway (Station Entrance) 5 Turnstiles	411	51	0.75	0.90	0.24	A
	Glenwood Road 1 HEET, 1 HXT	292	23	0.75	0.90	1.30	D
PM	Rockaway Parkway (Bus Terminal) 4 Turnstiles	39	252	0.75	0.90	0.17	A
	Rockaway Parkway (Station Entrance) 5 Turnstiles	133	246	0.75	0.90	0.18	A
	Glenwood Road 1 HEET, 1 HXT	60	108	0.75	0.90	0.41	A

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes is 1.0.
Does not assume fare evasion at the Glenwood Road fare control per NYCT's guidance.

Subway Line-Haul

Existing subway line-haul conditions for the L subway line serving the Rockway Parkway station are summarized in **Table 13-23**. The analysis examines the peak hour load passing through the maximum load point of the subway line in the peak direction. The peak direction of travel on this line is northbound (Manhattan-bound) in the weekday AM peak hour (the maximum load point is at the Bedford Avenue station) and southbound (Brooklyn-bound) in the PM peak hour (the maximum load point is at the First Avenue station). The peak direction subway line operates at a v/c ratio of 0.99 during the AM peak hour and 1.02 during the PM peak hour; a v/c ratio of 1.0 signifies that the subway line haul is at capacity.

Table 13-23 Existing Subway Line-Haul Analysis

Peak Hour	Route and Direction	Max Load Point (leaving station)	Average Passengers Per Hour[1]	Average Trains Per Hour[1]	Average Cars Per Hour[1]	Average Passengers Per Car[1]	Guideline Passengers Per Car[2]	V/C Ratio[3]
AM	L – NB	Bedford Ave	22,633	19.8	158	143	145	0.99
PM	L – SB	First Ave	20,672	17.5	140	148	145	1.02

Notes:
[1] Based on 2017 – 2018 ridership and train throughput data from NYCT
[2] Guideline capacities are based on NYCT rush hour loading guidelines which vary by car type, line, and location based on frequency and type of service.
[3] Volume to guideline capacity ratio

Buses

The study area is served by several MTA-NYCT local bus routes – B6, B60, B82, B82 SBS (which operates on weekdays), B83, and B103 bus routes – and by the BM2 and BM5 express bus routes. Based on the trip assignments, three bus routes were identified for analysis – the B82, B82 SBS, and B83 – during the AM and PM commuter peak hours. The B82 and B82 SBS bus routes operate between Spring Creek and Coney Island, operating along Pennsylvania Avenue and Flatlands Avenue near the Development Site, and provide bus connections between the Development Site and the Rockaway Parkway L subway station. The B83 bus route operates between East New York (starting at the Broadway Junction subway station) and Gateway Center Mall and provides bus connections between the Development Site and the Pennsylvania Avenue No. 3 subway station.

Table 13-24 shows the existing number of buses and ridership at the maximum load points in each direction for the B82, B82 SBS and B83 bus routes in the AM and PM peak hours. Although the maximum load points for the B82 and B82 SBS bus route are located at stops in central sections of Brooklyn, since the vast majority of project-generated bus trips are bus-to-subway transfers, the maximum load points identified are bus stops between the Development Site and Rockaway Parkway L subway station. The bus routes analyzed currently operate with available capacity at their maximum load points during the peak hours analyzed.

Table 13-24 Existing Local Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point	Peak Hour Buses[1]	Peak Hour Passengers[2]	Average Passengers per Bus	Available Peak Hour Capacity[3]
AM	B82	EB	Glenwood Rd & Rockaway Pkwy	6	77	13	247
		WB	Glenwood Rd & E 102 St	7	132	19	246
	B82 SBS	EB	Glenwood Rd & Rockaway Pkwy	10	224	22	316
		WB	Flatlands Av & E 105 St	9	262	29	224
	B83	NB	Van Siclen Ave & Hegeman Ave	10	473	47	67
		SB	Pennsylvania Av & Livonia Av	7	177	25	201
PM	B82	EB	Glenwood Rd & Rockaway Pkwy	8	143	18	289
		WB	Glenwood Rd & E 102 St	6	89	15	235
	B82 SBS	EB	Glenwood Rd & Rockaway Pkwy	6	192	32	132
		WB	Flatlands Av & E 105 St	5	93	19	177
	B83	NB	Van Siclen Ave & Hegeman Ave	5	160	32	110
		SB	New Lots Av & Pennsylvania Av	7	240	34	138

Notes:
Based on most currently available timetables (September and October 2018)
[2] Based on most currently available data from NYCT (October 2019)
[3] Available capacities based on NYCT loading guidelines of 54 passengers per standard bus

Pedestrians

Pedestrian counts were conducted in November 2020 at key potential impact locations for the weekday AM, midday, PM, and Saturday peak periods for two typical weekdays and two Saturdays, when NYC public schools were in session. With the guidance of NYC DOT, these 2020 data were adjusted to represent pre-COVID conditions. These adjustments were determined based on a comparison of the 2020 data and historic data that were obtained from NYC DOT's traffic count database. An adjustment factor of 1.65 was applied to the weekday AM peak hour, and a factor of 1.39 was applied to the weekday midday, PM, and Saturday PM peak hours. The pedestrian weekday peak hours of 7:15 AM to 8:15 AM, 12:00 PM to 1:00 PM, and 4:15 PM to 5:15 PM and the Saturday peak hour of 2:45 PM to 3:45 PM were selected for analysis. Pedestrian volumes during these peak hours are shown in **Figure 13-35** through **Figure 13-38**.

Due to the pandemic, the CCC church services were held remotely during the November 2020 counts and Sunday peak period counts were not conducted. The CCC resumed in-person services in September 2021, and pedestrian counts were conducted during the Sunday peak period for pedestrian elements along the Development Site frontages. As church services have not returned to full occupancy, the pedestrian volumes were adjusted to develop full occupancy, pre-pandemic pedestrian volumes. An adjustment factor of 1.39 was applied to the Sunday peak hour pedestrian volumes. An online travel survey was conducted to identify the travel patterns of the CCC's congregation, and used to adjust the existing pedestrian count data, with guidance from NYC DOT and concurrence from DCP, to develop the Sunday peak pedestrian volumes. The peak hour of 9:45 AM to 10:45 AM was identified based on the church service times and travel survey results. Pedestrian volumes during the Sunday peak hour are shown in **Figure 13-39**.

Figure 13-35 Existing Pedestrian Volumes – Weekday AM Peak Hour



Figure 13-36 Existing Pedestrian Volumes – Weekday Midday Peak Hour



Figure 13-37 Existing Pedestrian Volumes – Weekday PM Peak Hour



Figure 13-38 Existing Pedestrian Volumes – Saturday Peak Hour



Figure 13-39 Existing Pedestrian Volumes – Sunday Peak Hour



As shown in **Table 13-25**, all sidewalk, crosswalk, and corner areas operate at acceptable LOS B or better during the weekday and Saturday peak hours. Six of the 14 pedestrian elements analyzed for the Sunday peak hour operate at unacceptable levels of service (LOS D, E or F) due to the pedestrian activities related to church services.

The existing peak hour volumes and levels of service for each pedestrian element analyzed for the weekday and Saturday peak hours are presented in **Table 13-26** through **Table 13-28,** and **Table 13-29** through **Table 13-31** for the Sunday peak hour.

Table 13-25 Year 2020 Existing Pedestrian Levels of Service Summary

	Weekday AM Peak Hour	Weekday Midday Peak Hour	PM Peak Weekday Hour	Saturday Peak Hour	Sunday Peak Hour
Sidewalk Elements					
Sidewalks at LOS A/B/C	9	9	9	9	2
Sidewalks at LOS D	0	0	0	0	1
Sidewalks at LOS E	0	0	0	0	0
Sidewalks at LOS F	0	0	0	0	0
Crosswalk Elements					
Crosswalks at LOS A/B/C	14	14	14	14	3
Crosswalks at LOS D	0	0	0	0	2
Crosswalks at LOS E	0	0	0	0	0
Crosswalks at LOS F	0	0	0	0	1
Corner Elements					
Corners at LOS A/B/C	13	13	13	13	3
Corners at LOS D	0	0	0	0	1
Corners at LOS E	0	0	0	0	0
Corners at LOS F	0	0	0	0	1

Note: Includes nine sidewalk, 14 crosswalk, and 13 corner analysis locations for the weekday and Saturday peak hours, and three sidewalks, six crosswalks, and five corner analysis locations for the Sunday peak hour.

Table 13-26 Year 2020 Existing Pedestrian Levels of Service – Sidewalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Flatlands Avenue between Pennsylvania Avenue and Louisiana Avenue (south side)	5.5	26	1,815.0	A	33	1,675.4	A	28	1,555.7	A	41	1,555.7	A
Flatlands Avenue between Louisiana Avenue and Williams Avenue (north side)	9.0	26	3,564.0	A	18	3,960.0	A	18	4,455.0	A	65	1,697.1	A
Flatlands Avenue between Louisiana Avenue and Williams Avenue (south side)	11.0	59	1,675.4	A	100	1,405.1	A	99	1,405.1	A	92	1,405.1	A
Flatlands Avenue between Williams Avenue and East 108th Street (north side)	8.5	26	3,366.0	A	27	3,740.0	A	39	2,589.2	A	65	1,602.8	A
Flatlands Avenue between Williams Avenue and East 108th Street (south side)	9.0	54	1,980.0	A	72	1,620.0	A	105	1,018.2	A	92	1,149.6	A
Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue (west side)	3.5	41	815.2	A	133	384.9	B	76	554.3	A	84	533.0	A
Pennsylvania Avenue between Vandalia Avenue and Croton Loop (east side)	6.5	71	919.2	A	90	887.5	A	49	1,514.1	A	78	953.3	A

Table 13-26 Year 2020 Existing Pedestrian Levels of Service – Sidewalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue between Vandalia Avenue and Croton Loop (west side)	5.5	139	435.5	B	139	463.3	B	105	725.9	A	123	473.4	B
Louisiana Avenue between Flatlands Avenue and Vandalia Avenue (east side)	5.5	13	3,111.4	A	29	1,675.4	A	41	1,361.2	A	20	3,111.4	A

Table 13-27 Year 2020 Existing Pedestrian Levels of Service – Crosswalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Intersection	Crosswalk	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*South*	18	700.5	A	28	477.4	A	34	461.7	A	33	381.1	A
	West	24	928.9	A	104	347.3	A	73	375.3	A	84	120.5	A
Pennsylvania Avenue and Vandalia Avenue	*North*	48	350.7	A	48	323.3	A	38	455.8	A	64	196.7	A
	South	73	244.1	A	67	240.6	A	66	308.3	A	55	295.1	A
	West	89	640.3	A	101	703.1	A	76	818.4	A	101	420.9	A
Flatlands Avenue and Louisiana Avenue	*North*	22	2,092.5	A	25	1,654.5	A	29	2,026.3	A	28	1,135.0	A
	East	9	1,088.4	A	14	911.0	A	14	755.9	A	13	724.5	A
	South	20	2,087.8	A	29	1,625.7	A	30	1,493.5	A	44	644.6	A
	West	11	881.7	A	22	421.8	A	21	421.8	A	19	409.2	A
Flatlands Avenue and Williams Avenue	*North*	29	1,893.8	A	49	1,302.3	A	29	2,479.2	A	32	1,646.5	A
	East	45	373.5	A	58	405.9	A	34	347.8	A	44	373.2	A
	West	13	1,246.4	A	23	959.0	A	40	298.3	A	35	403.1	A
Flatlands Avenue and East 108th Street	*North*	19	2,004.2	A	35	1,480.5	A	55	852.8	A	40	824.5	A
	South	34	1,498.0	A	113	492.6	A	88	629.1	A	97	232.3	A

Table 13-28 Year 2020 Existing Pedestrian Levels of Service – Corners (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Intersection	Corner	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*Southwest*	13	1,165.2	A	18	661.0	A	6	777.5	A	13	629.5	A
Pennsylvania Avenue and Vandalia Avenue	*Northeast*	2	781.3	A	4	656.7	A	1	852.9	A	6	493.1	A
	Southeast	20	680.0	A	22	664.4	A	11	790.5	A	19	594.5	A
	Southwest	14	547.5	A	15	619.1	A	7	747.5	A	13	640.1	A
	Northwest	5	421.8	A	11	425.0	A	16	490.0	A	10	342.1	A
Flatlands Avenue and Louisiana Avenue	*Northeast*	0	2,117.1	A	0	1,723.6	A	0	1,832.9	A	0	1,834.1	A
	Southeast	10	1,712.4	A	10	1,532.7	A	5	1,457.0	A	9	1,227.8	A
	Southwest	8	2,336.9	A	7	1,465.3	A	7	1,583.6	A	4	1,518.7	A
	Northwest	2	1,632.9	A	0	1,216.3	A	3	1,284.8	A	1	1,361.3	A
Flatlands Avenue and Williams Avenue	*Northeast*	9	905.5	A	6	791.5	A	0	1,347.1	A	9	945.4	A
	Northwest	20	1,351.8	A	6	1,198.9	A	39	697.1	A	21	953.5	A
Flatlands Avenue and East 108th Street	*Northeast*	8	1,896.5	A	21	1,099.6	A	7	1,036.6	A	10	1,239.4	A
	Southeast	4	1,957.6	A	17	750.4	A	20	810.0	A	20	722.4	A

Table 13-29 Year 2020 Existing Pedestrian Levels of Service – Sidewalks (Sunday Peak Hour)

Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Flatlands Avenue between Pennsylvania Avenue and Louisiana Avenue (south side)	5.5	843	61.1	C
Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue (west side)	3.5	176	231.6	B
Louisiana Avenue between Flatlands Avenue and Vandalia Avenue (east side)	5.5	1,434	37.6	D

Table 13-30 Year 2020 Existing Pedestrian Levels of Service – Crosswalks (Sunday Peak Hour)

Intersection	Crosswalk	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*South*	223	37.1	C
	West	524	17.5	D
Flatlands Avenue and Louisiana Avenue	*North*	270	73.4	A
	East	957	1.5	F
	South	614	28.1	C
	West	276	19.1	D

Table 13-31 Year 2020 Existing Pedestrian Levels of Service – Corners (Sunday Peak Hour)

Intersection	Corner	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*Southwest*	135	63.7	A
Flatlands Avenue and Louisiana Avenue	*Northeast*	6	17.9	D
	Southeast	8	6.5	F
	Southwest	27	73.5	A
	Northwest	3	65.7	A

No-Action Conditions

Traffic

Traffic Volumes

This section establishes the baseline (No-Action) condition against which potential impacts of the project can be identified. Future year conditions were analyzed for the year 2031. No-Action traffic, pedestrian, and transit volumes were established by applying a background growth rate of 0.50 percent per year for the first five years (years 2020 to 2025) and a growth rate of 0.25 percent per year for the subsequent six years (years 2025 to 2031) in accordance with *CEQR Technical Manual* guidelines for Brooklyn projects. This background growth is applied to existing traffic volumes and accounts for smaller projects and general increases in travel demand.

Several developments are being planned and will be expected to be developed by the year 2031 within the study area. Three projects were identified in consultation with DCP to be incorporated in the 2031 No-Action condition analyses, totaling approximately 4,832

residential units, 223,633 sf of commercial space, 86,016 sf of community facility, 29,746 sf of light manufacturing, and 12,252 sf of office space. These projects are located approximately a half-mile to one mile to the east of the Development Site and a portion of the No-Action's project-generated vehicles would be expected to travel through the traffic study area. These background development projects are detailed in **Table 13-32**. No-Action traffic volume maps for the weekday AM, midday, PM, Saturday, and Sunday peak hours – including annual background traffic growth plus traffic expected to be generated by the three No-Action development projects - are provided in **Figure 13-40** through **Figure 13-47**.

Table 13-32 Background Development Projects

No.	Project Name/Address	Description	Projected Completion Date
1	**Gateway Estates II**	1,040 residential units	Expected to be completed by 2031
2	**Brooklyn ~~Development~~Developmental Center**	2,623 residential units 143,993 sf of commercial space 55,384 sf of community facility 29,746 sf of light manufacturing	2031
3	**Fountain Avenue Land Use Improvement and Residential Project**	1,169 residential units 67,388 sf of local retail 12,252 restaurant space 12,252 sf of medical office 12,252 sf of office space 18,380 sf day care center	2028

Figure 13-40 No-Action Traffic Volumes – Weekday AM Peak Hour (North Study Area)



Figure 13-41 No-Action Traffic Volumes – Weekday AM Peak Hour (South Study Area)



Figure 13-42 No-Action Traffic Volumes – Weekday Midday Peak Hour (North Study Area)



Figure 13-43 No-Action Traffic Volumes – Weekday Midday Peak Hour (South Study Area)

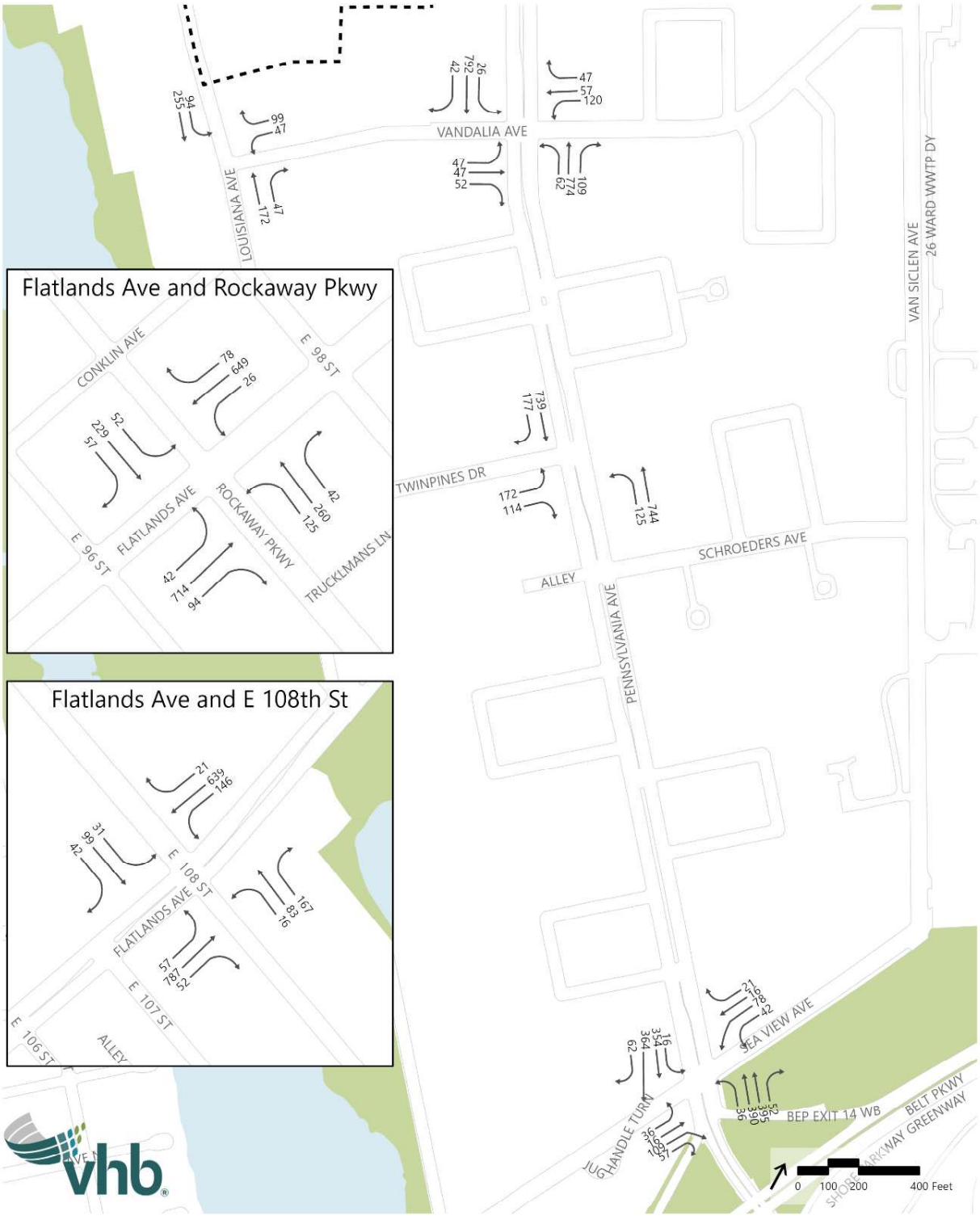


Figure 13-44 No-Action Traffic Volumes – Weekday PM Peak Hour (North Study Area)

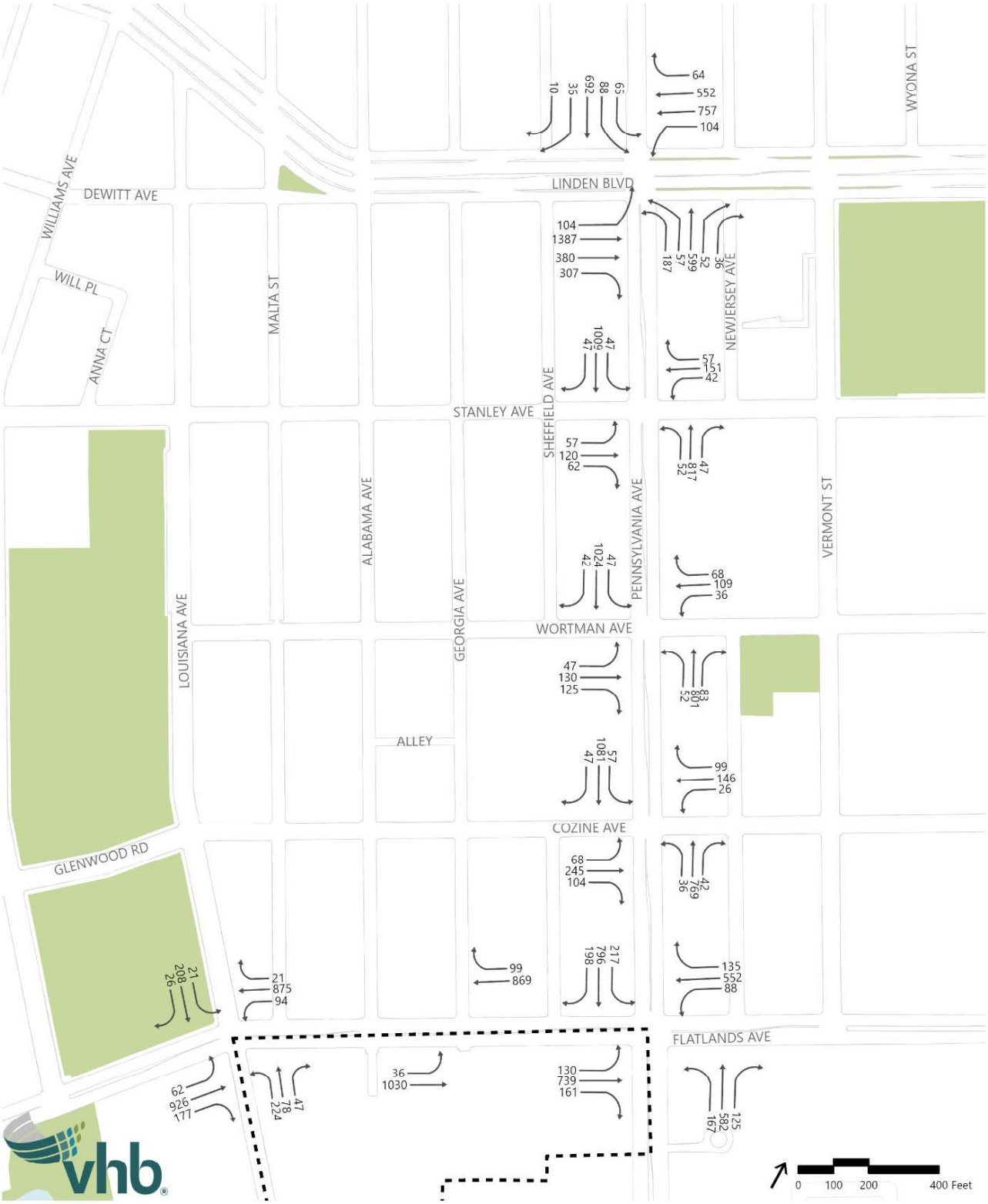


Figure 13-45 No-Action Traffic Volumes – Weekday PM Peak Hour (South Study Area)



Figure 13-46 No-Action Traffic Volumes – Saturday Peak Hour (North Study Area)

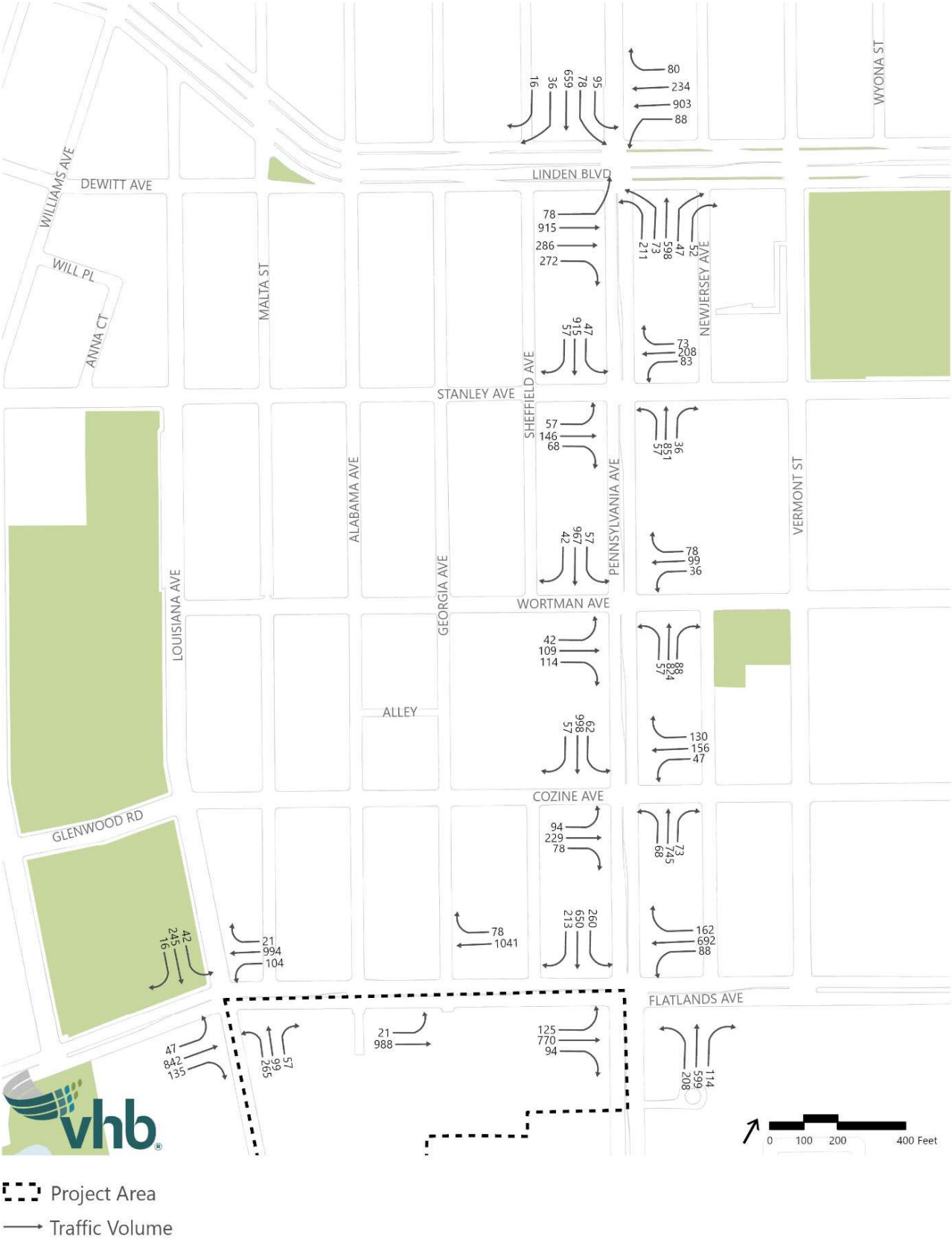


Figure 13-47 No-Action Traffic Volumes – Saturday Peak Hour (South Study Area)



Figure 13-48 No-Action Traffic Volumes – Sunday Peak Hour



Changes to the Study Street Network

Pedestrian safety and mobility improvements have been identified as a part of the Southern Brooklyn Crosstown (B82) Select Bus Service project. Within the study area, improvements include restriping of crosswalks along the Pennsylvania Avenue and Flatlands Avenue corridors, and extension of the corner curbs at the intersections of Pennsylvania Avenue with Flatlands Avenue and Vandalia Avenue, and Louisiana Avenue and Flatlands Avenue. While the *Gateway Estates II EIS* identified measures to mitigate traffic impacts resulting from the project, these measures are no longer applicable due to recent roadway improvements implemented by NYC DOT as part of bus projects along Pennsylvania Avenue and Rockaway Parkway. The No-Action traffic analysis, however, does reflect signal timing changes proposed at the intersection of Pennsylvania Avenue and Flatlands Avenue as a mitigation measure for the *Brooklyn ~~Development~~Developmental Center Mixed-Use Development FEIS (2021)* during the weekday AM, midday, and PM peak hours, and signal phasing changes (inclusion of a leading pedestrian interval) at the intersection of Pennsylvania Avenue and Cozine Avenue implemented by NYC DOT after the existing conditions.

Levels of Service

Based on the traffic volume increases and traffic operations changes mentioned above, the 2031 No-Action traffic levels of service were determined for the traffic analysis locations. **Table 13-33** and **Table 13-34** provide an overview of the levels of service that are projected to characterize the No-Action "overall" intersection conditions and individual traffic movements, respectively, during the weekday AM, midday, PM, Saturday, and Sunday peak hours. Detailed traffic levels of service are provided in **Table 13-35** for the weekday and Saturday peak hours, and **Table 13-36** for the Sunday peak hour.

Table 13-33 Year 2031 No-Action Traffic Level of Service Summary – Overall Intersections

	Existing					No-Action				
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
Intersections at Overall LOS A/B/C	11	12	11	11	4	10	11	10	8	4
Intersections at Overall LOS D	1	1	1	2	2	2	2	2	4	2
Intersections at Overall LOS E	1	0	1	0	0	1	0	1	1	0
Intersections at Overall LOS F	0	0	0	0	1	0	0	0	0	1

Note: Includes 12 signalized intersections and 1 unsignalized intersection for the weekday and Saturday peak hours, and 6 signalized intersections and 1 unsignalized intersection for the Sunday peak hour

Table 13-34 Year 2031 No-Action Traffic Level of Service Summary – Traffic Movements

	Existing					No-Action				
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
Traffic Movements at LOS A/B/C	48	54	45	58	31	44	50	44	54	29
Traffic Movements at LOS D	28	25	31	23	11	31	27	26	23	10
Traffic Movements at LOS E	10	9	14	9	3	10	9	17	7	3
Traffic Movements at LOS F	6	5	3	2	5	7	7	6	8	8
Number of Individual Traffic Movements	92	93	93	92	50	92	93	93	92	50

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left turn movements. The Sunday peak hour analysis addressed a subset of seven of the 13 traffic analysis locations.

Table 13-35 Year 2031 No-Action Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS																	
Pennsylvania Avenue and Seaview Avenue																	
Seaview Avenue	EB	LT	0.27	41.1	D	LT	0.19	29.4	C	LT	0.23	36.0	D	LT	0.16	17.4	B
		R	0.67	51.8	D	R	0.47	34.0	C	R	0.87	60.3	E	R	0.60	25.5	C
	WB	LTR	0.58	39.3	D	LTR	0.48	35.8	D	LTR	0.52	36.8	D	LTR	0.57	24.8	C
Pennsylvania Avenue	NB	L	0.58	62.6	E	L	0.42	56.9	E	L	0.31	55.8	E	L	0.38	40.4	D
		T	0.81	35.0	C	T	0.46	22.5	C	T	0.43	21.7	C	T	0.60	29.1	C
	SB	L	0.22	76.7	E	L	0.23	67.8	E	L	0.21	50.3	D	L	0.13	54.5	D
		TR	0.61	29.5	C	TR	0.62	27.5	C	TR	0.72	14.3	B	TR	0.76	33.6	C
Shore Parkway Westbound Off-Ramp	NB	TR	0.68	26.7	C	TR	0.35	20.1	C	TR	0.38	20.5	C	TR	0.61	27.7	C
Overall Intersection[2]		-	-	**33.7**	**C**	-	-	**27.3**	**C**	-	-	**26.0**	**C**	-	-	**29.4**	**C**
Pennsylvania Avenue and Twin Pines Drive																	
Twin Pines Drive	EB	LR	0.34	36.0	D	LR	0.77	51.4	D	LR	0.84	57.9	E	LR	0.56	25.8	C
Pennsylvania Avenue	NB	L	0.51	15.3	B	L	0.41	13.7	B	L	0.51	30.1	C	L	0.51	37.8	D
		T	0.75	8.0	A	T	0.41	9.4	A	T	0.37	22.7	C	T	0.54	23.2	C
	SB	T	0.48	27.6	C	T	0.50	9.9	A	T	0.56	10.0	A	T	0.59	8.8	A
		R	0.19	24.1	C	R	0.29	7.9	A	R	0.30	7.7	A	R	0.52	9.4	A
Overall Intersection[2]		-	-	**16.2**	**B**	-	-	**15.9**	**B**	-	-	**22.4**	**C**	-	-	**18.6**	**B**

Table 13-35 Year 2031 No-Action Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Vandalia Avenue																	
Vandalia Avenue	EB	LTR	0.28	38.3	D	LTR	0.42	42.5	D	LTR	0.40	42.9	D	LTR	0.39	25.4	C
	WB	LTR	0.71	48.6	D	LTR	0.74	50.8	D	LTR	0.81	58.6	E	LTR	0.62	32.3	C
Pennsylvania Avenue	NB	L	0.43	46.1	D	L	0.94	117.3	F	L	0.45	46.7	D	L	0.40	38.8	D
		T	0.90	12.4	B	T	0.48	6.8	A	T	0.55	6.2	A	T	0.69	20.3	C
		R	0.18	3.6	A	R	0.21	6.2	A	R	0.20	5.3	A	R	0.24	15.2	B
	SB	L	0.20	33.4	C	L	0.38	64.2	E	L	0.53	41.5	D	L	0.26	44.9	D
		T	0.45	19.2	B	T	0.48	35.9	D	T	0.59	18.1	B	T	0.59	36.8	D
		R	0.08	16.8	B	R	0.08	27.3	C	R	0.06	12.8	B	R	0.08	29.6	C
Overall Intersection[2]		-	-	**19.1**	**B**	-	-	**29.1**	**C**	-	-	**20.2**	**C**	-	-	**28.3**	**C**
Pennsylvania Avenue and Flatlands Avenue																	
Flatlands Avenue	EB	L	0.54	43.5	D	L	0.66	50.8	D	L	0.55	49.7	D	L	0.70	50.6	D
		T	0.51	39.6	D	T	0.70	41.6	D	T	0.95	63.9	E	T	0.75	32.1	C
		R	0.12	26.3	C	R	0.32	28.4	C	R	0.37	29.9	C	R	0.19	18.9	B
	WB	L	0.26	34.3	C	L	0.44	44.1	D	L	0.49	53.6	D	L	0.51	40.6	D
		T	0.57	41.4	D	T	0.58	38.2	D	T	0.72	44.6	D	T	0.79	33.8	C
		R	0.41	31.4	C	R	0.44	30.9	C	R	0.31	28.7	C	R	0.35	21.2	C
Pennsylvania Avenue	NB	L	0.94	47.4	D	L	0.55	49.5	D	L	0.78	39.4	D	L	1.01	81.7	F
		T	0.97	27.3	C	T	0.57	28.4	C	T	0.55	13.2	B	T	0.60	16.5	B
		R	0.20	9.6	A	R	0.30	23.3	C	R	0.35	13.0	B	R	0.38	13.7	B
	SB	L	0.83	66.5	E	L	0.80	49.2	D	L	0.75	28.1	C	L	1.15	109.4	F
		T	0.59	40.3	D	T	0.64	16.5	B	T	0.72	15.0	B	T	0.68	13.1	B
		R	0.36	37.5	D	R	0.41	13.1	B	R	0.52	14.3	B	R	0.68	17.5	B
Overall Intersection[2]		-	-	**36.3**	**D**	-	-	**32.4**	**C**	-	-	**32.9**	**C**	-	-	**33.5**	**C**

Table 13-35 Year 2031 No-Action Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Cozine Avenue																	
Cozine Avenue	EB	LTR	1.05	102.2	F	LTR	1.05	98.2	F	LTR	1.10	113.9	F	LTR	1.29	185.0	F
	WB	LTR	0.56	38.2	D	LTR	0.68	45.0	D	LTR	0.73	45.5	D	LTR	1.01	79.9	E
Pennsylvania Avenue	NB	L	0.52	14.3	B	L	0.39	15.3	B	L	0.36	17.2	B	L	0.59	25.5	C
		TR	0.87	19.1	B	TR	0.65	12.6	B	TR	0.57	12.9	B	TR	0.58	9.0	A
	SB	L	0.63	42.4	D	L	0.34	9.0	A	L	0.35	9.8	A	L	0.37	9.5	A
		TR	0.65	14.1	B	TR	0.70	11.7	B	TR	0.74	16.8	B	TR	0.74	13.6	B
Overall Intersection[2]		-	-	**29.5**	**C**	-	-	**28.0**	**C**	-	-	**33.7**	**C**	-	-	**46.0**	**D**
Pennsylvania Avenue and Wortman Avenue																	
Wortman Avenue	EB	LTR	0.68	44.9	D	LTR	0.70	46.3	D	LTR	0.88	62.1	E	LTR	0.66	33.6	C
	WB	LTR	0.43	36.2	D	LTR	0.42	35.7	D	LTR	0.63	42.7	D	LTR	0.55	29.5	C
Pennsylvania Avenue	NB	L	0.61	79.4	E	L	0.56	62.4	E	L	0.57	60.4	E	L	0.51	36.7	D
		TR	0.99	22.8	C	TR	0.77	31.6	C	TR	0.64	27.2	C	TR	0.75	25.7	C
	SB	L	0.41	54.4	D	L	0.44	70.4	E	L	0.55	73.8	E	L	0.59	42.6	D
		TR	0.63	19.0	B	TR	0.70	11.5	B	TR	0.75	13.5	B	TR	0.81	28.3	C
Overall Intersection[2]		-	-	**26.5**	**C**	-	-	**27.3**	**C**	-	-	**29.3**	**C**	-	-	**28.6**	**C**

Table 13-35 Year 2031 No-Action Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Stanley Avenue																	
Stanley Avenue	EB	LTR	0.89	76.6	E	LTR	0.75	56.1	E	LTR	0.75	55.0	D	LTR	0.76	39.8	D
	WB	LTR	0.85	67.6	E	LTR	0.82	61.5	E	LTR	0.89	72.4	E	LTR	0.96	65.4	E
Pennsylvania Avenue	NB	L	0.73	82.2	F	L	0.56	73.6	E	L	0.57	57.5	E	L	0.53	64.1	E
		TR	0.86	8.3	A	TR	0.65	6.1	A	TR	0.55	12.2	B	TR	0.69	10.4	B
	SB	L	0.25	40.6	D	L	0.48	43.9	D	L	0.50	62.6	E	L	0.45	25.9	C
		TR	0.63	34.4	C	TR	0.57	25.3	C	TR	0.69	13.7	B	TR	0.76	37.5	D
Overall Intersection[2]		-	-	**31.0**	**C**	-	-	**25.6**	**C**	-	-	**25.0**	**C**	-	-	**33.1**	**C**
Pennsylvania Avenue and Linden Boulevard																	
Linden Boulevard Main Line	EB	L	0.68	77.1	E	L	0.99	128.7	F	L	0.75	82.3	F	L	0.79	84.0	F
		T	0.56	37.2	D	T	0.70	40.3	D	T	1.02	70.8	E	T	0.76	33.8	C
	WB	L	0.86	106.3	F	L	0.91	113.3	F	L	0.87	101.6	F	L	0.95	115.8	F
		T	0.96	55.4	E	T	0.77	42.5	D	T	0.58	37.4	D	T	0.73	32.8	C
Pennsylvania Avenue	NB	L	1.23	149.5	F	L	1.14	122.4	F	L	1.13	142.3	F	L	1.14	116.5	F
		T	1.11	107.4	F	T	0.88	34.8	C	T	0.71	48.9	D	T	0.71	47.5	D
		R	0.22	47.2	D	R	0.40	21.5	C	R	0.33	41.9	D	R	0.36	45.0	D
	SB	L	0.94	98.0	F	L	0.79	64.2	E	L	0.72	55.3	E	L	0.68	42.0	D
		TR	0.80	45.6	D	TR	0.69	40.7	D	TR	0.84	47.2	D	TR	0.82	38.1	D
Linden Boulevard Eastbound Service Rd	EB	T	0.56	40.2	D	T	0.58	40.3	D	T	0.80	50.6	D	T	0.62	34.2	C
		R	0.39	28.3	C	R	0.46	29.6	C	R	0.54	31.6	C	R	0.47	24.5	C
Linden Boulevard Westbound Service Rd	WB	TR	0.96	76.4	E	T	1.06	100.7	F	T	1.09	107.9	F	TR	0.82	46.2	D
		-	-	-	-	R	0.20	32.5	C	R	0.18	32.1	C	-	-	-	-
Overall Intersection[2]		-	-	**68.9**	**E**	-	-	**54.1**	**D**	-	-	**63.4**	**E**	-	-	**44.6**	**D**

Table 13-35 Year 2031 No-Action Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Louisiana Avenue and Vandalia Avenue																	
Vandalia Avenue	WB	LR	0.33	16.9	B	LR	0.37	23.0	C	LR	0.30	16.0	B	LR	0.36	17.9	B
Louisiana Avenue	NB	TR	0.32	12.8	B	TR	0.28	7.5	A	TR	0.28	9.3	A	TR	0.31	9.2	A
	SB	LT	0.49	11.5	B	LT	0.53	12.2	B	LT	0.75	17.4	B	LT	0.69	15.6	B
Overall Intersection[2]		-	-	**12.9**	**B**	-	-	**13.2**	**B**	-	-	**15.2**	**B**	-	-	**14.3**	**B**
Louisiana Avenue and Flatlands Avenue																	
Flatlands Avenue	EB	L	0.04	22.0	C	L	0.09	21.2	C	L	0.34	34.6	C	L	0.28	37.6	D
		T	0.46	23.5	C	T	0.63	26.9	C	T	0.72	29.7	C	T	0.79	32.6	C
		R	0.37	23.2	C	R	0.46	25.1	C	R	0.36	23.0	C	R	0.40	25.2	C
	WB	L	0.26	23.5	C	L	0.38	31.5	C	L	0.46	39.9	D	L	0.48	37.7	D
		TR	0.56	25.4	C	TR	0.46	23.4	C	TR	0.64	27.1	C	TR	0.97	50.2	D
Louisiana Avenue	NB	L	0.64	43.5	D	L	0.69	45.4	D	L	0.93	80.8	F	L	0.88	56.4	E
		TR	0.26	36.9	D	TR	0.29	37.3	D	TR	0.35	38.5	D	TR	0.40	29.0	C
	SB	L	0.04	28.9	C	L	0.02	29.2	C	L	0.08	31.6	C	L	0.13	21.9	C
		TR	0.16	35.4	D	TR	0.13	34.8	C	TR	0.65	47.7	D	TR	0.67	36.9	D
Overall Intersection[2]		-	-	**27.6**	**C**	-	-	**28.9**	**C**	-	-	**35.4**	**D**	-	-	**41.1**	**D**
Flatlands Avenue and East 108th Street																	
Flatlands Avenue	EB	L	0.13	13.0	B	L	0.18	14.9	B	L	0.20	18.1	B	L	0.30	29.3	C
		TR	0.42	15.5	B	TR	0.58	19.3	B	TR	0.69	21.5	C	TR	0.74	26.3	C
	WB	L	0.35	16.8	B	L	0.50	27.3	C	L	0.87	59.4	E	L	1.11	115.5	F
		TR	0.46	16.2	B	TR	0.44	16.9	B	TR	0.56	18.4	B	TR	0.82	29.5	C
East 108th Street	NB	LTR	0.99	91.8	F	LTR	0.96	85.1	F	LTR	0.87	68.2	E	LTR	0.98	68.1	E
	SB	LTR	0.55	46.2	D	LTR	0.65	50.2	D	LTR	0.88	70.9	E	LTR	0.62	31.9	C
Overall Intersection[2]		-	-	**31.3**	**C**	-	-	**30.7**	**C**	-	-	**33.1**	**C**	-	-	**43.2**	**D**

Table 13-35 Year 2031 No-Action Traffic Levels of Service – Weekday and Saturday Peak Hours

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatlands Avenue and Rockaway Parkway																	
Flatlands Avenue	EB	L	0.26	39.1	D	L	0.28	36.6	D	L	0.36	47.6	D	L	0.28	37.7	D
		TR	0.66	36.8	D	TR	0.85	44.2	D	TR	1.02	72.5	E	TR	1.12	101.5	F
	WB	L	0.12	32.1	C	L	0.19	37.6	D	L	0.18	44.7	D	L	0.16	35.2	D
		TR	0.77	40.9	D	TR	0.67	35.5	D	TR	0.89	48.0	D	TR	1.05	76.4	E
Rockaway Parkway	NB	L	0.46	29.9	C	L	0.46	29.5	C	L	0.51	29.8	C	L	0.67	32.2	C
		TR	0.68	33.3	C	TR	0.47	28.3	C	TR	0.44	26.4	C	TR	0.53	22.7	C
	SB	LT	0.91	64.9	E	LT	0.69	45.4	D	LT	0.72	44.9	D	LT	0.99	75.3	E
		R	0.36	35.4	D	R	0.29	34.7	C	R	0.37	35.4	D	R	0.20	27.0	C
Overall Intersection[2]		-	-	**41.4**	**D**	-	-	**38.3**	**D**	-	-	**52.2**	**D**	-	-	**72.8**	**E**
UNSIGNALIZED INTERSECTIONS																	
Flatlands Avenue and Georgia Avenue																	
Flatlands Avenue	EB	LTR	-	1.4	A	LTR	-	1.2	A	LTR	-	1.8	A	LTR	-	1.2	A
	WB	L	-	0.0	A	L	-	0.0	A	L	-	0.0	A	L	-	0.0	A
		TR	-	0.0	A	TR	-	0.0	A	TR	-	0.0	A	TR	-	0.0	A
Overall Intersection[2]		-	-	**0.3**	**A**	-	-	**0.3**	**A**	-	-	**0.5**	**A**	-	-	**0.3**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Table 13-36 Year 2031 No-Action Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS					
Pennsylvania Avenue and Seaview Avenue					
Seaview Avenue	EB	LT	0.07	16.4	B
		R	0.42	21.3	C
	WB	LTR	0.29	19.1	B
Pennsylvania Avenue	NB	L	0.30	40.0	D
		T	1.04	75.5	E
	SB	L	0.07	54.9	D
		TR	0.95	47.3	D
Shore Parkway Westbound Off-Ramp	NB	TR	0.44	24.6	C
Overall Intersection[2]		-	-	**46.0**	**D**
Pennsylvania Avenue and Twin Pines Drive					
Twin Pines Drive	EB	LR	0.36	21.8	C
Pennsylvania Avenue	NB	L	0.96	90.4	F
		T	0.69	30.6	C
	SB	T	0.75	9.2	A
		R	0.36	6.7	A
Overall Intersection[2]		-	-	**26.0**	**C**
Pennsylvania Avenue and Vandalia Avenue					
Vandalia Avenue	EB	LTR	0.24	22.9	C
	WB	LTR	0.42	26.5	C
Pennsylvania Avenue	NB	L	1.01	101.2	F
		T	0.70	26.5	C
		R	0.19	21.2	C
	SB	L	0.12	39.5	D
		T	0.71	29.5	C
		R	0.39	25.1	C
Overall Intersection[2]		-	-	**31.9**	**C**

Table 13-36 Year 2031 No-Action Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Flatlands Avenue					
Flatlands Avenue	EB	L	1.15	123.4	F
		T	0.80	34.9	C
		R	0.93	53.0	D
	WB	L	0.46	36.8	D
		T	0.43	25.4	C
		R	0.31	20.8	C
Pennsylvania Avenue	NB	L	1.06	92.7	F
		T	0.64	15.1	B
		R	0.29	10.4	B
	SB	L	0.96	81.0	F
		T	0.60	28.3	C
		R	0.60	35.4	C
Overall Intersection[2]		-	-	**45.1**	**D**
Louisiana Avenue and Vandalia Avenue					
Vandalia Avenue	WB	LR	0.75	28.9	C
Louisiana Avenue	NB	TR	0.39	10.1	B
	SB	LT	0.50	11.6	B
Overall Intersection[2]		-	-	**16.5**	**B**
Louisiana Avenue and Flatlands Avenue					
Flatlands Avenue	EB	L	0.11	22.3	C
		T	0.91	41.3	D
		R	0.80	57.3	E
	WB	L	0.62	45.0	D
		TR	0.61	27.0	C
Louisiana Avenue	NB	L	0.90	61.2	E
		TR	1.30	184.3	F
	SB	L	1.54	296.5	F
		TR	0.73	40.9	D
Overall Intersection[2]		-	-	**91.9**	**F**

Table 13-36 Year 2031 No-Action Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS
UNSIGNALIZED INTERSECTIONS					
Flatlands Avenue and Georgia Avenue/Site Driveway					
Flatlands Avenue	EB	LTR	-	4.7	A
	WB	L	-	0.0	A
		TR	-	0.0	A
Site Driveway	NB	LTR	-	138.4	F
Overall Intersection[2]		-	-	**16.9**	**C**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

The summary overview of 2031 No-Action conditions indicates that:

- In the weekday AM peak hour, one intersection would be expected to operate at overall LOS E, the same as the existing conditions. Seventeen movements would operate at LOS E or F, compared to 16 movements in the existing conditions.
- In the weekday midday peak hour, no intersections would be expected to operate at overall LOS E, the same as the existing conditions. Sixteen movements would operate at LOS E or F, compared to 14 movements in the existing conditions.
- In the weekday PM peak hour, one intersection would be expected to operate at LOS E, the same as in existing conditions. Twenty-three movements would operate at LOS E or F, compared to 17 movements in the existing conditions.
- In the Saturday peak hour, one intersection would be expected to operate at LOS E, compared to none in the existing conditions. Fifteen movements would operate at LOS E or F, compared to 11 movements in the existing conditions.
- In the Sunday peak hour, one intersection would be expected to operate at LOS F, the same as in the existing conditions. Eleven movements would operate at LOS E or F, compared to eight movements in the existing conditions.

The intersection of Pennsylvania Avenue and Linden Boulevard would operate at overall LOS E during the weekday AM and PM peak hours. The intersection of Flatlands Avenue and Rockaway Parkway would operate at overall LOS E during the Saturday peak hour. The intersection of Louisiana Avenue and Flatlands Avenue would operate at overall LOS F during the Sunday peak hour.

Based on the analysis results, the majority of traffic movements would continue to operate at acceptable levels of service in the No-Action condition. The majority of the intersections with at least one traffic movement operating at unacceptable levels of service during the peak hours analyzed under existing conditions would continue to do so during the No-Action condition. The following intersections would have at least one movement operating at unacceptable levels of service during at least one peak hour.

- Pennsylvania Avenue and Seaview Avenue
  - Eastbound Seaview Avenue right turn movement (weekday PM)

- Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, and PM)
- Northbound Pennsylvania Avenue through movement (Sunday)
- Southbound Pennsylvania Avenue left turn movement (weekday AM and midday)

› Pennsylvania Avenue and Twin Pines Drive
- Eastbound Twin Pines Drive approach (weekday PM)
- Northbound Pennsylvania Avenue left turn movement (Sunday)

› Pennsylvania Avenue and Vandalia Avenue
- Westbound Vandalia Avenue approach (weekday PM)
- Northbound Pennsylvania Avenue left turn movement (weekday midday and Sunday)
- Southbound Pennsylvania Avenue left turn movement (weekday midday)

› Pennsylvania Avenue and Flatlands Avenue
- Eastbound Flatlands Avenue left turn movement (Sunday)
- Eastbound Flatlands Avenue through movement (weekday PM)
- Northbound Pennsylvania Avenue left turn movement (Saturday and Sunday)
- Southbound Pennsylvania Avenue left turn movement (weekday AM, Saturday, and Sunday)

› Pennsylvania Avenue and Cozine Avenue
- Eastbound Cozine Avenue approach (weekday AM, midday, PM, and Saturday)
- Westbound Cozine Avenue approach (Saturday)

› Pennsylvania Avenue and Wortman Avenue
- Eastbound Wortman Avenue approach (weekday PM)
- Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, and PM)
- Southbound Pennsylvania Avenue left turn movement (weekday midday and PM)

› Pennsylvania Avenue and Stanley Avenue
- Eastbound Stanley Avenue approach (weekday AM and midday)
- Westbound Stanley Avenue approach (weekday AM, midday, PM, and Saturday)
- Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, PM, and Saturday)
- Southbound Pennsylvania Avenue left turn movement (weekday PM)

› Pennsylvania Avenue and Linden Boulevard
- Eastbound Linden Boulevard Main Line left turn movement (weekday AM, midday, PM, and Saturday)
- Eastbound Linden Boulevard Main Line through movement (weekday PM)
- Westbound Linden Boulevard Main Line left turn movement (weekday AM, midday, PM, and Saturday)
- Westbound Linden Boulevard Main Line through movement (weekday AM)

- Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, PM, and Saturday)
- Northbound Pennsylvania Avenue through movement (weekday AM)
- Southbound Pennsylvania Avenue left turn movement (weekday AM, midday, and PM)
- Westbound Linden Boulevard Service Road shared through-right movement (weekday AM)
- Westbound Linden Boulevard Service Road through movement (weekday midday and PM)

› Louisiana Avenue and Flatlands Avenue
- Eastbound Flatlands Avenue right turn movement (Sunday)
- Northbound Pennsylvania Avenue left turn movement (weekday PM, Saturday, and Sunday)
- Northbound Pennsylvania Avenue shared through-right movement (Sunday)
- Southbound Pennsylvania Avenue left turn movement (Sunday)

› Flatlands Avenue and East 108th Street
- Westbound Flatlands Avenue left turn movement (weekday PM and Saturday)
- Northbound East 108th Street approach (weekday AM, midday, PM, and Saturday)
- Southbound East 108th Street approach (weekday PM)

› Flatlands Avenue and Rockaway Parkway
- Eastbound Flatlands Avenue shared through-right movement (weekday PM and Saturday)
- Westbound Flatlands Avenue shared through-right movement (Saturday)
- Southbound Rockaway Parkway shared left-through movement (weekday AM and Saturday)

› Flatlands Avenue and Georgia Avenue/Site Driveway
- Northbound Site Driveway approach (Sunday)

Parking

In order to estimate future parking conditions, existing occupancies for on-street parking were increased by the background traffic growth rate in accordance with *CEQR Technical Manual* procedures. Available on-street parking is expected to decrease slightly under the No-Action condition due to the projected increase of traffic in the area. Under the No-Action condition, it is expected that on-street parking would be about 77 percent occupied during the weekday AM and PM periods, 75 percent occupied during the weekday midday period, 69 percent occupied during the weekday overnight period, 70 percent occupied during the Saturday period, and 89 percent occupied during the Sunday period.

Absent the Proposed Project, on-site parking supply and utilization would be similar to the existing conditions.

Subways

Subway Station Elements

Existing subway station volumes were increased based on the background growth rates recommended in the *CEQR Technical Manual* and incorporated subway trips associated with the No-Action background projects to develop the No-Action condition subway volumes. As shown in **Table 13-37**, the subway station elements that operate at acceptable levels of service during the AM and PM peak hours will continue to do so in the No-Action condition; the Glenwood Road fare control elements analyzed would deteriorate to LOS E (v/c ratio of 1.36) during the AM peak hour.

Table 13-37 No-Action Subway Station Levels of Service

Peak Hour	Control Element	Pedestrian Volume (15-min) In	Pedestrian Volume (15-min) Out	Surging Factor	Friction Factor	v/c Ratio	LOS
AM	Rockaway Parkway (Bus Terminal) 4 Turnstiles	95	33	0.75	0.90	0.08	A
	Rockaway Parkway (Station Entrance) 5 Turnstiles	428	54	0.75	0.90	0.25	A
	Glenwood Road 1 HEET, 1 HXT	304	24	0.75	0.90	1.36	E
PM	Rockaway Parkway (Bus Terminal) 4 Turnstiles	41	262	0.75	0.90	0.18	A
	Rockaway Parkway (Station Entrance) 5 Turnstiles	138	259	0.75	0.90	0.19	A
	Glenwood Road 1 HEET, 1 HXT	62	112	0.75	0.90	0.42	A

Notes:
Methodology based on *2021 CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes in 1.0.
Does not assume fare evasion at the Glenwood Road fare control per NYCT's guidance.

Subway Line-Haul

Table 13-38 summarizes anticipated 2031 No-Action subway line-haul conditions at the maximum load point of the subway line in the peak direction. The No-Action condition passenger volumes reflect increases in volumes due to background growth based on the recommended rates in the *CEQR Technical Manual* as well as demand from new developments in the vicinity of the Proposed Project. In the No-Action condition, the L subway line would operate at a v/c ratio of 1.03 during the AM peak hour and 1.06 during the PM peak hour, i.e., a modest increase from existing conditions.

Table 13-38 No-Action Subway Line-Haul Analysis

Peak Hour	Route and Direction	Max Load Point (leaving station)	Average Passengers Per Hour[1]	Average Trains Per Hour[1]	Average Cars Per Hour[1]	Average Passengers Per Car[1]	Guideline Passengers Per Car[2]	V/C Ratio[3]
AM	L – NB	Bedford Ave	23,355	19.8	158	149	145	1.03
PM	L – SB	First Ave	21,514	17.5	140	140	145	1.06

Notes:
[1] 2031 No-Action passenger volumes are based on 0.5 percent per year background growth for first five years and 0.25 percent per year background for subsequent years to the year 2031, plus demand from No-Action developments expected by 2031
[2] Guideline capacities are based on NYCT rush hour loading guidelines which vary by car type, line, and location based on frequency and type of service.
[3] Volume to guideline capacity ratio

Buses

Demand on the local bus routes operating near the Proposed Project is expected to increase as a result of background growth as well as demand from new developments in the vicinity of the Proposed Project. **Table 13-39** shows that existing levels of bus service would be sufficient to meet the projected demand in the 2031 No Action condition along the B82 and B82 SBS routes. A capacity shortfall can be expected along the B83 route in the northbound direction during the AM peak hour (seven additional buses would be needed to accommodate the projected No-Action demand), and in both directions during the PM peak hour (two additional buses would be needed in the northbound direction and 12 additional buses would be needed in the southbound direction) primarily due to the demand from the Brooklyn ~~Development~~Developmental Center project and Fountain Avenue Land Use Improvement and Residential Project.

As general policy, MTA-NYCT provides additional bus service where demand warrants, considering financial and operational constraints. Based on ongoing passenger monitoring programs, comprehensive service plans would be generated to respond to specific, known needs with capital and/or operational improvements where fiscally and operationally practicable. The MTA's capital program is developed on a five-year cycle; through this program, expansion of bus service would be provided as needs are determined. It is therefore anticipated that in the No-Action condition, MTA-NYCT would increase service frequency on the B83 route to address the capacity shortfall.

Table 13-39 No-Action Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point	Peak Hour Buses[1]	Peak Hour Passengers[2]	Average Passengers per Bus	Available Peak Hour Capacity[3]
AM	B82	EB	Glenwood Rd & Rockaway Pkwy	6	80	13	244
		WB	Glenwood Rd & E 102 St	7	137	20	241
	B82 SBS	EB	Glenwood Rd & Rockaway Pkwy	10	233	23	307
		WB	Flatlands Av & E 105 St	9	273	30	213
	B83	NB	Van Siclen Ave & Hegeman Ave	10	901	90	-361
			With Service Increase	**17**	**901**	**53**	**17**
		SB	Pennsylvania Av & Livonia Av	7	334	48	44
PM	B82	EB	Glenwood Rd & Rockaway Pkwy	8	149	19	283
		WB	Glenwood Rd & E 102 St	6	93	16	231
	B82 SBS	EB	Glenwood Rd & Rockaway Pkwy	6	200	33	124
		WB	Flatlands Av & E 105 St	5	97	19	173
	B83	NB	Van Siclen Ave & Hegeman Ave	5	362	72	-92
			With Service Increase	**7**	**362**	**52**	**16**
		SB	New Lots Av & Pennsylvania Av	7	998	143	-620
			With Service Increase	**19**	**998**	**53**	**28**

Notes:
[1] 2031 No-Action passenger volumes are based on 0.5 percent per year background growth for first five years and 0.25 percent per year background for subsequent years to the year 2031, plus demand from No-Action developments expected by 2031
[2] Based on most currently available data from NYCT (October 2019)
[3] Available capacities based on NYCT loading guidelines of 54 passengers per standard bus
Shading denotes capacity shortfall in the No-Action condition; bold text denotes No-Action conditions with service increases to address the capacity shortfalls

Pedestrians

The 2031 No-Action pedestrian volumes were developed by increasing existing volumes to reflect expected growth in overall travel through and within the study area. Due to distance between the Development and the No-Action development projects, pedestrian trips from these projects would not be expected travel within the pedestrian study area and therefore were not incorporated into the No-Action pedestrian analysis. Signal timing changes

proposed as mitigation measures outlined in the *Brooklyn ~~Development~~Developmental Center Mixed-Use Development FEIS*, inclusion of a leading pedestrian interval at the intersection of Pennsylvania Avenue and Cozine Avenue as part of NYC DOT's improvements, and physical improvements identified as part of the Southern Brooklyn Crosstown (B82) Select Bus Service project were also incorporated into the No-Action pedestrian analysis. Pedestrian volumes are shown in **Figure 13-49** through **Figure 13-53**.

Figure 13-49 No-Action Pedestrian Volumes – Weekday AM Peak Hour



Figure 13-50 No-Action Pedestrian Volumes – Weekday Midday Peak Hour



Figure 13-51 No-Action Pedestrian Volumes – Weekday PM Peak Hour



Figure 13-52 No-Action Pedestrian Volumes – Saturday Peak Hour



Figure 13-53 No-Action Pedestrian Volumes – Sunday Peak Hour



The No-Action pedestrian levels of service were determined for the locations analyzed in the existing conditions. **Table 13-40** provides an overview of the pedestrian levels of service for the peak hours analyzed. Pedestrian volumes and levels of service are provided in **Table 13-41** through **Table 13-43** for the weekday and Saturday peak hours, and **Table 13-44** through **Table 13-46** for the Sunday peak hour. The summary of the No-Action conditions indicates that during the weekday AM, midday, PM, and Saturday peak hours , all sidewalks, crosswalks, and corners can be expected to operate at clearly acceptable level of service A or B, the same as in existing conditions. However, five pedestrian elements would operate at unacceptable levels of service during the Sunday peak hour due to the increased pedestrian activities related to church services. The northeast corner of Flatlands Avenue and Louisiana Avenue would improve to acceptable LOS C from unacceptable levels of service in the existing as a result of improvements (corner curb extension) related to the Brooklyn Crosstown (B82) Select Bus Service project.

Table 13-40 Year 2031 No-Action Pedestrian Levels of Service Summary

	Weekday AM Peak Hour	Weekday Midday Peak Hour	PM Peak Weekday Hour	Saturday Peak Hour	Sunday Peak Hour
Sidewalk Elements					
Sidewalks at LOS A/B/C	9	9	9	9	2
Sidewalks at LOS D	0	0	0	0	1
Sidewalks at LOS E	0	0	0	0	0
Sidewalks at LOS F	0	0	0	0	0
Crosswalk Elements					
Crosswalks at LOS A/B/C	14	14	14	14	3
Crosswalks at LOS D	0	0	0	0	2
Crosswalks at LOS E	0	0	0	0	0
Crosswalks at LOS F	0	0	0	0	1
Corner Elements					
Corners at LOS A/B/C	13	13	13	13	4
Corners at LOS D	0	0	0	0	0
Corners at LOS E	0	0	0	0	0
Corners at LOS F	0	0	0	0	1

Note: Includes nine sidewalk, 14 crosswalk, and 13 corner analysis locations for the weekday and Saturday peak hours, and three sidewalks, six crosswalks, and five corner analysis locations for the Sunday peak hour.

Table 13-41 Year 2031 No-Action Pedestrian Levels of Service – Sidewalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Flatlands Avenue between Pennsylvania Avenue and Louisiana Avenue (south side)	5.5	27	1,747.7	A	35	1,579.6	A	30	1,452.0	A	43	1,483.3	A
Flatlands Avenue between Louisiana Avenue and Williams Avenue (north side)	9.0	27	3,432.0	A	18	3,960.0	A	19	4,220.5	A	68	1,622.2	A
Flatlands Avenue between Louisiana Avenue and Williams Avenue (south side)	11.0	62	1,594.3	A	104	1,351.1	A	103	1,350.6	A	96	1,346.6	A
Flatlands Avenue between Williams Avenue and East 108th Street (north side)	8.5	27	3,241.3	A	28	3,606.4	A	40	2,524.5	A	68	1,532.1	A
Flatlands Avenue between Williams Avenue and East 108th Street (south side)	9.0	56	1,909.3	A	75	1,555.2	A	109	980.9	A	96	1,101.7	A
Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue (west side)	3.5	43	777.3	A	139	368.2	B	79	533.2	A	87	514.6	B
Pennsylvania Avenue between Vandalia Avenue and Croton Loop (east side)	6.5	73	894.0	A	94	849.8	A	51	1,454.7	A	81	918.0	A

Table 13-41 Year 2031 No-Action Pedestrian Levels of Service – Sidewalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue between Vandalia Avenue and Croton Loop (west side)	5.5	144	420.3	B	145	444.1	B	110	692.9	A	128	454.9	B
Louisiana Avenue between Flatlands Avenue and Vandalia Avenue (east side)	5.5	13	3,111.4	A	31	1,567.3	A	43	1,297.9	A	21	2,963.2	A

Table 13-42 Year 2031 No-Action Pedestrian Levels of Service – Crosswalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Intersection	Crosswalk	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*South*	18	698.2	A	29	603.7	A	36	453.3	A	34	454.5	A
	West	25	834.7	A	108	311.6	A	76	334.8	A	88	104.8	A
Pennsylvania Avenue and Vandalia Avenue	*North*	50	403.5	A	50	369.5	A	39	531.6	A	66	226.4	A
	South	75	185.8	A	70	177.7	A	69	228.6	A	57	221.3	A
	West	93	612.1	A	105	675.7	A	79	785.8	A	105	404.4	A
Flatlands Avenue and Louisiana Avenue	*North*	22	1,770.8	A	26	1,339.5	A	30	1,650.8	A	29	923.2	A
	East	9	1,178.1	A	14	986.1	A	14	816.4	A	13	780.9	A
	South	21	1,976.7	A	31	1,505.3	A	31	1,430.1	A	46	608.2	A
	West	11	872.3	A	23	398.6	A	22	400.7	A	20	380.6	A
Flatlands Avenue and Williams Avenue	*North*	31	1,630.4	A	51	1,151.0	A	30	2,212.4	A	34	1,421.2	A
	East	47	357.3	A	60	391.6	A	36	327.0	A	46	356.4	A
	West	13	1,243.9	A	24	918.9	A	42	283.2	A	36	386.0	A
Flatlands Avenue and East 108th Street	*North*	19	2,001.6	A	37	1,398.0	A	57	821.1	A	42	783.3	A
	South	36	1,408.6	A	117	472.6	A	92	597.1	A	101	218.3	A

Table 13-43 Year 2031 No-Action Pedestrian Levels of Service – Corners (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Intersection	Corner	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*Southwest*	14	1,124.9	A	19	635.0	A	6	744.4	A	14	601.0	A
Pennsylvania Avenue and Vandalia Avenue	*Northeast*	2	1,714.1	A	4	1,439.2	A	1	1,874.2	A	6	1,090.4	A
	Southeast	21	1,136.6	A	23	1,103.4	A	11	1,316.5	A	20	992.0	A
	Southwest	15	526.1	A	16	592.2	A	7	718.8	A	14	613.7	A
	Northwest	5	716.8	A	11	728.2	A	17	837.4	A	10	591.5	A
Flatlands Avenue and Louisiana Avenue	*Northeast*	0	3,155.6	A	0	2,500.4	A	0	2,682.7	A	0	2,677.7	A
	Southeast	10	1,676.5	A	10	1,480.6	A	5	1,430.0	A	9	1,193.4	A
	Southwest	8	2,284.6	A	7	1,405.5	A	7	1,535.9	A	4	1,454.0	A
	Northwest	2	1,632.9	A	0	1,165.7	A	3	1,242.2	A	1	1,307.5	A
Flatlands Avenue and Williams Avenue	*Northeast*	9	865.3	A	6	765.3	A	0	1,284.1	A	9	906.1	A
	Northwest	21	1,289.3	A	6	1,158.0	A	41	665.3	A	22	912.6	A
Flatlands Avenue and East 108th Street	*Northeast*	8	1,896.5	A	22	1,060.7	A	7	1,013.8	A	10	1,212.6	A
	Southeast	4	1,886.5	A	18	727.2	A	21	780.9	A	21	698.3	A

Table 13-44 Year 2031 No-Action Pedestrian Levels of Service – Sidewalks (Sunday Peak Hour)

Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Flatlands Avenue between Pennsylvania Avenue and Louisiana Avenue (south side)	5.5	878	58.6	C
Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue (west side)	3.5	183	222.8	B
Louisiana Avenue between Flatlands Avenue and Vandalia Avenue (east side)	5.5	1,493	36.0	D

Table 13-45 Year 2031 No-Action Pedestrian Levels of Service – Crosswalks (Sunday Peak Hour)

Intersection	Crosswalk	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*South*	232	42.0	B
	West	545	15.3	D
Flatlands Avenue and Louisiana Avenue	*North*	281	58.6	B
	East	996	1.4	F
	South	639	26.6	C
	West	287	17.9	D

Table 13-46 Year 2031 No-Action Pedestrian Levels of Service – Corners (Sunday Peak Hour)

Intersection	Corner	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*Southwest*	140	60.4	A
Flatlands Avenue and Louisiana Avenue	*Northeast*	6	32.7	C
	Southeast	8	5.3	F
	Southwest	28	70.2	A
	Northwest	3	62.3	A

With-Action Conditions

Traffic

The Proposed Project would consist of approximately 2,050 residential dwelling units (DUs) and approximately 65,670 square feet (sf) of local retail space, 14,300 sf of food store space, 52,820 sf of community facility space, 81,740 sf (1.88 acres) of publicly accessible passive open space, and approximately 312,114 sf of on-site above-grade surface parking and below-grade garage parking (approximately 886 parking spaces). A new internal roadway network would be developed within the Development Site with one driveway along Louisiana Avenue, two driveways along Flatlands Avenue at Georgia Avenue and at Sheffield Avenue, and one driveway (entry only) along Pennsylvania Avenue.

The intersection of Flatlands Avenue and Georgia Avenue would be signalized as part of the project to facilitate vehicular traffic and pedestrian operations; this traffic signal would be expected to be implemented in 2026 when the Georgia Avenue access roadway is open and Buildings 1 and 2 and the 500-space parking garage located next to the CCC are expected to be completed. To facilitate traffic flow during church services, church traffic would be directed to enter from the Louisiana Avenue driveway and exit through the driveway at Flatlands Avenue and Georgia Avenue. "No Standing 9 AM to 12 PM Sunday" regulations would need to be ~~identified~~implemented along the west side of Louisiana Avenue for approximately 525 feet (approximately 22 spaces) south of Flatlands Avenue to facilitate turns at the intersection of Louisiana Avenue and Flatlands Avenue, and at the site access driveway along ~~the~~ Louisiana Avenue. Similar to existing conditions, CCC staff would be stationed at the Development Site driveways to monitor and direct church-related traffic to minimize delays and queues on the surrounding streets. The Applicant is responsible for all costs associated with the design and implementation of the project improvements and mitigation measures.

A traffic signal warrant and all-way stop control warrant were conducted at Louisiana Avenue and the Site Driveway; based on the Proposed Project's trip projections, neither traffic control device would be warranted. However, upon completion of the full buildout of Proposed Project, the Applicant has committed to conducting traffic signal and all-way stop control warrant analyses using actual volumes for the intersection. If warranted, the Applicant will be responsible for the design and installation of the appropriate traffic signal control device.

Traffic Volumes

Overall, the Proposed Project would generate a total of 668 vph (277 "ins" and 442 "outs") in the weekday AM peak hour, 536 vph (268 "ins" and 268 "outs") in the weekday midday peak hour, 722 vph (402 "ins" and 320 "outs") in the weekday PM peak hour, 771 vph (380 "ins" and 391 "outs) in the Saturday peak hour, and 789 vph (379 "ins" and 410 "outs") in the Sunday peak hour. These vehicle trips were distributed as described in the Level 2 screening assessment. The With-Action traffic volumes for the weekday AM, midday, PM, Saturday, and Sunday peak hours are shown in **Figure 13-54** through **Figure 13-67**.

Figure 13-54 With-Action Traffic Volumes – Weekday AM Peak Hour (North Study Area)



Figure 13-55 With-Action Traffic Volumes – Weekday AM Peak Hour (South Study Area)



Figure 13-56 With-Action Traffic Volumes – Weekday AM Peak Hour (Project Area)

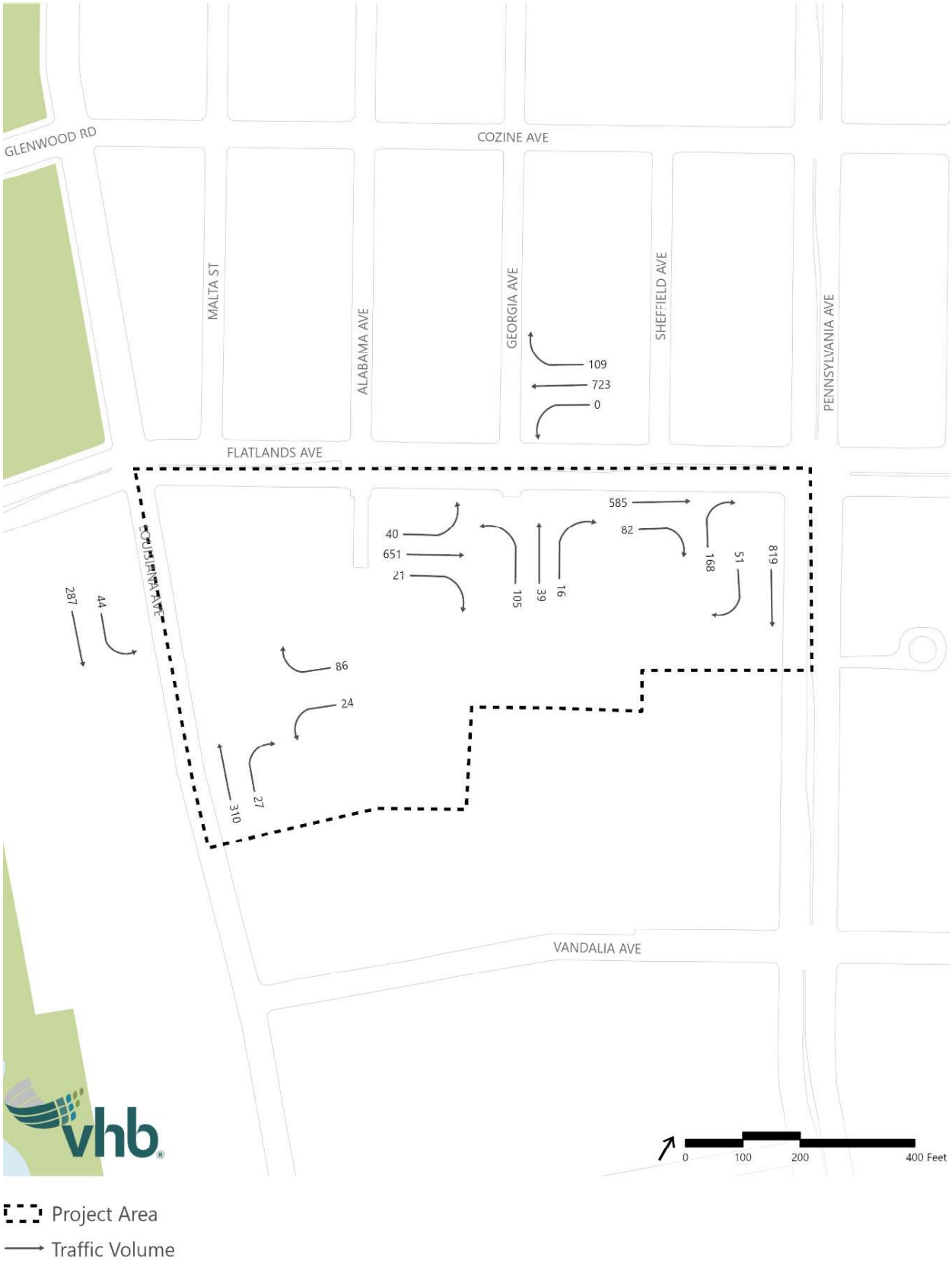


Figure 13-57 With-Action Traffic Volumes – Weekday Midday Peak Hour (North Study Area)

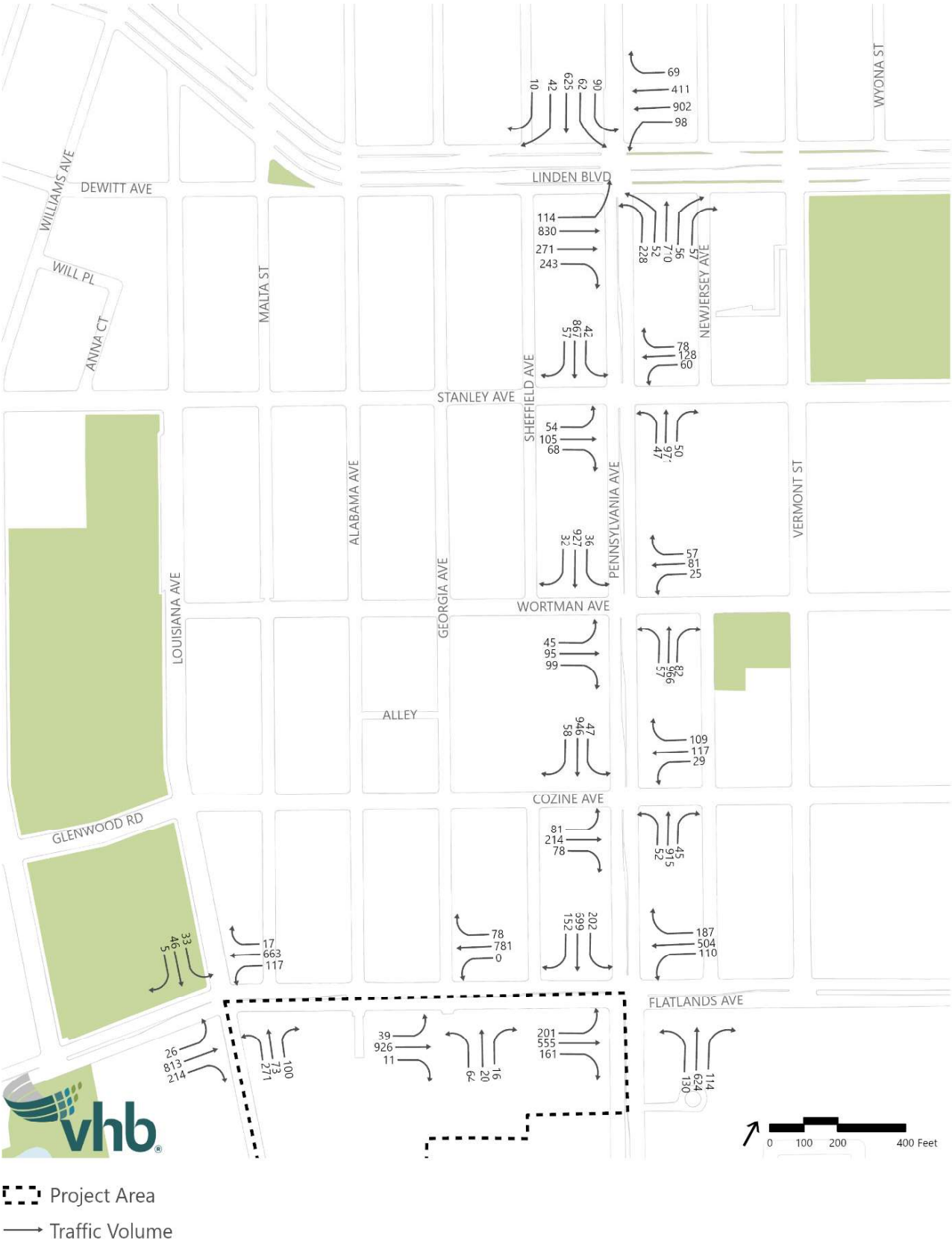


Figure 13-58 With-Action Traffic Volumes – Weekday Midday Peak Hour (South Study Area)



Figure 13-59 With-Action Traffic Volumes – Weekday Midday Peak Hour (Project Area)

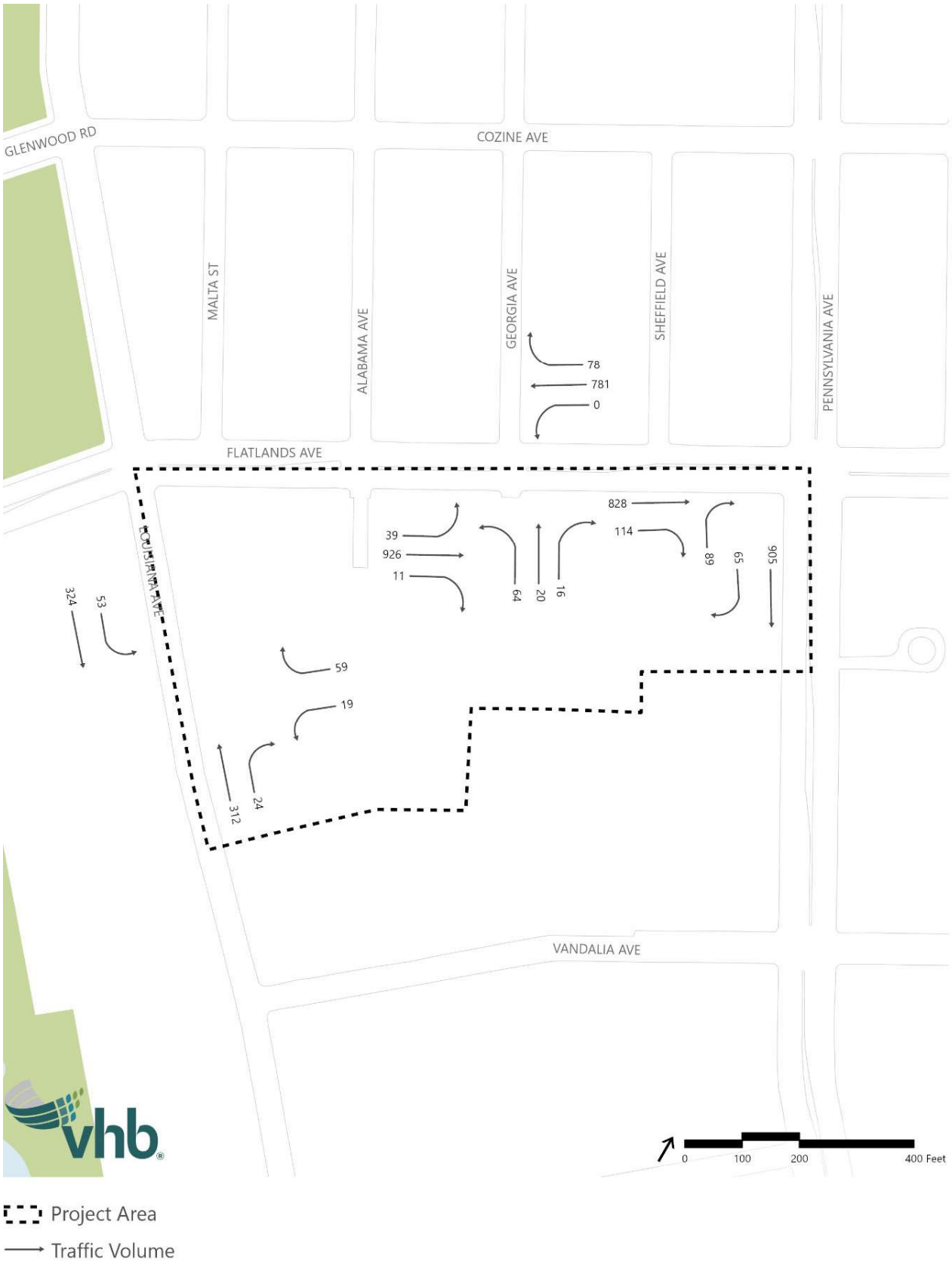


Figure 13-60 With-Action Traffic Volumes – Weekday PM Peak Hour (North Study Area)

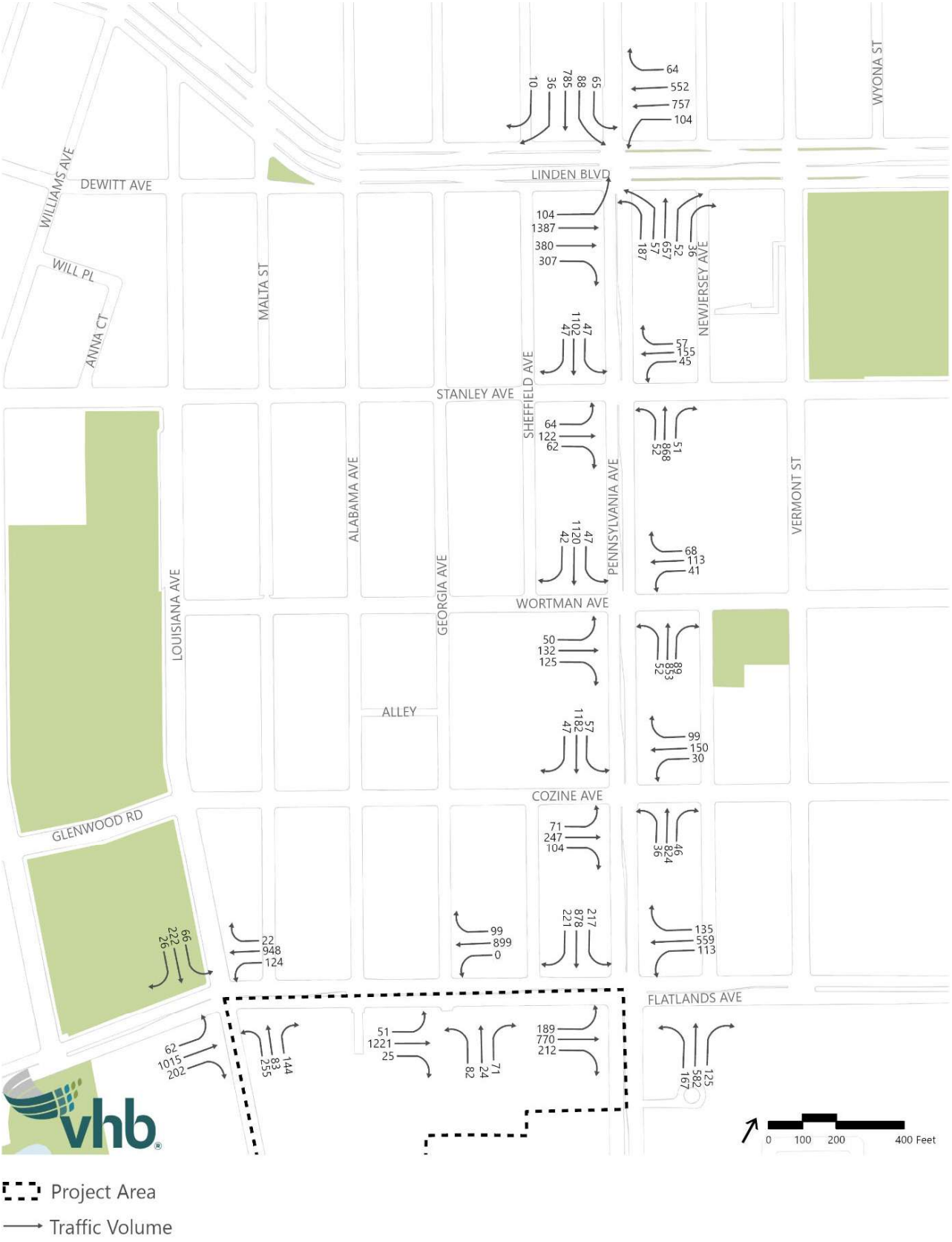


Figure 13-61 With-Action Traffic Volumes – Weekday PM Peak Hour (South Study Area)



Figure 13-62 With-Action Traffic Volumes – Weekday PM Peak Hour (Project Area)

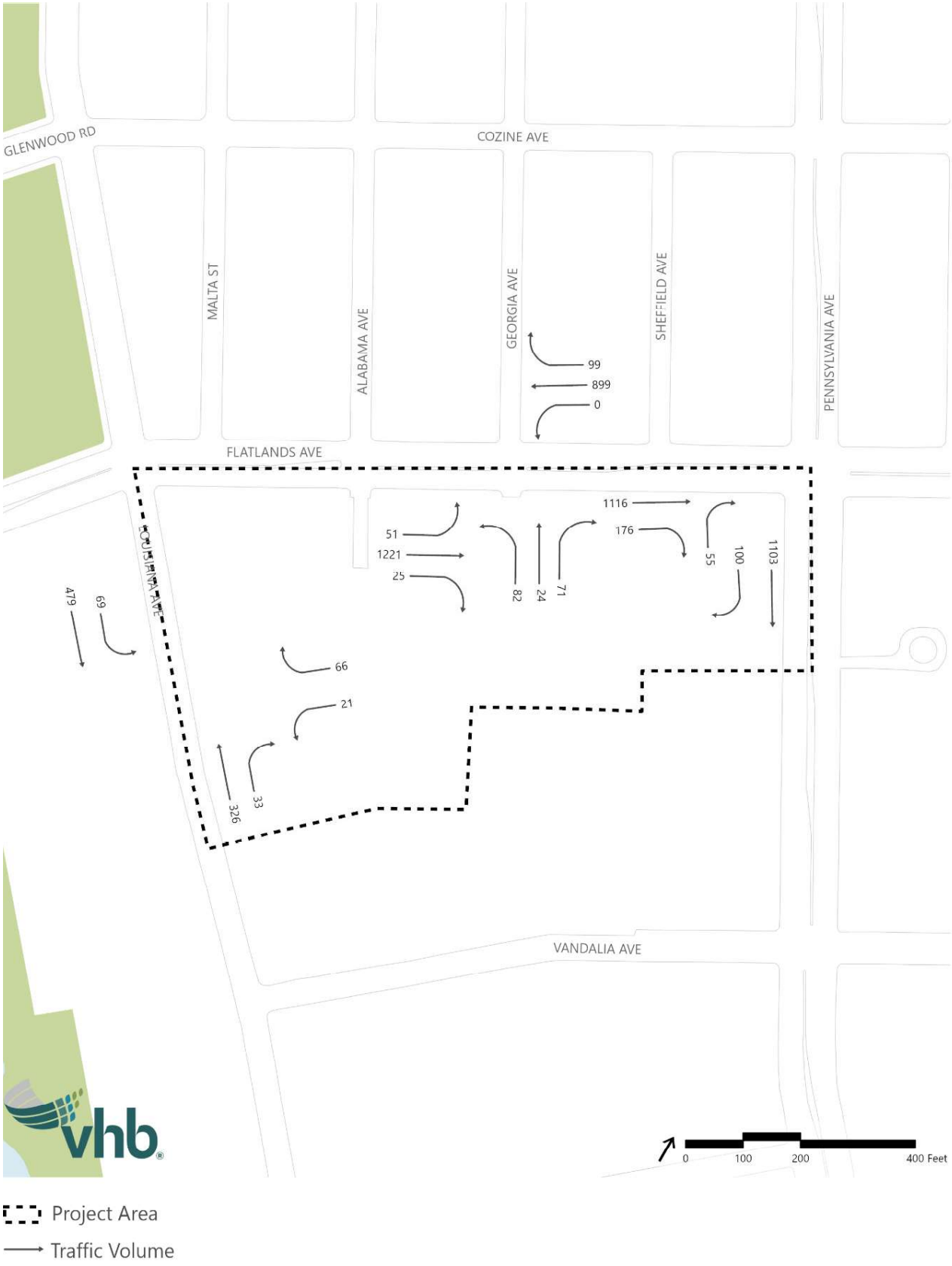


Figure 13-63 With-Action Traffic Volumes – Saturday Peak Hour (North Study Area)



Figure 13-64 With-Action Traffic Volumes – Saturday Peak Hour (South Study Area)



Figure 13-65 With-Action Traffic Volumes – Saturday Peak Hour (Project Area)

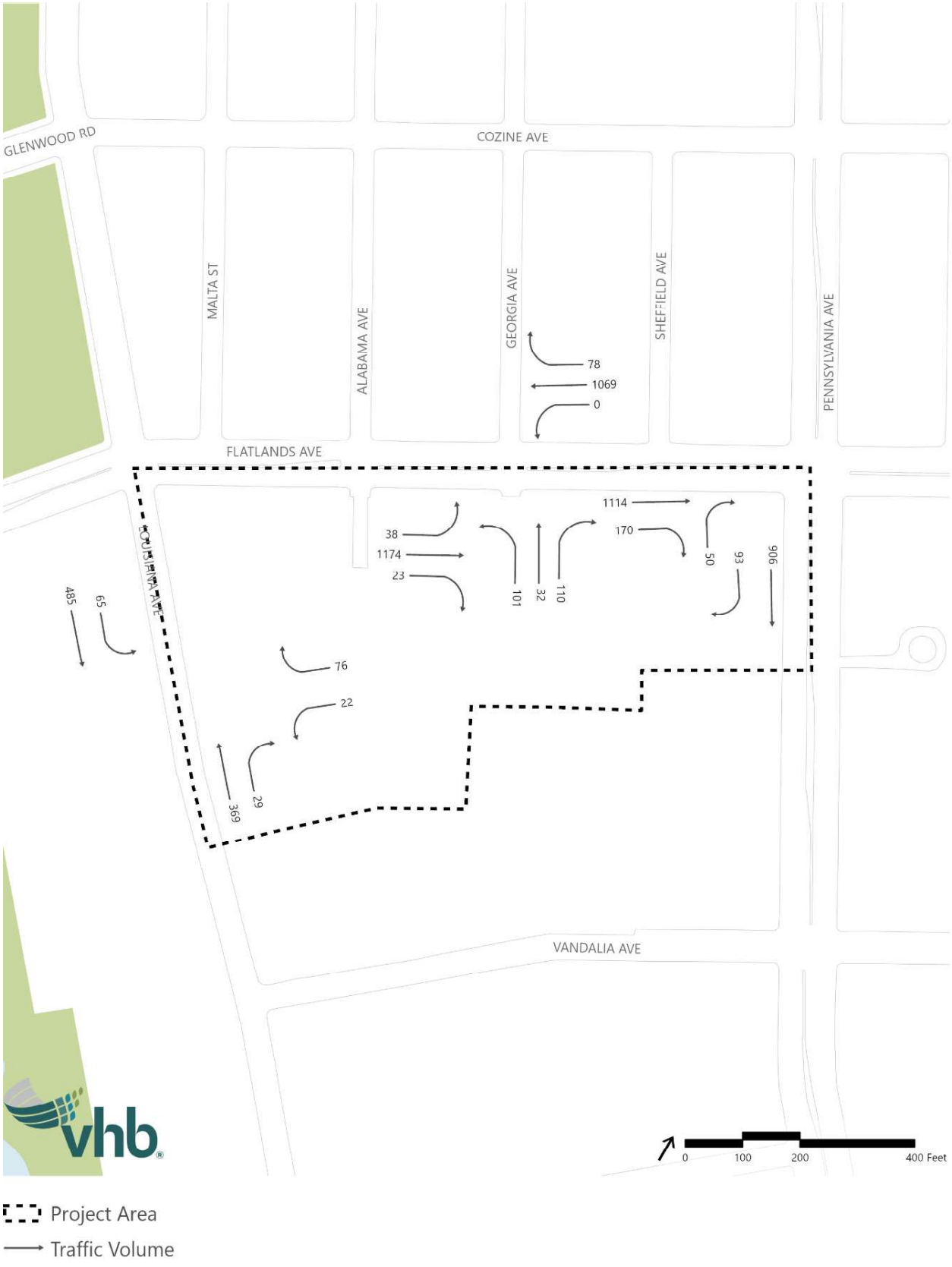
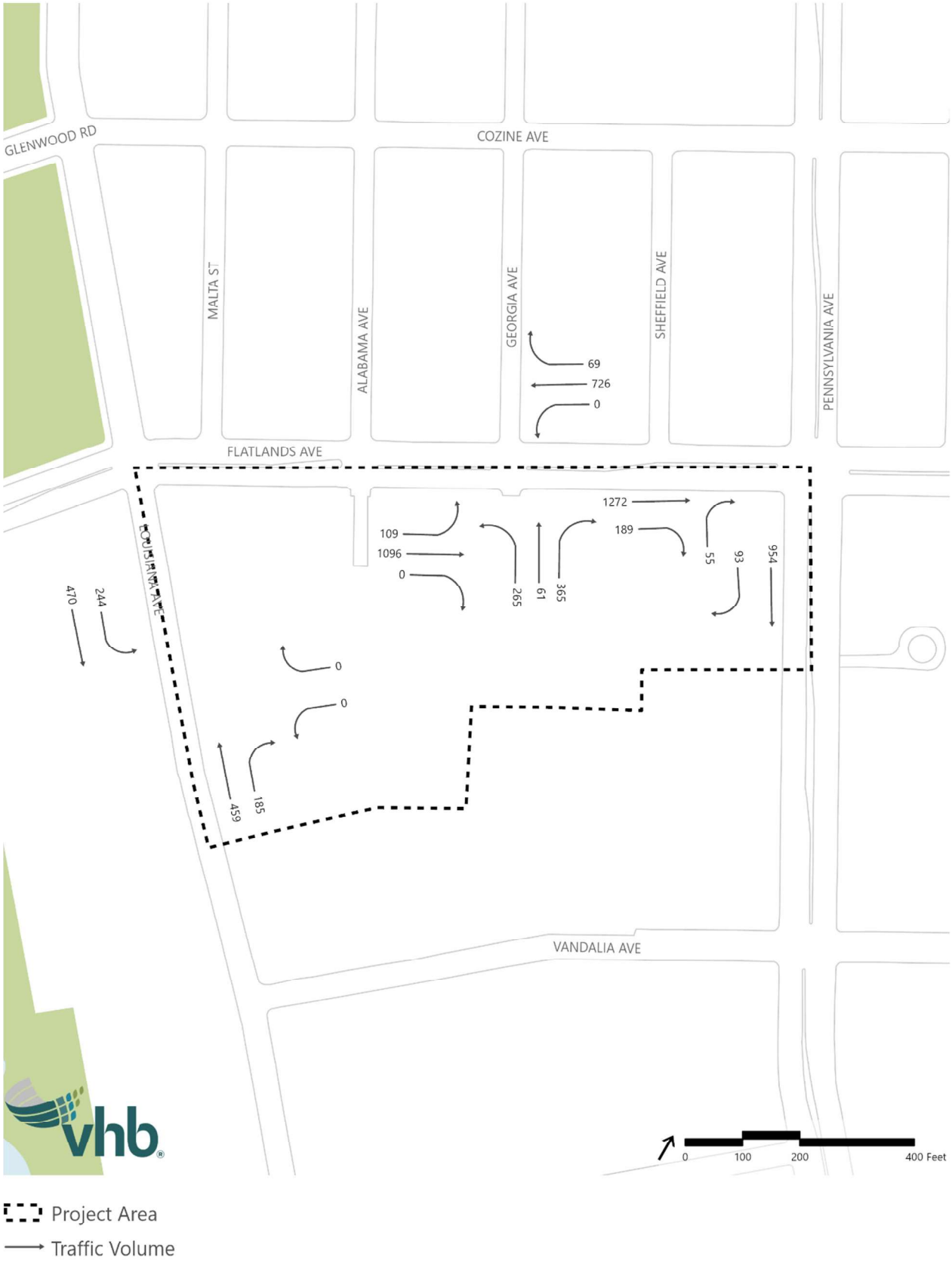


Figure 13-66 With-Action Traffic Volumes – Sunday Peak Hour (Study Area)



Figure 13-67 With-Action Traffic Volumes – Sunday Peak Hour (Project Area)



Levels of Service

Based on the traffic volume increments detailed above, the 2031 With-Action traffic levels of service were determined for the traffic analysis locations. **Table 13-47** and **Table 13-48** provide an overview of the levels of service that characterize 2031 With-Action "overall" intersection conditions and individual traffic movements during the weekday AM, midday, PM, Saturday, and Sunday peak hours. Detailed traffic levels of service comparing the No-Action and With-Action conditions during each peak hour are provided in **Table 13-49** through **Table 13-52**.

Table 13-47 Year 2031 With-Action Traffic Level of Service Summary – Overall Intersections

	No-Action					With-Action				
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
Intersections at Overall LOS A/B/C	10	11	10	8	4	9	12	9	8	4
Intersections at Overall LOS D	2	2	2	4	2	5	3	4	4	3
Intersections at Overall LOS E	1	0	1	1	0	1	1	3	3	2
Intersections at Overall LOS F	0	0	0	0	1	1	0	0	1	1
Number of significantly impacted intersections	-	-	-	-	-	9	7	9	7	4

Note: Includes 12 signalized intersections and 1 unsignalized intersection in the No-Action condition, and 13 signalized intersections and 3 unsignalized intersections in the With-Action condition for the weekday and Saturday peak hours. For the Sunday peak hour, the No-Action condition analysis includes 6 signalized intersections and 1 unsignalized intersection, and 7 signalized intersections and 3 unsignalized intersections in the With-Action condition. The intersection of Flatlands Avenue and Georgia Avenue would be signalized in the With-Action condition.

Table 13-48 Year 2031 With-Action Traffic Level of Service Summary – Traffic Movements

	No-Action					With-Action				
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
Traffic Movements at LOS A/B/C	44	50	44	54	29	44	51	45	50	31
Traffic Movements at LOS D	31	27	26	23	10	30	29	21	29	13
Traffic Movements at LOS E	10	9	17	7	3	16	11	20	5	5
Traffic Movements at LOS F	7	7	6	8	8	10	10	15	16	8
Number of significantly impacted movements	-	-	-	-	-	15	11	22	15	8
Number of Individual Traffic Movements	92	93	93	92	50	100	101	101	100	57

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left turn movements. The Sunday peak hour analysis addressed a subset of seven out of the 13 traffic analysis locations.

Table 13-49 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS									
Pennsylvania Avenue and Seaview Avenue									
Seaview Avenue	EB	LT	0.27	41.1	D	LT	0.27	46.5	D
		R	0.67	51.8	D	R	0.69	57.4	E
	WB	LTR	0.58	39.3	D	LTR	0.58	39.3	D
Pennsylvania Avenue	NB	L	0.58	62.6	E	L	0.58	62.6	E
		T	0.81	35.0	C	T	0.81	35.0	C
	SB	L	0.22	76.7	E	L	0.22	74.5	E
		TR	0.61	29.5	C	TR	0.67	29.9	C
Shore Parkway Westbound Off-Ramp	NB	TR	0.68	26.7	C	TR	0.70	27.5	C
Overall Intersection[2]		-	-	**33.7**	**C**	-	-	**34.5**	**C**
Pennsylvania Avenue and Twin Pines Drive									
Twin Pines Drive	EB	LR	0.34	36.0	D	LR	0.36	36.5	D
Pennsylvania Avenue	NB	L	0.51	15.3	B	L	0.59	25.8	C
		T	0.75	8.0	A	T	0.77	8.3	A
	SB	T	0.48	27.6	C	T	0.53	24.9	C
		R	0.19	24.1	C	R	0.19	21.1	C
Overall Intersection[2]		-	-	**16.2**	**B**	-	-	**16.5**	**B**
Pennsylvania Avenue and Vandalia Avenue									
Vandalia Avenue	EB	LTR	0.28	38.3	D	LTR	0.33	44.5	D
	WB	LTR	0.71	48.6	D	LTR	0.82	60.8	E
Pennsylvania Avenue	NB	L	0.43	46.1	D	L	0.73	60.2	E
		T	0.90	12.4	B	T	0.91	13.2	B
		R	0.18	3.6	A	R	0.20	4.1	A
	SB	L	0.20	33.4	C	L	0.18	37.8	D
		T	0.45	19.2	B	T	0.50	21.1	C
		R	0.08	16.8	B	R	0.19	18.5	B
Overall Intersection[2]		-	-	**19.1**	**B**	-	-	**22.2**	**C**

Table 13-49 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.54	43.5	D	L	0.95	74.5	E
		T	0.51	39.6	D	T	0.55	34.2	C
		R	0.12	26.3	C	R	0.36	24.2	C
	WB	L	0.26	34.3	C	L	0.33	37.3	D
		T	0.57	41.4	D	T	0.58	41.6	D
		R	0.41	31.4	C	R	0.42	31.9	C
Pennsylvania Avenue	NB	L	0.94	47.4	D	L	1.01	64.9	E
		T	0.97	27.3	C	T	0.97	27.9	C
		R	0.20	9.6	A	R	0.22	10.1	B
	SB	L	0.83	66.5	E	L	0.83	65.6	E
		T	0.59	40.3	D	T	0.64	38.7	D
		R	0.36	37.5	D	R	0.44	37.6	D
Overall Intersection[2]		-	-	**36.3**	**D**	-	-	**39.0**	**D**
Pennsylvania Avenue and Cozine Avenue									
Cozine Avenue	EB	LTR	1.05	102.2	F	LTR	1.11	121.4	F
	WB	LTR	0.56	38.2	D	LTR	0.58	39.1	D
Pennsylvania Avenue	NB	L	0.52	14.3	B	L	0.58	18.0	B
		TR	0.87	19.1	B	TR	0.93	24.9	C
	SB	L	0.63	42.4	D	L	0.83	82.0	F
		TR	0.65	14.1	B	TR	0.69	15.3	B
Overall Intersection[2]		-	-	**29.5**	**C**	-	-	**35.0**	**D**
Pennsylvania Avenue and Wortman Avenue									
Wortman Avenue	EB	LTR	0.68	44.9	D	LTR	0.72	47.0	D
	WB	LTR	0.43	36.2	D	LTR	0.45	36.8	D
Pennsylvania Avenue	NB	L	0.61	79.4	E	L	0.61	77.0	E
		TR	0.99	22.8	C	TR	1.06	44.3	D
	SB	L	0.41	54.4	D	L	0.41	54.4	D
		TR	0.63	19.0	B	TR	0.67	20.4	C
Overall Intersection[2]		-	-	**26.5**	**C**	-	-	**37.9**	**D**

Table 13-49 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Stanley Avenue									
Stanley Avenue	EB	LTR	0.89	76.6	E	LTR	1.06	119.9	F
	WB	LTR	0.85	67.6	E	LTR	0.87	71.1	E
Pennsylvania Avenue	NB	L	0.73	82.2	F	L	0.73	78.8	E
		TR	0.86	8.3	A	TR	0.93	8.7	A
	SB	L	0.25	40.6	D	L	0.25	40.2	D
		TR	0.63	34.4	C	TR	0.67	35.2	D
Overall Intersection[2]		-	-	**31.0**	**C**	-	-	**34.8**	**C**
Pennsylvania Avenue and Linden Boulevard									
Linden Boulevard Main Line	EB	L	0.68	77.1	E	L	0.68	77.1	E
		T	0.56	37.2	D	T	0.56	37.2	D
	WB	L	0.86	106.3	F	L	0.91	115.0	F
		T	0.96	55.4	E	T	0.96	55.4	E
Pennsylvania Avenue	NB	L	1.23	149.5	F	L	1.32	188.2	F
		T	1.11	107.4	F	T	1.25	167.8	F
		R	0.22	47.2	D	R	0.24	47.3	D
	SB	L	0.94	98.0	F	L	0.94	100.5	F
		TR	0.80	45.6	D	TR	0.87	50.3	D
Linden Boulevard Eastbound Service Rd	EB	T	0.56	40.2	D	T	0.56	40.2	D
		R	0.39	28.3	C	R	0.39	28.3	C
Linden Boulevard Westbound Service Rd	WB	TR	0.96	76.4	E	TR	0.96	76.4	E
Overall Intersection[2]		-	-	**68.9**	**E**	-	-	**83.7**	**F**
Louisiana Avenue and Vandalia Avenue									
Vandalia Avenue	WB	LR	0.33	16.9	B	LR	0.45	16.0	B
Louisiana Avenue	NB	TR	0.32	12.8	B	TR	0.35	12.6	B
	SB	LT	0.49	11.5	B	LT	0.53	16.5	B
Overall Intersection[2]		-	-	**12.9**	**B**	-	-	**15.1**	**B**

Table 13-49 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Louisiana Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.04	22.0	C	L	0.05	24.1	C
		T	0.46	23.5	C	T	0.50	24.3	C
		R	0.37	23.2	C	R	0.89	64.6	E
	WB	L	0.26	23.5	C	L	0.36	27.4	C
		TR	0.56	25.4	C	TR	0.64	27.2	C
Louisiana Avenue	NB	L	0.64	43.5	D	L	0.94	78.0	E
		TR	0.26	36.9	D	TR	0.67	52.9	D
	SB	L	0.04	28.9	C	L	0.18	36.1	D
		TR	0.16	35.4	D	TR	0.20	36.2	D
Overall Intersection[2]		-	-	**27.6**	**C**	-	-	**38.3**	**D**
Flatlands Avenue and East 108th Street									
Flatlands Avenue	EB	L	0.13	13.0	B	L	0.15	14.9	B
		TR	0.42	15.5	B	TR	0.45	16.1	B
	WB	L	0.35	16.8	B	L	0.40	19.0	B
		TR	0.46	16.2	B	TR	0.54	17.7	B
East 108th Street	NB	LTR	0.99	91.8	F	LTR	1.03	100.7	F
	SB	LTR	0.55	46.2	D	LTR	0.58	48.0	D
Overall Intersection[2]		-	-	**31.3**	**C**	-	-	**32.9**	**C**
Flatlands Avenue and Rockaway Parkway									
Flatlands Avenue	EB	L	0.26	39.1	D	L	0.31	43.7	D
		TR	0.66	36.8	D	TR	0.70	38.5	D
	WB	L	0.12	32.1	C	L	0.12	33.1	C
		TR	0.77	40.9	D	TR	0.90	50.8	D
Rockaway Parkway	NB	L	0.46	29.9	C	L	0.48	30.9	C
		TR	0.68	33.3	C	TR	0.68	33.3	C
	SB	LT	0.91	64.9	E	LT	1.04	97.7	F
		R	0.36	35.4	D	R	0.36	35.4	D
Overall Intersection[2]		-	-	**41.4**	**D**	-	-	**50.3**	**D**

Table 13-49 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
UNSIGNALIZED INTERSECTIONS									
Flatlands Avenue and Georgia Avenue								**(SIGNALIZED)**	
Flatlands Avenue	EB	LTR	-	1.4	A	L	0.21	10.6	B
		-	-	-	-	TR	0.39	10.4	B
	WB	L	-	0.0	A	L	0.00	0.0	A
		TR	-	0.0	A	TR	0.55	5.4	A
Georgia Access	NB	-	-	-	-	LTR	0.56	44.1	D
Overall Intersection[2]		-	-	**0.3**	**A**	-	-	**11.3**	**B**
Flatlands Avenue and Sheffield Avenue/Site Driveway									
Flatlands Avenue	EB	-	-	-	-	TR	0.25	0.0	A
Site Driveway[3]	NB	-	-	-	-	R	1.15	175.1	F
Overall Intersection[2]		-	-	-	-	-	-	**35.3**	**E**
Pennsylvania Avenue and Site Driveway									
Pennsylvania Avenue	SB	-	-	-	-	T	0.35	0.0	A
Overall Intersection[2]		-	-	-	-	-	-	**0.0**	**A**
Louisiana Avenue and Site Driveway									
Louisiana Avenue	NB	-	-	-	-	TR	0.22	0.0	A
	SB	-	-	-	-	LT	0.07	2.3	A
Site Driveway	WB	-	-	-	-	LR	0.41	26.1	D
Overall Intersection[2]		-	-	-	-	-	-	**4.7**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] Although traffic volumes along the project's driveway approach at Flatlands Avenue and Sheffield Avenue is modest, the Synchro model projects that this approach would operate with poor levels of service due to pedestrian conflicts. The pedestrian conflict inputs assumes that each pedestrian crossing the approach is a conflict and is a conservative approach since pedestrians typically cross in groups and each group is considered a pedestrian conflict. The Applicant will coordinate with NYC DOT in the driveway design process.

Denotes a significantly impacted movement

Table 13-50 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS									
Pennsylvania Avenue and Seaview Avenue									
Seaview Avenue	EB	LT	0.19	29.4	C	LT	0.19	36.5	D
		R	0.47	34.0	C	R	0.48	42.6	D
	WB	LTR	0.48	35.8	D	LTR	0.48	35.8	D
Pennsylvania Avenue	NB	L	0.42	56.9	E	L	0.42	56.9	E
		T	0.46	22.5	C	T	0.46	22.5	C
	SB	L	0.23	67.8	E	L	0.23	70.1	E
		TR	0.62	27.5	C	TR	0.65	28.5	C
Shore Parkway Westbound Off-Ramp	NB	TR	0.35	20.1	C	TR	0.38	20.6	C
Overall Intersection[2]		-	-	**27.3**	**C**	-	-	**28.6**	**C**
Pennsylvania Avenue and Twin Pines Drive									
Twin Pines Drive	EB	LR	0.77	51.4	D	LR	0.79	52.7	D
Pennsylvania Avenue	NB	L	0.41	13.7	B	L	0.48	16.5	B
		T	0.41	9.4	A	T	0.43	8.3	A
	SB	T	0.50	9.9	A	T	0.52	9.5	A
		R	0.29	7.9	A	R	0.29	7.7	A
Overall Intersection[2]		-	-	**15.9**	**B**	-	-	**15.6**	**B**
Pennsylvania Avenue and Vandalia Avenue									
Vandalia Avenue	EB	LTR	0.42	42.5	D	LTR	0.50	35.1	D
	WB	LTR	0.74	50.8	D	LTR	0.85	64.8	E
Pennsylvania Avenue	NB	L	0.94	117.3	F	L	1.46	302.0	F
		T	0.48	6.8	A	T	0.48	7.3	A
		R	0.21	6.2	A	R	0.24	7.0	A
	SB	L	0.38	64.2	E	L	0.38	61.5	E
		T	0.48	35.9	D	T	0.50	33.4	C
		R	0.08	27.3	C	R	0.17	27.2	C
Overall Intersection[2]		-	-	**29.1**	**C**	-	-	**39.9**	**D**

Table 13-50 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.66	50.8	D	L	0.93	65.1	E
		T	0.70	41.6	D	T	0.73	33.8	C
		R	0.32	28.4	C	R	0.51	27.5	C
	WB	L	0.44	44.1	D	L	0.54	49.2	D
		T	0.58	38.2	D	T	0.58	38.4	D
		R	0.44	30.9	C	R	0.46	31.5	C
Pennsylvania Avenue	NB	L	0.55	49.5	D	L	0.59	53.6	D
		T	0.57	28.4	C	T	0.57	27.7	C
		R	0.30	23.3	C	R	0.33	23.4	C
	SB	L	0.80	49.2	D	L	0.80	46.4	D
		T	0.64	16.5	B	T	0.69	16.1	B
		R	0.41	13.1	B	R	0.51	14.4	B
Overall Intersection[2]		-	-	**32.4**	**C**	-	-	**32.1**	**C**
Pennsylvania Avenue and Cozine Avenue									
Cozine Avenue	EB	LTR	1.05	98.2	F	LTR	1.07	105.6	F
	WB	LTR	0.68	45.0	D	LTR	0.70	46.6	D
Pennsylvania Avenue	NB	L	0.39	15.3	B	L	0.45	16.6	B
		TR	0.65	12.6	B	TR	0.69	12.2	B
	SB	L	0.34	9.0	A	L	0.37	9.5	A
		TR	0.70	11.7	B	TR	0.75	11.1	B
Overall Intersection[2]		-	-	**28.0**	**C**	-	-	**28.3**	**C**
Pennsylvania Avenue and Wortman Avenue									
Wortman Avenue	EB	LTR	0.70	46.3	D	LTR	0.73	47.8	D
	WB	LTR	0.42	35.7	D	LTR	0.44	36.3	D
Pennsylvania Avenue	NB	L	0.56	62.4	E	L	0.56	63.5	E
		TR	0.77	31.6	C	TR	0.81	31.6	C
	SB	L	0.44	70.4	E	L	0.44	67.9	E
		TR	0.70	11.5	B	TR	0.75	13.2	B
Overall Intersection[2]		-	-	**27.3**	**C**	-	-	**27.9**	**C**

Table 13-50 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Stanley Avenue									
Stanley Avenue	EB	LTR	0.75	56.1	E	LTR	0.81	62.7	E
	WB	LTR	0.82	61.5	E	LTR	0.85	64.3	E
Pennsylvania Avenue	NB	L	0.56	73.6	E	L	0.56	74.1	E
		TR	0.65	6.1	A	TR	0.68	6.1	A
	SB	L	0.48	43.9	D	L	0.48	40.6	D
		TR	0.57	25.3	C	TR	0.61	27.9	C
Overall Intersection[2]		-	-	**25.6**	**C**	-	-	**27.1**	**C**
Pennsylvania Avenue and Linden Boulevard									
Linden Boulevard Main Line	EB	L	0.99	128.7	F	L	0.99	128.7	F
		T	0.70	40.3	D	T	0.70	40.3	D
	WB	L	0.91	113.3	F	L	0.95	122.3	F
		T	0.77	42.5	D	T	0.77	42.5	D
Pennsylvania Avenue	NB	L	1.14	122.4	F	L	1.22	152.4	F
		T	0.88	34.8	C	T	0.95	43.1	D
		R	0.40	21.5	C	R	0.41	23.0	C
	SB	L	0.79	64.2	E	L	0.84	73.6	E
		TR	0.69	40.7	D	TR	0.75	43.0	D
Linden Boulevard Eastbound Service Rd	EB	T	0.58	40.3	D	T	0.58	40.3	D
		R	0.46	29.6	C	R	0.46	29.6	C
Linden Boulevard Westbound Service Rd	WB	T	1.06	100.7	F	T	1.06	100.7	F
		R	0.20	32.5	C	R	0.20	32.5	C
Overall Intersection[2]		-	-	**54.1**	**D**	-	-	**57.5**	**E**
Louisiana Avenue and Vandalia Avenue									
Vandalia Avenue	WB	LR	0.37	23.0	C	LR	0.49	26.8	C
Louisiana Avenue	NB	TR	0.28	7.5	A	TR	0.31	8.2	A
	SB	LT	0.53	12.2	B	LT	0.57	18.5	B
Overall Intersection[2]		-	-	**13.2**	**B**	-	-	**17.6**	**B**

Table 13-50 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Louisiana Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.09	21.2	C	L	0.10	22.5	C
		T	0.63	26.9	C	T	0.67	28.2	C
		R	0.46	25.1	C	R	1.15	139.4	F
	WB	L	0.38	31.5	C	L	0.52	39.2	D
		TR	0.46	23.4	C	TR	0.51	24.3	C
Louisiana Avenue	NB	L	0.69	45.4	D	L	0.97	84.6	F
		TR	0.29	37.3	D	TR	0.67	51.3	D
	SB	L	0.02	29.2	C	L	0.17	35.9	D
		TR	0.13	34.8	C	TR	0.16	35.4	D
Overall Intersection[2]		-	-	**28.9**	**C**	-	-	**47.6**	**D**
Flatlands Avenue and East 108th Street									
Flatlands Avenue	EB	L	0.18	14.9	B	L	0.20	16.3	B
		TR	0.58	19.3	B	TR	0.63	20.4	C
	WB	L	0.50	27.3	C	L	0.57	33.1	C
		TR	0.44	16.9	B	TR	0.49	17.7	B
East 108th Street	NB	LTR	0.96	85.1	F	LTR	1.00	94.5	F
	SB	LTR	0.65	50.2	D	LTR	0.69	52.9	D
Overall Intersection[2]		-	-	**30.7**	**C**	-	-	**32.8**	**C**
Flatlands Avenue and Rockaway Parkway									
Flatlands Avenue	EB	L	0.28	36.6	D	L	0.30	38.8	D
		TR	0.85	44.2	D	TR	0.89	47.4	D
	WB	L	0.19	37.6	D	L	0.20	39.0	D
		TR	0.67	35.5	D	TR	0.73	37.4	D
Rockaway Parkway	NB	L	0.46	29.5	C	L	0.49	30.7	C
		TR	0.47	28.3	C	TR	0.47	28.3	C
	SB	LT	0.69	45.4	D	LT	0.80	52.7	D
		R	0.29	34.7	C	R	0.29	34.7	C
Overall Intersection[2]		-	-	**38.3**	**D**	-	-	**41.1**	**D**

Table 13-50 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
UNSIGNALIZED INTERSECTIONS									
Flatlands Avenue and Georgia Avenue								**(SIGNALIZED)**	
Flatlands Avenue	EB	LTR	-	1.2	A	L	0.18	11.0	B
		-	-	-	-	TR	0.57	14.5	B
	WB	L	-	0.0	A	L	0.00	0.0	A
		TR	-	0.0	A	TR	0.49	10.7	B
Georgia Access	NB	-	-	-	-	LTR	0.29	34.5	C
Overall Intersection[2]		-	-	**0.3**	**A**	-	-	**14.0**	**B**
Flatlands Avenue and Sheffield Avenue/Site Driveway									
Flatlands Avenue	EB	-	-	-	-	TR	0.35	0.0	A
Site Driveway[3]	NB	-	-	-	-	R	1.07	200.9	F
Overall Intersection[2]		-	-	-	-	-	-	**17.4**	**C**
Pennsylvania Avenue and Site Driveway									
Pennsylvania Avenue	SB	-	-	-	-	T	0.39	0.0	A
Overall Intersection[2]		-	-	-	-	-	-	**0.0**	**A**
Louisiana Avenue and Site Driveway									
Louisiana Avenue	NB	-	-	-	-	TR	0.21	0.0	A
	SB	-	-	-	-	LT	0.09	2.7	A
Site Driveway	WB	-	-	-	-	LR	0.35	27.6	D
Overall Intersection[2]		-	-	-	-	-	-	**4.0**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] Although traffic volumes along the project's driveway approach at Flatlands Avenue and Sheffield Avenue is modest, the Synchro model projects that this approach would operate with poor levels of service due to pedestrian conflicts. The pedestrian conflict inputs assumes that each pedestrian crossing the approach is a conflict and is a conservative approach since pedestrians typically cross in groups and each group is considered a pedestrian conflict. The Applicant will coordinate with NYC DOT in the driveway design process.

Denotes a significantly impacted movement

Table 13-51 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS									
Pennsylvania Avenue and Seaview Avenue									
Seaview Avenue	EB	LT	0.23	36.0	D	LT	0.23	31.7	C
		R	0.87	60.3	E	R	0.88	55.1	E
	WB	LTR	0.52	36.8	D	LTR	0.52	36.8	D
Pennsylvania Avenue	NB	L	0.31	55.8	E	L	0.31	55.8	E
		T	0.43	21.7	C	T	0.43	21.7	C
	SB	L	0.21	50.3	D	L	0.21	51.6	D
		TR	0.72	14.3	B	TR	0.75	16.1	B
Shore Parkway Westbound Off-Ramp	NB	TR	0.38	20.5	C	TR	0.44	21.3	C
Overall Intersection[2]		-	-	**26.0**	**C**	-	-	**25.8**	**C**
Pennsylvania Avenue and Twin Pines Drive									
Twin Pines Drive	EB	LR	0.84	57.9	E	LR	0.86	60.2	E
Pennsylvania Avenue	NB	L	0.51	30.1	C	L	0.64	36.0	D
		T	0.37	22.7	C	T	0.40	21.8	C
	SB	T	0.56	10.0	A	T	0.59	10.2	B
		R	0.30	7.7	A	R	0.30	8.0	A
Overall Intersection[2]		-	-	**22.4**	**C**	-	-	**22.9**	**C**
Pennsylvania Avenue and Vandalia Avenue									
Vandalia Avenue	EB	LTR	0.40	42.9	D	LTR	0.49	42.9	D
	WB	LTR	0.81	58.6	E	LTR	0.97	89.6	F
Pennsylvania Avenue	NB	L	0.45	46.7	D	L	0.92	97.2	F
		T	0.55	6.2	A	T	0.54	6.5	A
		R	0.20	5.3	A	R	0.25	6.1	A
	SB	L	0.53	41.5	D	L	0.48	41.2	D
		T	0.59	18.1	B	T	0.63	17.3	B
		R	0.06	12.8	B	R	0.18	12.7	B
Overall Intersection[2]		-	-	**20.2**	**C**	-	-	**25.6**	**C**

Table 13-51 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.55	49.7	D	L	0.81	84.1	F
		T	0.95	63.9	E	T	0.99	76.4	E
		R	0.37	29.9	C	R	0.61	43.1	D
	WB	L	0.49	53.6	D	L	0.64	60.8	E
		T	0.72	44.6	D	T	0.73	45.0	D
		R	0.31	28.7	C	R	0.33	29.2	C
Pennsylvania Avenue	NB	L	0.78	39.4	D	L	0.87	53.1	D
		T	0.55	13.2	B	T	0.55	15.3	B
		R	0.35	13.0	B	R	0.39	16.1	B
	SB	L	0.75	28.1	C	L	0.75	25.6	C
		T	0.72	15.0	B	T	0.79	18.1	B
		R	0.52	14.3	B	R	0.68	19.9	B
Overall Intersection[2]		-	-	**32.9**	**C**	-	-	**39.5**	**D**
Pennsylvania Avenue and Cozine Avenue									
Cozine Avenue	EB	LTR	1.10	113.9	F	LTR	1.14	126.8	F
	WB	LTR	0.73	45.5	D	LTR	0.77	48.3	D
Pennsylvania Avenue	NB	L	0.36	17.2	B	L	0.45	21.3	C
		TR	0.57	12.9	B	TR	0.61	12.9	B
	SB	L	0.35	9.8	A	L	0.39	9.8	A
		TR	0.74	16.8	B	TR	0.81	16.7	B
Overall Intersection[2]		-	-	**33.7**	**C**	-	-	**35.2**	**D**
Pennsylvania Avenue and Wortman Avenue									
Wortman Avenue	EB	LTR	0.88	62.1	E	LTR	0.92	67.8	E
	WB	LTR	0.63	42.7	D	LTR	0.68	45.5	D
Pennsylvania Avenue	NB	L	0.57	60.4	E	L	0.57	62.0	E
		TR	0.64	27.2	C	TR	0.69	23.6	C
	SB	L	0.55	73.8	E	L	0.55	75.7	E
		TR	0.75	13.5	B	TR	0.82	15.3	B
Overall Intersection[2]		-	-	**29.3**	**C**	-	-	**29.4**	**C**

Table 13-51 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Stanley Avenue									
Stanley Avenue	EB	LTR	0.75	55.0	D	LTR	0.81	60.7	E
	WB	LTR	0.89	72.4	E	LTR	0.92	79.4	E
Pennsylvania Avenue	NB	L	0.57	57.4	E	L	0.57	57.8	E
		TR	0.55	12.2	B	TR	0.58	13.0	B
	SB	L	0.50	62.6	E	L	0.50	65.1	E
		TR	0.69	13.7	B	TR	0.74	13.5	B
Overall Intersection[2]		-	-	**25.0**	**C**	-	-	**26.0**	**C**
Pennsylvania Avenue and Linden Boulevard									
Linden Boulevard Main Line	EB	L	0.75	82.3	F	L	0.75	82.3	F
		T	1.02	70.8	E	T	1.02	70.8	E
	WB	L	0.87	101.6	F	L	0.87	101.6	F
		T	0.58	37.4	D	T	0.58	37.4	D
Pennsylvania Avenue	NB	L	1.13	142.3	F	L	1.27	199.1	F
		T	0.71	48.9	D	T	0.77	52.3	D
		R	0.33	41.9	D	R	0.33	41.6	D
	SB	L	0.72	55.3	E	L	0.77	62.4	E
		TR	0.84	47.2	D	TR	0.94	58.0	E
Linden Boulevard Eastbound Service Rd	EB	T	0.80	50.6	D	T	0.80	50.6	D
		R	0.54	31.6	C	R	0.54	31.6	C
Linden Boulevard Westbound Service Rd	WB	T	1.09	107.9	F	T	1.09	107.9	F
		R	0.18	32.1	C	R	0.18	32.1	C
Overall Intersection[2]		-	-	**63.4**	**E**	-	-	**67.9**	**E**
Louisiana Avenue and Vandalia Avenue									
Vandalia Avenue	WB	LR	0.30	16.0	B	LR	0.48	19.4	B
Louisiana Avenue	NB	TR	0.28	9.3	A	TR	0.33	9.3	A
	SB	LT	0.75	17.4	B	LT	0.79	15.5	B
Overall Intersection[2]		-	-	**15.2**	**B**	-	-	**14.7**	**B**

Table 13-51 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Louisiana Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.34	34.6	C	L	0.38	38.9	D
		T	0.72	29.7	C	T	0.79	32.5	C
		R	0.36	23.0	C	R	1.14	141.3	F
	WB	L	0.46	39.9	D	L	0.69	56.4	E
		TR	0.64	27.1	C	TR	0.71	28.9	C
Louisiana Avenue	NB	L	0.93	80.8	F	L	1.18	158.6	F
		TR	0.35	38.5	D	TR	0.86	63.5	E
	SB	L	0.08	31.6	C	L	0.37	44.8	D
		TR	0.65	47.7	D	TR	0.71	51.3	D
Overall Intersection[2]		-	-	**35.4**	**D**	-	-	**54.6**	**D**
Flatlands Avenue and East 108th Street									
Flatlands Avenue	EB	L	0.20	18.1	B	L	0.22	20.5	C
		TR	0.69	21.5	C	TR	0.76	23.9	C
	WB	L	0.87	59.4	E	L	1.04	100.5	F
		TR	0.56	18.4	B	TR	0.62	19.6	B
East 108th Street	NB	LTR	0.87	68.2	E	LTR	0.91	74.4	E
	SB	LTR	0.88	70.9	E	LTR	0.93	81.1	F
Overall Intersection[2]		-	-	**33.1**	**C**	-	-	**39.0**	**D**
Flatlands Avenue and Rockaway Parkway									
Flatlands Avenue	EB	L	0.36	47.6	D	L	0.37	49.5	D
		TR	1.02	72.5	E	TR	1.07	89.5	F
	WB	L	0.18	44.7	D	L	0.18	46.5	D
		TR	0.89	48.0	D	TR	0.95	56.2	E
Rockaway Parkway	NB	L	0.51	29.8	C	L	0.56	32.4	C
		TR	0.44	26.4	C	TR	0.44	26.4	C
	SB	LT	0.72	44.9	D	LT	0.87	58.8	E
		R	0.37	35.4	D	R	0.37	35.4	D
Overall Intersection[2]		-	-	**52.2**	**D**	-	-	**62.7**	**E**

Table 13-51 Year 2031 No-Action vs With-Action Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
UNSIGNALIZED INTERSECTIONS									
Flatlands Avenue and Georgia Avenue								**(SIGNALIZED)**	
Flatlands Avenue	EB	LTR	-	1.8	A	L	0.23	9.6	A
		-	-	-	-	TR	0.68	13.2	B
	WB	L	-	0.0	A	L	0.00	0.0	A
		TR	-	0.0	A	TR	0.50	18.0	B
Georgia Access	NB	-	-	-	-	LTR	0.70	54.3	D
Overall Intersection[2]		-	-	**0.5**	**A**	-	-	**18.4**	**B**
Flatlands Avenue and Sheffield Avenue/Site Driveway									
Flatlands Avenue	EB	-	-	-	-	TR	0.47	0.0	A
Site Driveway[3]	NB	-	-	-	-	R	2.00+	600+	F
Overall Intersection[2]		-	-	-	-	-	-	**39.9**	**E**
Pennsylvania Avenue and Site Driveway									
Pennsylvania Avenue	SB	-	-	-	-	T	0.47	0.0	A
Overall Intersection[2]		-	-	-	-	-	-	**0.0**	**A**
Louisiana Avenue and Site Driveway									
Louisiana Avenue	NB	-	-	-	-	TR	0.23	0.0	A
	SB	-	-	-	-	LT	0.16	4.5	A
Site Driveway[3]	WB	-	-	-	-	LR	0.66	69.3	F
Overall Intersection[2]		-	-	-	-	-	-	**8.6**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] Although traffic volumes along the project's driveway approaches at Flatlands Avenue and Sheffield Avenue, and along the Louisiana Avenue driveway are modest, the Synchro model projects that these approaches would operate with poor levels of service due to pedestrian conflicts. The pedestrian conflict inputs assumes that each pedestrian crossing the approach is a conflict and is a conservative approach since pedestrians typically cross in groups and each group is considered a pedestrian conflict. The Applicant will coordinate with NYC DOT in the driveway design process.

Denotes a significantly impacted movement

Table 13-52 Year 2031 No-Action vs With-Action Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS									
Pennsylvania Avenue and Seaview Avenue									
Seaview Avenue	EB	LT	0.16	17.4	B	LT	0.16	17.4	B
		R	0.60	25.5	C	R	0.61	25.9	C
	WB	LTR	0.57	24.8	C	LTR	0.57	24.8	C
Pennsylvania Avenue	NB	L	0.38	40.4	D	L	0.38	40.4	D
		T	0.60	29.1	C	T	0.60	29.1	C
	SB	L	0.13	54.5	D	L	0.13	54.5	D
		TR	0.76	33.6	C	TR	0.81	35.9	D
Shore Parkway Westbound Off-Ramp	NB	TR	0.61	27.7	C	TR	0.68	29.5	C
Overall Intersection[2]		-	-	**29.4**	**C**	-	-	**30.7**	**C**
Pennsylvania Avenue and Twin Pines Drive									
Twin Pines Drive	EB	LR	0.56	25.8	C	LR	0.58	26.2	C
Pennsylvania Avenue	NB	L	0.51	37.8	D	L	0.63	45.9	D
		T	0.54	23.2	C	T	0.57	25.8	C
	SB	T	0.59	8.8	A	T	0.65	9.0	A
		R	0.52	9.4	A	R	0.52	9.3	A
Overall Intersection[2]		-	-	**18.6**	**B**	-	-	**20.3**	**C**
Pennsylvania Avenue and Vandalia Avenue									
Vandalia Avenue	EB	LTR	0.39	25.4	C	LTR	0.47	27.4	C
	WB	LTR	0.62	32.3	C	LTR	0.74	40.4	D
Pennsylvania Avenue	NB	L	0.40	38.8	D	L	0.74	51.4	D
		T	0.69	20.3	C	T	0.71	22.3	C
		R	0.24	15.2	B	R	0.35	19.3	B
	SB	L	0.26	44.9	D	L	0.23	43.6	D
		T	0.59	36.8	D	T	0.65	35.2	D
		R	0.08	29.6	C	R	0.25	31.1	C
Overall Intersection[2]		-	-	**28.3**	**C**	-	-	**30.6**	**C**

Table 13-52 Year 2031 No-Action vs With-Action Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.70	50.6	D	L	1.13	121.8	F
		T	0.75	32.1	C	T	0.78	32.3	C
		R	0.19	18.9	B	R	0.42	25.6	C
	WB	L	0.51	40.6	D	L	0.69	50.9	D
		T	0.79	33.8	C	T	0.80	34.1	C
		R	0.35	21.2	C	R	0.38	21.7	C
Pennsylvania Avenue	NB	L	1.01	81.7	F	L	1.14	127.4	F
		T	0.60	16.5	B	T	0.60	16.6	B
		R	0.38	13.7	B	R	0.45	15.8	B
	SB	L	1.15	109.4	F	L	1.17	111.1	F
		T	0.68	13.1	B	T	0.76	15.6	B
		R	0.68	17.5	B	R	0.91	35.4	D
Overall Intersection[2]		-	-	**33.5**	**C**	-	-	**41.1**	**D**
Pennsylvania Avenue and Cozine Avenue									
Cozine Avenue	EB	LT	1.29	185.0	F	LT	1.35	207.2	F
	WB	LTR	1.01	79.9	E	LTR	1.06	95.4	F
Pennsylvania Avenue	NB	L	0.59	25.5	C	L	0.72	36.1	D
		TR	0.58	9.0	A	TR	0.63	8.6	A
	SB	L	0.37	9.5	A	L	0.43	10.8	B
		TR	0.74	13.6	B	TR	0.80	14.7	B
Overall Intersection[2]		-	-	**46.0**	**D**	-	-	**50.1**	**D**
Pennsylvania Avenue and Wortman Avenue									
Wortman Avenue	EB	LTR	0.66	33.6	C	LTR	0.69	35.0	C
	WB	LTR	0.55	29.5	C	LTR	0.59	30.8	C
Pennsylvania Avenue	NB	L	0.51	36.7	D	L	0.51	36.4	D
		TR	0.75	25.7	C	TR	0.81	29.4	C
	SB	L	0.59	42.6	D	L	0.59	41.3	D
		TR	0.81	28.3	C	TR	0.88	32.6	C
Overall Intersection[2]		-	-	**28.6**	**C**	-	-	**31.8**	**C**

Table 13-52 Year 2031 No-Action vs With-Action Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Stanley Avenue									
Stanley Avenue	EB	LTR	0.76	39.8	D	LTR	0.84	47.4	D
	WB	LTR	0.96	65.4	E	LTR	1.00	75.1	E
Pennsylvania Avenue	NB	L	0.53	64.1	E	L	0.53	64.3	E
		TR	0.69	10.4	B	TR	0.75	11.2	B
	SB	L	0.45	25.9	C	L	0.45	25.1	C
		TR	0.76	37.5	D	TR	0.82	40.6	D
Overall Intersection[2]		-	-	**33.1**	**C**	-	-	**36.4**	**D**
Pennsylvania Avenue and Linden Boulevard									
Linden Boulevard Main Line	EB	L	0.79	84.0	F	L	0.79	84.0	F
		T	0.76	33.8	C	T	0.76	33.8	C
	WB	L	0.95	115.8	F	L	0.96	118.0	F
		T	0.73	32.8	C	T	0.73	32.8	C
Pennsylvania Avenue	NB	L	1.14	116.5	F	L	1.26	166.3	F
		T	0.71	47.5	D	T	0.81	50.9	D
		R	0.36	45.0	D	R	0.36	45.2	D
	SB	L	0.68	42.0	D	L	0.75	48.9	D
		TR	0.82	38.1	D	TR	0.91	46.1	D
Linden Boulevard Eastbound Service Rd	EB	T	0.62	34.2	C	T	0.62	34.2	C
		R	0.47	24.5	C	R	0.47	24.5	C
Linden Boulevard Westbound Service Rd	WB	TR	0.82	46.2	D	TR	0.82	46.2	D
Overall Intersection[2]		-	-	**44.6**	**D**	-	-	**49.6**	**D**
Louisiana Avenue and Vandalia Avenue									
Vandalia Avenue	WB	LR	0.36	17.9	B	LR	0.54	21.1	C
Louisiana Avenue	NB	TR	0.31	9.2	A	TR	0.35	9.6	A
	SB	LT	0.69	15.6	B	LT	0.74	17.2	B
Overall Intersection[2]		-	-	**14.3**	**B**	-	-	**16.0**	**B**

Table 13-52 Year 2031 No-Action vs With-Action Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Louisiana Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.28	37.6	D	L	0.28	39.3	D
		T	0.79	32.6	C	T	0.88	37.8	D
		R	0.40	25.2	C	R	1.48	283.9	F
	WB	L	0.48	37.7	D	L	0.68	49.4	D
		TR	0.97	50.2	D	TR	1.07	77.1	E
Louisiana Avenue	NB	L	0.88	56.4	E	L	1.10	111.3	F
		TR	0.40	29.0	C	TR	0.90	59.7	E
	SB	L	0.13	21.9	C	L	0.35	31.1	C
		TR	0.67	36.9	D	TR	0.72	39.5	D
Overall Intersection[2]		-	-	**41.1**	**D**	-	-	**73.3**	**E**
Flatlands Avenue and East 108th Street									
Flatlands Avenue	EB	L	0.30	29.3	C	L	0.33	33.5	C
		TR	0.74	26.3	C	TR	0.84	30.7	C
	WB	L	1.11	115.5	F	L	1.32	197.5	F
		TR	0.82	29.5	C	TR	0.93	38.1	D
East 108th Street	NB	LTR	0.98	68.1	E	LTR	1.02	78.7	E
	SB	LTR	0.62	31.9	C	LTR	0.65	33.2	C
Overall Intersection[2]		-	-	**43.2**	**D**	-	-	**57.0**	**E**
Flatlands Avenue and Rockaway Parkway									
Flatlands Avenue	EB	L	0.28	37.7	D	L	0.28	37.7	D
		TR	1.12	101.5	F	TR	1.18	125.1	F
	WB	L	0.16	35.2	D	L	0.16	36.6	D
		TR	1.05	76.4	E	TR	1.15	114.1	F
Rockaway Parkway	NB	L	0.67	32.2	C	L	0.74	38.2	D
		TR	0.53	22.7	C	TR	0.53	22.7	C
	SB	LT	0.99	75.3	E	LT	1.15	126.9	F
		R	0.20	27.0	C	R	0.20	27.0	C
Overall Intersection[2]		-	-	**72.8**	**E**	-	-	**100.8**	**F**

Table 13-52 Year 2031 No-Action vs With-Action Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
UNSIGNALIZED INTERSECTIONS									
Flatlands Avenue and Georgia Avenue								**(SIGNALIZED)**	
Flatlands Avenue	EB	LTR	-	1.2	A	L	0.28	12.3	B
		-	-	-	-	TR	0.66	13.2	B
	WB	L	-	0.0	A	L	0.00	0.0	A
		TR	-	0.0	A	TR	0.63	11.7	B
Georgia Access	NB	-	-	-	-	LTR	0.86	53.2	D
Overall Intersection[2]		-	-	**0.3**	**A**	-	-	**16.8**	**B**
Flatlands Avenue and Sheffield Avenue/Site Driveway									
Flatlands Avenue	EB	-	-	-	-	TR	0.47	0.0	A
Site Driveway[3]	NB	-	-	-	-	R	2.00+	600+	F
Overall Intersection[2]		-	-	-	-	-	-	**47.7**	**E**
Pennsylvania Avenue and Site Driveway									
Pennsylvania Avenue	SB	-	-	-	-	T	0.39	0.0	A
Overall Intersection[2]		-	-	-	-	-	-	**0.0**	**A**
Louisiana Avenue and Site Driveway									
Louisiana Avenue	NB	-	-	-	-	TR	0.25	0.0	A
	SB	-	-	-	-	LT	0.18	5.6	A
Site Driveway[3]	WB	-	-	-	-	LR	0.97	149.1	F
Overall Intersection[2]		-	-	-	-	-	-	**17.0**	**C**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] Although traffic volumes along the project's driveway approaches at Flatlands Avenue and Sheffield Avenue, and along the Louisiana Avenue driveway are modest, the Synchro model projects that these approaches would operate with poor levels of service due to pedestrian conflicts. The pedestrian conflict inputs assumes that each pedestrian crossing the approach is a conflict and is a conservative approach since pedestrians typically cross in groups and each group is considered a pedestrian conflict. The Applicant will coordinate with NYC DOT in the driveway design process.

Denotes a significantly impacted movement

Table 13-53 Year 2031 No-Action vs With-Action Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
SIGNALIZED INTERSECTIONS									
Pennsylvania Avenue and Seaview Avenue									
Seaview Avenue	EB	LT	0.07	16.4	B	LT	0.07	16.4	B
		R	0.42	21.3	C	R	0.44	21.7	C
	WB	LTR	0.29	19.1	B	LTR	0.30	19.2	B
Pennsylvania Avenue	NB	L	0.30	40.0	D	L	0.30	40.0	D
		T	1.04	75.5	E	T	1.04	75.5	E
	SB	L	0.07	54.9	D	L	0.07	56.6	E
		TR	0.95	47.3	D	TR	0.99	53.7	D
Shore Parkway Westbound Off-Ramp	NB	TR	0.44	24.6	C	TR	0.51	25.6	C
Overall Intersection[2]		-	-	**46.0**	**D**	-	-	**48.1**	**D**
Pennsylvania Avenue and Twin Pines Drive									
Twin Pines Drive	EB	LR	0.36	21.8	C	LR	0.37	22.0	C
Pennsylvania Avenue	NB	L	0.96	90.4	F	L	1.33	220.6	F
		T	0.69	30.6	C	T	0.69	30.8	C
	SB	T	0.75	9.2	A	T	0.79	11.1	B
		R	0.36	6.7	A	R	0.34	7.6	A
Overall Intersection[2]		-	-	**26.0**	**C**	-	-	**43.0**	**D**
Pennsylvania Avenue and Vandalia Avenue									
Vandalia Avenue	EB	LTR	0.24	22.9	C	LTR	0.30	24.0	C
	WB	LTR	0.42	26.5	C	LTR	0.54	30.4	C
Pennsylvania Avenue	NB	L	1.01	101.2	F	L	1.69	364.3	F
		T	0.70	26.5	C	T	0.64	25.6	C
		R	0.19	21.2	C	R	0.26	22.5	C
	SB	L	0.12	39.5	D	L	0.12	40.9	D
		T	0.71	29.5	C	T	0.73	32.0	C
		R	0.39	25.1	C	R	0.46	30.7	C
Overall Intersection[2]		-	-	**31.9**	**C**	-	-	**63.6**	**E**

Table 13-53 Year 2031 No-Action vs With-Action Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Pennsylvania Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	1.15	123.4	F	L	1.34	186.5	F
		T	0.80	34.9	C	T	0.85	36.1	D
		R	0.93	53.0	D	R	0.84	38.1	D
	WB	L	0.46	36.8	D	L	0.69	49.1	D
		T	0.43	25.4	C	T	0.45	25.7	C
		R	0.31	20.8	C	R	0.39	22.5	C
Pennsylvania Avenue	NB	L	1.06	92.7	F	L	0.77	52.4	D
		T	0.64	15.1	B	T	0.64	28.9	C
		R	0.29	10.4	B	R	0.40	27.6	C
	SB	L	0.96	81.0	F	L	1.02	94.9	F
		T	0.60	28.3	C	T	0.71	30.9	C
		R	0.60	35.4	D	R	1.00	92.1	F
Overall Intersection[2]		-	-	**45.1**	**D**	-	-	**54.3**	**D**
Louisiana Avenue and Vandalia Avenue									
Vandalia Avenue	WB	LR	0.75	28.9	C	LR	0.78	30.9	C
Louisiana Avenue	NB	TR	0.39	10.1	B	TR	0.48	11.2	B
	SB	LT	0.50	11.6	B	LT	0.55	12.5	B
Overall Intersection[2]		-	-	**16.5**	**B**	-	-	**17.4**	**B**
Louisiana Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.11	22.3	C	L	0.15	28.7	C
		T	0.91	41.3	D	T	0.91	41.7	D
		R	0.80	57.3	E	R	1.32	202.9	F
	WB	L	0.62	45.0	D	L	1.27	186.1	F
		TR	0.61	27.0	C	TR	0.85	36.2	D
Louisiana Avenue	NB	L	0.90	61.2	E	L	0.75	51.0	D
		TR	1.30	184.3	F	TR	0.99	75.1	E
	SB	L	1.54	296.5	F	L	0.63	40.5	D
		TR	0.73	40.9	D	TR	1.00	79.6	E
Overall Intersection[2]		-	-	**91.9**	**F**	-	-	**71.2**	**E**

Table 13-53 Year 2031 No-Action vs With-Action Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
UNSIGNALIZED INTERSECTIONS									
Flatlands Avenue and Georgia Avenue/Site Driveway								**(SIGNALIZED)**	
Flatlands Avenue	EB	LTR	-	4.7	A	L	0.77	47.9	D
		-	-	-	-	TR	0.90	32.9	C
	WB	L	-	0.0	A	L	0.0	0.0	A
		TR	-	0.0	A	TR	0.62	18.5	B
Site Driveway	NB	LTR	-	138.4	F	LT	0.71	27.7	C
		-	-	-	-	R	0.95	54.8	D
Overall Intersection[2]		-	-	**16.9**	**C**	-	-	**32.2**	**C**
Flatlands Avenue and Sheffield Avenue/Site Driveway									
Flatlands Avenue	EB	-	-	-	-	TR	0.54	0.0	A
Site Driveway[3]	NB	-	-	-	-	R	2.00+	600+	F
Overall Intersection[2]		-	-	-	-	-	-	**600+**	**F**
Pennsylvania Avenue and Site Driveway									
Pennsylvania Avenue	SB	-	-	-	-	T	0.41	0.0	A
Overall Intersection[2]		-	-	-	-	-	-	**0.0**	**A**
Louisiana Avenue and Site Driveway [4]									
Louisiana Avenue	NB	-	-	-	-	TR	0.47	0.0	A
	SB	-	-	-	-	L	0.75	35.9	E
		-	-	-	-	T	0.35	0.0	A
Overall Intersection[2]		-	-	-	-	-	-	**6.5**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] Although traffic volumes along the project's driveway approach at Flatlands Avenue and Sheffield Avenue is modest, the Synchro model projects that this approach would operate with poor levels of service due to pedestrian conflicts. The pedestrian conflict inputs assumes that each pedestrian crossing the approach is a conflict and is a conservative approach since pedestrians typically cross in groups and each group is considered a pedestrian conflict. The Applicant will coordinate with NYC DOT in the driveway design process.

[4] Traffic levels of services shown are for the condition without traffic enforcement assistance by CCC staff. The CCC staff would be expected to monitor traffic operations at this intersection to help facilitate inbound traffic further reduce delays and queues along Louisiana Avenue.

Denotes a significantly impacted movement

The summary overview of 2031 With-Action conditions indicates that:

› In the weekday AM peak hour, two intersections would operate at LOS E or F, compared to one in the No-Action condition. Twenty-six individual traffic movements would operate at LOS E or F, compared to 17 movements in the No-Action condition.

- In the weekday midday peak hour, one intersection would operate at LOS E, compared to none in the No-Action condition (none would operate at LOS F in either condition). Twenty-one movements would operate at LOS E or F, compared to 16 movements in the No-Action condition.
- In the weekday PM peak hour, three intersections would operate at LOS E, compared to one in the No-Action condition (none would operate at LOS F in either condition). Thirty-five movements would operate at LOS E or F, compared to 23 movements in the No-Action condition.
- In the Saturday peak hour, four intersections would operate at LOS E or F, compared to one in the No-Action condition. Twenty-one movements would operate at LOS E or F, compared to 15 movements in the No-Action condition.
- In the Sunday peak hour, three intersections would operate at LOS E or F, compared to one at LOS F in the No-Action condition. Thirteen movements would operate at LOS E or F, compared to 11 movements in the No-Action condition.

Traffic movements that operate at unacceptable levels of service under the No-Action condition would continue to do so under the With-Action condition; additional movements that would be expected to operate at unacceptable levels of service as a result of the Proposed Project are listed below.

- Pennsylvania Avenue and Seaview Avenue
  - Eastbound Seaview Avenue right turn movement (weekday AM)
- Pennsylvania Avenue and Vandalia Avenue
  - Westbound Vandalia Avenue approach (weekday AM and midday)
  - Northbound Vandalia Avenue left turn movement (weekday AM, PM)
- Pennsylvania Avenue and Flatlands Avenue
  - Eastbound Flatlands Avenue left turn movement (weekday AM, midday, PM, Saturday)
  - Westbound Flatlands Avenue left turn movement (weekday PM)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM)
  - Southbound Pennsylvania Avenue right turn movement (Sunday)
- Pennsylvania Avenue and Cozine Avenue
  - Southbound Pennsylvania Avenue left turn movement (weekday AM)
- Pennsylvania Avenue and Stanley Avenue
  - Eastbound Stanley Avenue approach (weekday PM)
- Pennsylvania Avenue and Linden Boulevard
  - Southbound Pennsylvania Avenue shared through-right movement (weekday PM)
- Louisiana Avenue and Flatlands Avenue
  - Eastbound Flatlands Avenue right turn movement (weekday AM, midday, PM, Saturday)
  - Westbound Flatlands Avenue left turn movement (weekday PM and Sunday)
  - Westbound Flatlands Avenue shared through-right movement (Saturday)

- Northbound Louisiana Avenue left turn movement (weekday AM and midday)
- Northbound Louisiana Avenue shared through-right movement (weekday PM, Saturday)
- Southbound Louisiana Avenue shared through-right movement (Sunday)

› Flatlands Avenue and Rockaway Parkway

- Westbound Flatlands Avenue shared through-right movement (weekday PM)
- Southbound Rockaway Parkway shared left-through movement (weekday PM)

The following movements are expected to operate at unacceptable LOS E or F in the No-Action conditions during the Sunday peak hour and would be expected to improve to acceptable levels of service as a result of the changes in the Development Site access:

› Northbound Pennsylvania Avenue left turn at Flatlands Avenue;

› Northbound Louisiana Avenue left turn movement at Flatlands Avenue;

› Southbound Louisiana Avenue left turn at Flatlands Avenue; and

› Northbound Site Driveway approach at Flatlands Avenue and Georgia Avenue.

In addition to the movements identified above, the new site access driveway exits at the intersection of Flatlands Avenue and Sheffield Avenue, and along Louisiana Avenue would be expected to operate at LOS F during specific peak hours despite modest traffic volumes. This ~~is~~could be due to how the Synchro model assesses pedestrian conflicts; the pedestrian conflict inputs assumes that each pedestrian crossing the site egress approach is an individual conflict which is a conservative approach since pedestrians typically cross in groups and each group is considered a pedestrian conflict. The Applicant will coordinate with NYC DOT in the driveway design process and commit to a traffic monitoring program for the intersection of Flatlands Avenue and Sheffield Avenue. ~~If~~The traffic monitoring program would be conducted after Buildings 1 through 6 have been completed and would assess the traffic operations at the driveway at the intersection of Flatlands Avenue and Sheffield Avenue. If it is determined that additional egress capacity is ~~determined to be~~ needed, then the Applicant will explore the potential to convert driveway access along Pennsylvania Avenue from a one-way inbound roadway to a two-way roadway. ~~The specifics of the traffic monitoring program will be coordinated with NYC DOT between the Draft and Final EISs.~~

Of the 16 intersections analyzed (including new site access driveway intersections with the street network), the Proposed Project would result in significant adverse traffic impacts at nine intersections (at 15 movements) during the weekday AM peak hour, seven intersections (at 11 movements) during the weekday midday peak hour, nine intersections (at 22 movements) during the weekday PM peak hour, and seven intersections (at 15 movements) during the Saturday peak hour. For the Sunday peak hour, at the 10 intersections analyzed, the Proposed Project would result in significant adverse traffic impacts at four intersections (at eight movements). The majority of the impacted movements are left and right turns from the key roadways in the area (e.g., Pennsylvania Avenue and Flatlands Avenue) or along the minor street approach along these key roadways. The significantly impacted traffic movements are identified below:

› Pennsylvania Avenue and Seaview Avenue

- Eastbound Seaview Avenue right turn movement (weekday AM)

› Pennsylvania Avenue and Twin Pines Drive
  - Northbound Pennsylvania Avenue left turn movement (Sunday)

› Pennsylvania Avenue and Vandalia Avenue
  - Westbound Vandalia Avenue approach (weekday AM, midday, and PM)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, PM, and Sunday)

› Pennsylvania Avenue and Flatlands Avenue
  - Eastbound Flatlands Avenue left turn movement (weekday AM, midday, PM, Saturday, and Sunday)
  - Eastbound Flatlands Avenue through movement (weekday PM)
  - Westbound Flatlands Avenue left turn movement (weekday PM)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM and Saturday)
  - Southbound Pennsylvania Avenue left turn movement (Sunday)
  - Southbound Pennsylvania Avenue right turn movement (Sunday)

› Pennsylvania Avenue and Cozine Avenue
  - Eastbound Cozine Avenue approach (weekday AM, midday, PM, and Saturday)
  - Westbound Cozine Avenue approach (Saturday)
  - Southbound Cozine Avenue left turn movement (weekday AM)

› Pennsylvania Avenue and Wortman Avenue
  - Eastbound Wortman Avenue approach (weekday PM)

› Pennsylvania Avenue and Stanley Avenue
  - Eastbound Stanley Avenue approach (weekday AM, midday, and PM)
  - Westbound Stanley Avenue approach (weekday PM and Saturday)

› Pennsylvania Avenue and Linden Boulevard
  - Westbound Linden Boulevard Main Line left turn movement (weekday AM and midday)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, PM, and Saturday)
  - Northbound Pennsylvania Avenue through movement (weekday AM)
  - Southbound Pennsylvania Avenue left turn movement (weekday midday and PM)
  - Southbound Pennsylvania shared through-right movement (weekday PM)

› Louisiana Avenue and Flatlands Avenue
  - Eastbound Flatlands Avenue right turn movement (weekday AM, midday, PM, Saturday, and Sunday)
  - Westbound Flatlands Avenue left turn movement (weekday PM and Sunday)
  - Westbound Flatlands Avenue shared through-right movement (Saturday)
  - Northbound Pennsylvania Avenue left turn movement (weekday AM, midday, PM, and Saturday)

- Northbound Pennsylvania Avenue shared through-right movement (weekday PM and Saturday)
- Southbound Pennsylvania Avenue shared through-right movement (Sunday)

› Flatlands Avenue and East 108th Street

- Westbound Flatlands Avenue left turn movement (weekday PM and Saturday)
- Northbound East 108th Street approach (weekday AM, midday, PM, and Saturday)
- Southbound East 108th Street approach (weekday PM)

› Flatlands Avenue and Rockaway Parkway

- Eastbound Flatlands Avenue shared through-right movement (weekday PM and Saturday)
- Westbound Flatlands Avenue shared through-right movement (weekday PM and Saturday)
- Southbound Rockaway Parkway shared left-through movement (weekday AM, PM, and Saturday)

The identification and evaluation of traffic capacity improvements needed to mitigate potential significant adverse traffic impacts created by the Proposed Project are presented in **Chapter 20, Mitigation**.

Parking

The Proposed Project would provide approximately 886 on-site parking spaces between four garages – three underground garages with a total capacity of approximately 386 spaces located under Buildings 1 and 2, Buildings 3 and 4, and Building 9, and an approximately 500-space garage which would be located next to the CCC and performing arts center buildings and would be used for CCC church services, and community facility and commercial uses. **Table 13-54**, **Table 13-55** and **Table 13-56** below show the project's hourly weekday, Saturday, and Sunday parking demand. The peak project-generated parking demand was determined to be 804 spaces during the overnight hours when demand for residential parking would be the highest.

Overall, the Proposed Project would provide enough spaces to accommodate the weekday and Saturday peak project demand. However, as shown in **Table 13-57**, while the project's overall projected parking demand would be accommodated during the day there would be an anticipated residential shortfall of 418 parking spaces during the overnight or early morning hours, 194 parking spaces during the weekday morning and 65 parking spaces during the Saturday afternoon periods. Based on the results of the quarter-mile parking inventory survey, there would be enough available on-street parking to accommodate the projected parking shortfall during these periods. The Proposed Project would also provide shuttle service for residents to the subway station and intends to provide a shared car program which could potentially reduce the residential parking demand. Adequate parking supply would be provided for the other uses.

Table 13-54 Projected Weekday Parking Demand

Hour	Residential	Local Retail	Food Store	Performing Arts Center	Trade School	Daycare	Medical Office	Weekday Total
12 AM - 1 AM	782	0	0	0	0	0	0	**782**
1 AM - 2 AM	794	0	0	0	0	0	0	**794**
2 AM - 3 AM	802	0	0	0	0	0	0	**802**
3 AM - 4 AM	804	0	0	0	0	0	0	**804**
4 AM - 5 AM	800	0	0	0	0	0	0	**800**
5 AM - 6 AM	776	0	0	0	0	0	0	**776**
6 AM - 7 AM	719	0	1	0	0	0	0	**720**
7 AM - 8 AM	580	2	3	0	2	1	8	**596**
8 AM - 9 AM	336	6	6	1	11	9	15	**384**
9 AM - 10 AM	229	8	6	3	13	10	23	**289**
10 AM - 11 AM	156	10	7	5	12	10	27	**224**
11 AM - 12 PM	131	10	8	9	10	10	25	**201**
12 PM - 1 PM	131	12	9	11	10	10	23	**203**
1 PM - 2 PM	131	12	10	12	9	10	21	**202**
2 PM - 3 PM	135	13	9	12	8	10	19	**203**
3 PM - 4 PM	162	15	9	10	6	9	21	**230**
4 PM - 5 PM	265	15	9	7	5	1	13	**313**
5 PM - 6 PM	341	15	8	3	3	0	7	**375**
6 PM - 7 PM	367	15	8	3	2	0	0	**393**
7 PM - 8 PM	443	8	7	0	2	0	0	**458**
8 PM - 9 PM	531	5	5	0	2	0	0	**541**
9 PM - 10 PM	618	1	3	0	2	0	0	**622**
10 PM - 11 PM	693	0	2	0	2	0	0	**695**
11 PM - 12 AM	752	0	1	0	2	0	0	**753**

Table 13-55 Projected Saturday Parking Demand

Hour	Residential	Local Retail	Food Store	Performing Arts Center	Trade School	Daycare	Medical Office	Saturday Total
12 AM - 1 AM	709	0	0	0	0	0	0	**709**
1 AM - 2 AM	735	0	0	0	0	0	0	**735**
2 AM - 3 AM	767	0	0	0	0	0	0	**767**
3 AM - 4 AM	782	0	0	0	0	0	0	**782**
4 AM - 5 AM	794	0	0	0	0	0	0	**794**
5 AM - 6 AM	790	0	0	0	0	0	0	**790**
6 AM - 7 AM	784	1	1	0	0	0	0	**786**
7 AM - 8 AM	744	2	3	0	1	2	0	**752**
8 AM - 9 AM	675	4	5	0	4	10	5	**703**
9 AM - 10 AM	587	7	6	0	5	11	10	**626**
10 AM - 11 AM	517	8	7	0	6	11	12	**561**
11 AM - 12 PM	464	10	8	1	6	11	11	**511**
12 PM - 1 PM	420	10	8	4	6	11	11	**470**
1 PM - 2 PM	406	12	7	13	5	11	10	**464**
2 PM - 3 PM	412	12	12	13	4	10	7	**470**
3 PM - 4 PM	415	12	12	7	5	2	7	**460**
4 PM - 5 PM	451	12	11	10	5	1	8	**498**
5 PM - 6 PM	488	11	11	12	4	1	4	**531**
6 PM - 7 PM	527	8	10	6	2	0	0	**553**
7 PM - 8 PM	550	4	8	5	1	0	0	**567**
8 PM - 9 PM	586	4	6	3	1	0	0	**599**
9 PM - 10 PM	630	2	3	0	1	0	0	**635**
10 PM - 11 PM	656	0	2	0	1	0	0	**658**
11 PM - 12 AM	678	0	1	0	0	0	0	**679**

Table 13-56 Projected Sunday Parking Demand

Hour	Residential	Local Retail	Food Store	Performing Arts Center	Trade School	Daycare	Medical Office	Sunday Total
12 AM - 1 AM	694	0	0	0	0	0	0	**694**
1 AM - 2 AM	727	0	0	0	0	0	0	**727**
2 AM - 3 AM	760	0	0	0	0	0	0	**760**
3 AM - 4 AM	782	0	0	0	0	0	0	**782**
4 AM - 5 AM	791	0	0	0	0	0	0	**791**
5 AM - 6 AM	792	0	0	0	0	0	0	**792**
6 AM - 7 AM	778	0	1	0	0	0	0	**779**
7 AM - 8 AM	753	0	3	0	1	2	0	**759**
8 AM - 9 AM	707	1	5	0	4	10	5	**732**
9 AM - 10 AM	625	5	7	0	5	11	10	**663**
10 AM - 11 AM	533	7	8	0	6	11	12	**577**
11 AM - 12 PM	465	8	8	1	6	11	12	**511**
12 PM - 1 PM	409	8	8	4	6	11	13	**459**
1 PM - 2 PM	395	11	9	13	5	11	12	**456**
2 PM - 3 PM	381	7	8	13	4	10	9	**432**
3 PM - 4 PM	361	9	9	7	5	2	9	**402**
4 PM - 5 PM	367	11	9	10	5	1	10	**413**
5 PM - 6 PM	385	7	9	12	4	1	7	**425**
6 PM - 7 PM	449	6	6	6	2	0	0	**469**
7 PM - 8 PM	492	5	6	5	0	0	0	**508**
8 PM - 9 PM	550	5	4	3	0	0	0	**562**
9 PM - 10 PM	590	4	2	0	0	0	0	**596**
10 PM - 11 PM	630	2	1	0	0	0	0	**633**
11 PM - 12 AM	662	0	1	0	0	0	0	**663**

Table 13-57 With-Action Parking Demand and Supply

Condition	Peak Period					
	Weekday AM	Weekday Midday	Weekday PM	Saturday	Sunday	Overnight
Proposed Project Parking Demand	596	224	393	498	577	804
Proposed Project Residential Parking Demand	580	156	367	451	533	804
Proposed Project Parking Supply	886 (total spaces) / 386 (residential spaces)					
Residential Parking Shortfall	194	0	0	65	147	418
Non-Residential Parking Shortfall	0	0	0	0	44	0
On-Street Church Parking Demand Increment	-	-	-	-	340	-
No-Action Condition On-Street Parking Availability	639	693	662	842	311	881
With-Action Condition On-Street Parking Availability	445	693	662	777	-220	463

Similar to the weekday and Saturday, the Proposed Project would provide enough overall spaces to accommodate Sunday demand generated by the proposed uses. However, the approximately 500-space parking garage would be developed as part of the project would be used to accommodate the vast majority of the church's on-site parking demand of 810 spaces during the 10 AM to 11 AM Sunday peak hour. The church parking overflow would be accommodated by the surrounding on-street parking within a quarter-mile from the site (a five-minute walk) with a modest projected excess demand of 29 spaces that could be accommodated by surrounding on-street parking just beyond a five-minute walk of the Development Site. As shown in **Table 13-57**, the parking demand for the proposed new uses would be expected to exceed the on-site parking by 191 spaces (147 residential spaces and 44 non-residential use spaces) which would also need to be accommodated by surrounding on-street parking beyond a five-minute walk of the Development Site (total shortfall of 220 spaces). The Proposed Project would provide shuttle bus service for CCC visitors from the subway stations and intends to provide a shared car program for residents which could potentially reduce the amount of church and residential-related parking demand.

Subways

The Proposed Project would generate 865 subway trips (270 "ins" and 595 "outs") during the AM commuter peak hour and 871 subway trips (493 "ins" and 378 "outs") during the PM commuter peak hour. Approximately 80 percent of these trips were assigned to the Rockaway Parkway subway station and would travel to the station using the B82 and B82 SBS bus routes.

Subway Station Elements

As shown in **Table 13-58**, the Rockaway Parkway subway station elements would continue to operate at acceptable levels of service during the AM and PM peak hours, with the

exception of the Glenwood Road fare control elements which would operate at LOS E (v/c ratio of 1.43) during the AM peak hour. The analysis of this fare control area assumes that all subway riders would use the fare control elements and not evade the fare, and the fare control would be significantly impacted as a result of the Proposed Project.

Table 13-58 No-Action vs. With-Action Subway Station Levels of Service

Peak Hour	Control Element	Pedestrian Volume (15-min) In	Pedestrian Volume (15-min) Out	Surging Factor	Friction Factor	No-Action v/c Ratio	No-Action LOS	With-Action v/c Ratio	With-Action LOS
AM	Rockaway Parkway (Bus Terminal) 4 Turnstiles	95	33	0.75	0.90	0.08	A	0.08	A
	Rockaway Parkway (Station Entrance) 5 Turnstiles	428	68	0.75	0.90	0.25	A	0.26	A
	Glenwood Road 1 HEET, 1 HXT	304	78	0.75	0.90	1.36	E	1.43	E
PM	Rockaway Parkway (Bus Terminal) 4 Turnstiles	41	262	0.75	0.90	0.18	A	0.18	A
	Rockaway Parkway (Station Entrance) 5 Turnstiles	138	284	0.75	0.90	0.19	A	0.20	A
	Glenwood Road 1 HEET, 1 HXT	62	211	0.75	0.90	0.42	A	0.56	B

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes is 1.0.
Does not assume fare evasion at the Glenwood Road fare control per NYCT's guidance.
Shading denotes a significant impact.

Subway Line-Haul

Table 13-59 summarizes anticipated 2031 With-Action subway line-haul conditions at the maximum load point of the subway line in the peak direction. In the With Action condition, the L subway line would operate at a v/c ratio of 1.04 during the AM peak hour and 1.07 during the PM peak hour. Although the line would operate at v/c ratios above 1.0, the project would result in an increase of 1.63 passengers per car in the northbound direction during the AM peak hour and 1.53 passengers per car in the southbound direction during the PM peak hour; these increases are below the five subway passenger per car threshold that are considered a significant impact per the *CEQR Technical Manual* criteria. Therefore, significant subway line haul impacts are not expected as a result of the project.

Table 13-59 With-Action Subway Line-Haul Analysis

Peak Hour	Route and Direction	Max Load Point (leaving station)	Average Passengers Per Hour[1]	Average Trains Per Hour[1]	Average Cars Per Hour[1]	Average Passengers Per Car[1]	Guideline Passengers Per Car[2]	V/C Ratio[3]
AM	L – NB	Bedford Ave	23,821	19.8	158	150	145	1.04
PM	L – SB	First Ave	21,734	17.5	140	155	145	1.07

Notes:
[1] Guideline capacities are based on NYCT rush hour loading guidelines which vary by car type, line, and location based on frequency and type of service.
[2] Volume to guideline capacity ratio

Buses

The Proposed Project would generate 363 bus trips (121 "ins" and 242 "outs") during the AM peak hour and 389 bus trips (214 "ins" and 175 "outs") during the PM peak hour. In addition to the bus-only trips, the project would generate bus-to-subway trips (destined for the Rockaway Parkway L and Pennsylvania Avenue No. 3 subway stations). In the AM peak hour, the project would generate 865 bus-to-subway trips (270 "ins" and 595 "outs") and 871 bus-to-subway trips (493 "ins" and 378 "outs") in the PM peak hour. As shown in **Table 13-60**:

- During the AM peak hour, demand on the B82 bus route is expected to increase by 153 eastbound trips at the Glenwood Road and Rockaway Parkway maximum load point and the projected bus service would provide adequate supply. Demand on the B82 bus route is expected to increase by 334 westbound trips at the Glenwood Road and East 102nd Street maximum load point and would result in a capacity shortfall of 93 passenger spaces.
- During the PM peak hour, demand on the B82 bus route is expected to increase by 279 eastbound trips at the Glenwood Road and Rockaway Parkway maximum load points. Demand on the B82 bus route is expected to increase by 215 westbound trips at the Glenwood Road and East 102nd Street maximum load point. The projected bus service would provide adequate supply in both directions during this time.
- During the AM peak hour, demand on the B82 SBS bus route is expected to increase by 99 eastbound trips at the Glenwood Road and Rockaway Parkway maximum load point and the projected bus service would provide adequate supply. Demand on the B82 SBS bus route is expected to increase by 215 westbound trips at the Glenwood Road and East 102nd Street maximum load point and would result in a capacity shortfall of two passenger spaces.
- During the PM peak hour, demand on the B82 SBS bus route is expected to increase by 180 eastbound trips at the Glenwood Road and Rockaway Parkway maximum load points and would result in a capacity shortfall of 56 passenger spaces. Demand on the B82 SBS bus route is expected to increase by 139 westbound trips at the Flatlands Avenue and East 105th Street maximum load point, which would not result in a capacity shortfall .
- During the AM peak hour, demand on the B83 bus route is expected to increase by 124 eastbound trips at the Van Siclen Avenue and Hegeman Avenue maximum load point

and would result in a capacity shortfall of 107 passenger spaces. Demand on the B83 bus route is expected to increase by 56 westbound trips at the Pennsylvania Avenue and Livonia Avenue maximum load point and would result in a capacity shortfall of 12 passenger spaces.

› During the PM peak hour, demand on the B83 bus route is expected to increase by 80 eastbound trips at the van Siclen Avenue and Hegemen Avenue maximum load point and would result in a capacity shortfall of 64 passenger spaces. Demand on the B83 bus route is expected to increase by 103 westbound trips at the New Lots Avenue and Pennsylvania Avenue maximum load point and would result in a capacity shortfall of 75 passenger spaces.

Table 13-60 With-Action Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point	Peak Hour Buses[1]	No-Action Available Capacity[2]	Project Increment	Available Capacity [3]
AM	B82	EB	Glenwood Rd & Rockaway Pkwy	6	244	153	91
		WB	Glenwood Rd & E 102 St	7	241	334	-93
	B82 SBS	EB	Glenwood Rd & Rockaway Pkwy	10	307	99	208
		WB	Flatlands Av & E 105 St	9	213	215	-2
	B83	NB	Van Siclen Ave & Hegeman Ave	17	17	124	-107
		SB	Pennsylvania Av & Livonia Av	7	44	56	-12
PM	B82	EB	Glenwood Rd & Rockaway Pkwy	8	283	279	4
		WB	Glenwood Rd & E 102 St	6	231	215	16
	B82 SBS	EB	Glenwood Rd & Rockaway Pkwy	6	124	180	-56
		WB	Flatlands Av & E 105 St	5	173	139	34
	B83	NB	Van Siclen Ave & Hegeman Ave	7	16	80	-64
		SB	New Lots Av & Pennsylvania Av	19	28	103	-75

Notes:
[1] Based on most currently available timetables (September and October 2018) and bus service increase assumed in the No-Action condition analysis
[2] Based on most currently available data from NYCT (October 2019)
[3] Available capacities based on NYCT loading guidelines of 54 passengers per standard bus

The With-Action condition analysis determined that there would be adequate supply for the Proposed Project's projected demand for the B82 and B82 SBS in the eastbound direction during the AM peak hour, and the B82 (both directions) and B82 SBS in the westbound

direction during the PM peak hour. However, the Proposed Project would result in a capacity shortfall for the bus routes listed below; these bus routes would be significantly impacted.

- The B82 bus route in the westbound direction during the AM peak hour
- The B82 SBS bus route in the westbound direction during the AM peak hour, and in the eastbound direction during the PM peak hour
- The B83 bus route in both directions during both the AM and PM peak hours

Pedestrians

The project-generated pedestrian volumes were distributed through the pedestrian network and added to the 2031 No-Action volumes to develop the 2031 With-Action pedestrian volumes. Pedestrian analyses were performed based on these volumes and the With-Action levels of service were determined for the analysis locations. The Proposed Project would also set back the proposed Development Site buildings to provide additional pedestrian space along the site frontages. As shown in **Figure 13-2,** the sidewalk width along the Flatlands Avenue frontage would range from 18 to 22 feet wide, approximately 13 feet wide along Louisiana Avenue, and 13.5 to 19 feet wide along Pennsylvania Avenue. The With-Action pedestrian volumes are shown in **Figure 13-68** through **Figure 13-72**.

Figure 13-68 With-Action Pedestrian Volumes – Weekday AM Peak Hour



Figure 13-69 With-Action Pedestrian Volumes – Weekday Midday Peak Hour



Figure 13-70 With-Action Pedestrian Volumes – Weekday PM Peak Hour



Figure 13-71 With-Action Pedestrian Volumes – Saturday Peak Hour



Figure 13-72 With-Action Pedestrian Volumes – Sunday Peak Hour



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Table 13-61 provides an overview of the pedestrian levels of service for the peak hours analyzed. Pedestrian levels of service are provided in **Table 13-62** through **Table 13-64** for the weekday and Saturday peak hours. The summary of the With-Action condition indicates that for these four peak hours:

- One sidewalk during the Saturday peak hour would be expected to operate at LOS D, compared to none in the No-Action condition.
- One crosswalk during the weekday AM and midday peak hours, two crosswalks during the weekday PM peak hour and three crosswalks during the Saturday peak hour would be expected to operate at LOS D or worse, compared to none in the No-Action condition.
- Similar to the No-Action condition, under With-Action, all corners would continue to operate at LOS C or better

Of the 36 pedestrian elements analyzed, the Proposed Project would result in significant impacts at one pedestrian element (one crosswalk) during the weekday AM and midday peak hours, two pedestrian elements (two crosswalks) during the weekday PM peak hour, and four pedestrian elements (three crosswalks and one sidewalk) during the Saturday peak hour.

Pedestrian levels of service for the Sunday peak hour are provided in **Table 13-65** through **Table 13-67**. Due to the confluence of pedestrian activities from the Proposed Project and the church services, the Proposed Project would result in significant pedestrian impacts at 12 of the 14 pedestrian elements analyzed for the Sunday peak hour (three sidewalks, five crosswalks, and four corner analysis locations).

Mitigation measures that could be implemented to mitigate these significant adverse pedestrian impacts are discussed in **Chapter 20, Mitigation**.

Table 13-61 Year 2031 With-Action Pedestrian Levels of Service Summary

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
Sidewalk Elements					
Sidewalks at LOS A/B/C	9	9	9	8	0
Sidewalks at LOS D	0	0	0	1	2
Sidewalks at LOS E	0	0	0	0	1
Sidewalks at LOS F	0	0	0	0	0
Number of significantly impacted sidewalk elements	**0**	**0**	**0**	**1**	**3**
Crosswalk Elements					
Crosswalks at LOS A/B/C	13	13	12	11	0
Crosswalks at LOS D	0	1	1	1	2
Crosswalks at LOS E	1	0	1	2	0
Crosswalks at LOS F	0	0	0	0	4
Number of significantly impacted crosswalk elements	**1**	**1**	**2**	**3**	**5**
Corner Elements					
Corners at LOS A/B/C	13	13	13	13	1
Corners at LOS D	0	0	0	0	1
Corners at LOS E	0	0	0	0	1
Corners at LOS F	0	0	0	0	2
Number of significantly impacted corner elements	**0**	**0**	**0**	**0**	**4**

Note: Includes nine sidewalk, 14 crosswalk, and 13 corner analysis locations for the weekday and Saturday peak hours, and three sidewalks, six crosswalks, and five corner analysis locations for the Sunday peak hour.

Table 13-62 Year 2031 No-Action vs With-Action Pedestrian Levels of Service – Sidewalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		No-Action		With-Action		No-Action		With-Action		No-Action		With-Action		No-Action		With-Action	
Sidewalk	Effective Width, ft	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS
Flatlands Avenue between Pennsylvania Avenue and Louisiana Avenue (south side)	8.5	1,747.7	A	139.1	B	1,579.6	A	129.4	B	1,452.0	A	75.0	C	1,483.3	A	94.9	B
Flatlands Avenue between Louisiana Avenue and Williams Avenue (north side)	9.0	3,432.0	A	147.4	B	3,960.0	A	109.5	B	4,220.5	A	89.2	C	1,622.2	A	120.2	B
Flatlands Avenue between Louisiana Avenue and Williams Avenue (south side)	11.0	1,594.3	A	242.0	B	1,351.1	A	271.6	B	1,350.6	A	191.9	B	1,346.6	A	219.6	B
Flatlands Avenue between Williams Avenue and East 108th Street (north side)	8.5	3,241.3	A	303.7	B	3,606.4	A	266.2	B	2,524.5	A	192.1	B	1,532.1	A	164.0	B
Flatlands Avenue between Williams Avenue and East 108th Street (south side)	9.0	1,909.3	A	494.9	B	1,555.2	A	366.6	B	980.9	A	239.5	B	1,101.7	A	216.9	B

Table 13-62 Year 2031 No-Action vs With-Action Pedestrian Levels of Service – Sidewalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		No-Action		With-Action		No-Action		With-Action		No-Action		With-Action		No-Action		With-Action	
Sidewalk	Effective Width, ft	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue (west side)	3.5	777.3	A	54.6	C	368.2	B	65.1	C	533.2	A	41.8	C	514.6	B	38.8	D
Pennsylvania Avenue between Vandalia Avenue and Croton Loop (east side)	6.5	894.0	A	232.0	B	849.8	A	287.2	B	1,454.7	A	243.0	B	918.0	A	194.4	B
Pennsylvania Avenue between Vandalia Avenue and Croton Loop (west side)	5.5	420.3	B	210.7	B	444.1	B	195.5	B	692.9	A	197.2	B	454.9	B	137.6	B
Louisiana Avenue between Flatlands Avenue and Vandalia Avenue (east side)	6.0	3,111.4	A	78.4	C	1,567.3	A	78.8	C	1,297.9	A	66.5	C	2,963.2	A	65.9	C

Denotes a significantly impacted pedestrian element

Table 13-63 Year 2031 No-Action vs With-Action Pedestrian Levels of Service – Crosswalks (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		No-Action		With-Action		No-Action		With-Action		No-Action		With-Action		No-Action		With-Action	
Intersection	Crosswalk	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*South*	698.2	A	74.3	A	603.7	A	72.4	A	453.3	A	46.1	B	454.5	A	33.2	C
	West	834.7	A	124.5	A	311.6	A	147.4	A	334.8	A	101.9	A	104.8	A	31.7	C
Pennsylvania Avenue and Vandalia Avenue	*North*	403.5	A	76.1	A	369.5	A	53.4	B	531.6	A	46.5	B	226.4	A	27.1	C
	South	185.8	A	45.4	B	177.7	A	46.8	B	228.6	A	47.4	B	221.3	A	34.8	C
	West	612.1	A	119.9	A	675.7	A	146.0	A	785.8	A	96.6	A	404.4	A	56.6	B
Flatlands Avenue and Louisiana Avenue	*North*	1,770.8	A	101.3	A	1,339.5	A	84.0	A	1,650.8	A	85.1	A	923.2	A	46.2	B
	East	1,178.1	A	12.8	E	986.1	A	27.5	C	816.4	A	15.2	D	780.9	A	11.8	E
	South	1,976.7	A	51.0	B	1,505.3	A	50.6	B	1,430.1	A	32.4	C	608.2	A	21.5	D
	West	872.3	A	24.7	C	398.6	A	21.5	D	400.7	A	12.2	E	380.6	A	13.4	E
Flatlands Avenue and Williams Avenue	*North*	1,630.4	A	139.5	A	1,151.0	A	114.6	A	2,212.4	A	93.0	A	1,421.2	A	57.9	B
	East	357.3	A	281.4	A	391.6	A	321.0	A	327.0	A	203.3	A	356.4	A	258.1	A
	West	1,243.9	A	187.5	A	918.9	A	283.4	A	283.2	A	97.0	A	386.0	A	120.9	A
Flatlands Avenue and East 108th Street	*North*	2,001.6	A	244.5	A	1,398.0	A	209.4	A	821.1	A	131.6	A	783.3	A	84.6	A
	South	1,408.6	A	348.1	A	472.6	A	190.7	A	597.1	A	165.8	A	218.3	A	55.6	B

Denotes a significantly impacted pedestrian element

Table 13-64 Year 2031 No-Action vs With-Action Pedestrian Levels of Service – Corners (Weekday/Saturday Peak Hours)

		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		No-Action		With-Action		No-Action		With-Action		No-Action		With-Action		No-Action		With-Action	
Intersection	Corner	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*Southwest*	1,124.9	A	156.0	A	635.0	A	178.2	A	744.4	A	115.5	A	601.0	A	88.7	A
Pennsylvania Avenue and Vandalia Avenue	*Northeast*	1,714.1	A	476.0	A	1,439.2	A	378.2	A	1,874.2	A	311.7	A	1,090.4	A	222.9	A
	Southeast	1,136.6	A	376.6	A	1,103.4	A	396.7	A	1,316.5	A	356.3	A	992.0	A	274.5	A
	Southwest	526.1	A	118.4	A	592.2	A	147.2	A	718.8	A	111.6	A	613.7	A	91.1	A
	Northwest	716.8	A	135.9	A	728.2	A	136.3	A	837.4	A	95.8	A	591.5	A	70.3	A
Flatlands Avenue and Louisiana Avenue	*Northeast*	3,155.6	A	79.9	A	2,500.4	A	105.4	A	2,682.7	A	74.7	A	2,677.7	A	75.5	A
	Southeast	1,676.5	A	25.1	C	1,480.6	A	49.2	B	1,430.0	A	25.9	C	1,193.4	A	27.3	C
	Southwest	2,284.6	A	72.3	A	1,405.5	A	69.1	A	1,535.9	A	40.7	B	1,454.0	A	53.0	B
	Northwest	1,632.9	A	69.6	A	1,165.7	A	57.2	B	1,242.2	A	32.5	C	1,307.5	A	47.5	B
Flatlands Avenue and Williams Avenue	*Northeast*	865.3	A	150.2	A	765.3	A	122.3	A	1,284.1	A	107.7	A	906.1	A	76.7	A
	Northwest	1,289.3	A	180.8	A	1,158.0	A	171.5	A	665.3	A	107.0	A	912.6	A	101.7	A
Flatlands Avenue and East 108th Street	*Northeast*	1,896.5	A	277.0	A	1,060.7	A	211.9	A	1,013.8	A	149.9	A	1,212.6	A	153.8	A
	Southeast	1,886.5	A	458.2	A	727.2	A	284.4	A	780.9	A	211.4	A	698.3	A	190.6	A

Table 13-65 Year 2031 No-Action vs With-Action Pedestrian Levels of Service – Sidewalks (Sunday Peak Hour)

		No-Action		With-Action	
Sidewalk	Effective Width, ft	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS
Flatlands Avenue between Pennsylvania Avenue and Louisiana Avenue (south side)	8.5	58.6	C	34.6	D
Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue (west side)	3.5	222.8	B	33.0	D
Louisiana Avenue between Flatlands Avenue and Vandalia Avenue (east side)	6.0	36.0	D	17.2	E

Denotes a significantly impacted pedestrian element

Table 13-66 Year 2031 No-Action vs With-Action Pedestrian Levels of Service – Crosswalks (Sunday Peak Hour)

		No-Action		With-Action	
Intersection	Crosswalk	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS
Pennsylvania Avenue and Flatlands Avenue	*South*	42.0	B	16.3	D
	West	15.3	D	7.8	F
Flatlands Avenue and Louisiana Avenue	*North*	58.6	B	16.9	D
	East	1.4	F	1.3	F
	South	26.6	C	6.0	F
	West	17.9	D	6.4	F

Denotes a significantly impacted pedestrian element

Table 13-67 Year 2031 No-Action vs With-Action Pedestrian Levels of Service – Corners (Weekday/Saturday Peak Hours)

		No-Action		With-Action	
Intersection	**Corner**	**Avg Ped Space, SF/P**	**LOS**	**Avg Ped Space, SF/P**	**LOS**
Pennsylvania Avenue and Flatlands Avenue	***Southwest***	60.4	A	32.5	C
Flatlands Avenue and Louisiana Avenue	***Northeast***	32.7	C	6.3	F
	Southeast	5.3	F	*	F
	Southwest	70.2	A	19.0	D
	Northwest	62.3	A	8.0	E

Denotes a significantly impacted pedestrian element

* The available corner area would not be sufficient to accommodate all pedestrians; some pedestrians would need to wait on the adjacent sidewalk area instead of the corner reservoir to cross the street

Vehicle and Pedestrian Safety

Crash data were obtained for the study area intersections from NYC DOT for the most recent three-year period for which such data are available (2017 through 2019). This information is based on data provided by the New York State Department of Transportation (NYSDOT), New York State Department of Motor Vehicles (NYSDMV), and the New York City Police Department (NYPD).

The crash data details reported crashes (crashes resulting in death, injury, or property damage in excess of $1,000), fatalities, injuries, and pedestrian and bicycle injuries annually. According to the *CEQR Technical Manual*, an intersection is considered a high-crash location when there are five or more pedestrian/bicyclist injury crashes in any consecutive 12 months during the most recent three-year period for which data are available or at locations along a Vision Zero Priority Corridor or Intersection.

Table 13-68 presents a summary of total crashes at the study area intersections during the three-year period of 2017 through 2019, and also shows total fatalities, injuries, and pedestrian and bicycle crashes. The crash data identified the intersections of Pennsylvania Avenue at Linden Boulevard and at Wortman Avenue as high crash locations due to these intersections having at least five pedestrian/bicyclist injury crashes within a consecutive 12-month period. Pedestrian/bicyclist high-crash thresholds are not exceeded at any of the other analysis intersections. These intersections are also Vision Zero Priority intersections. There are three Vision Zero corridors in the study area – Pennsylvania Avenue, Linden Boulevard, and Rockaway Parkway. Therefore, seven other locations are considered high-crash locations (total of nine high-crash locations): Pennsylvania Avenue with Stanley Avenue, Cozine Avenue, Flatlands Avenue, Vandalia Avenue, Twin Pines Drive, and Seaview Avenue, and Flatlands Avenue with Rockaway Parkway.

Table 13-68 Vehicle and Pedestrian Crash Summary

Intersection		Total Crashes by Year					Pedestrian Crashes by Year			Bicycle Crashes by Year		
North-South Roadway	East-West Roadway	2017	2018	2019	Total Fatalities	Total Injuries	2017	2018	2019	2017	2018	2019
Rockaway Parkway	Flatlands Avenue	7	12	12	0	20	1	3	0	0	1	0
East 108th Street	Flatlands Avenue	2	15	12	0	20	0	1	1	0	0	0
Williams Avenue	Flatlands Avenue	2	2	5	0	5	1	0	1	0	0	0
Louisiana Avenue	Flatlands Avenue	10	7	12	1	20	0	0	1	0	0	1
Georgia Avenue	Flatlands Avenue	1	2	5	0	4	0	0	0	0	0	0
Pennsylvania Avenue	Linden Boulevard *	35	65	64	0	111	1	4	1	1	0	1
Pennsylvania Avenue	Stanley Avenue	12	17	21	0	44	1	2	1	0	0	0
Pennsylvania Avenue	Wortman Avenue *	6	14	19	0	23	0	2	5	0	0	0
Pennsylvania Avenue	Cozine Avenue	3	8	10	1	17	1	2	1	1	0	0
Pennsylvania Avenue	Flatlands Avenue	21	35	22	2	53	2	2	2	2	1	1
Pennsylvania Avenue	Vandalia Avenue	7	3	10	0	17	2	0	3	0	0	0
Pennsylvania Avenue	Twin Pines Drive	3	8	7	0	11	1	0	1	1	0	0
Pennsylvania Avenue	Seaview Avenue	14	17	23	0	31	0	1	0	0	0	0
Louisiana Avenue	Vandalia Avenue	0	0	2	0	3	0	0	1	0	0	0

Denotes a high crash location

* Intersection has five or more pedestrian-/bicyclist-related crashes in a consecutive 12-month period

Source: NYSDOT/NYSDMV (2017-2019)

Flatlands Avenue and Rockaway Parkway

The intersection of Flatlands Avenue and Rockaway Parkway is along the Rockaway Parkway Vision Zero Priority corridor and is identified as a high-crash location. A total of 31 crashes, including 20 personal injuries, and five pedestrian/bicyclist-related crashes occurred at this intersection between 2017 and 2019. Based on a review of the crash data, of the five pedestrian/bicycle crashes that occurred from 2017 and 2019, four involved conflicts with turning vehicles, and two occurred during dark hours. The intersection is signalized and operates in five phases (including a leading pedestrian interval crossing Rockaway Parkway, a northbound lead phase, and a protected eastbound/westbound left turn phase) with high visibility crosswalks striped along each approach and with pedestrian countdown signals. Both Flatlands Avenue and Rockaway Parkway are two-way roadways. In 2018, NYC DOT implemented improvements along the Rockaway Parkway corridor between Flatlands Avenue and the Belt Parkway including reducing the number of through lanes along Rockaway Parkway from two lanes to one lane in each direction, and striping a painted median along the northbound Rockaway Parkway approach at this intersection. A pedestrian refuge island was implemented along this approach in 2021. As a result of these changes, the overall level of pedestrian and bicyclist safety should improve at this intersection.

The following intersections are along the Pennsylvania Avenue Vision Zero Priority Corridor and are therefore identified as high-crash locations.

Pennsylvania Avenue and Linden Boulevard

The intersection of Pennsylvania Avenue and Linden Boulevard was identified as a high-crash location due to the five crashes involving pedestrians or bicyclists between June 2018 and June 2019. A total of 164 crashes, including 111 personal injuries, and eight pedestrian/bicyclist-related crashes occurred at this intersection during the three-year period. Based on a review of the crash data, of the prevailing types of crashes that occurred from 2017 to 2019, 46 involved rear end crashes, 26 involved overtakes, and 31 involved conflicts with right turns and angles. Of the eight pedestrian/bicyclist-related crashes that occurred from 2017 to 2019, three involved conflicts with turning vehicles, three occurred during dark hours, and one involved pedestrians crossing against the signal. The intersection is signalized and operates in four phases (including a protected northbound/southbound left turn phase, and eastbound/westbound left turn phase) with pedestrian countdown clocks and high visibility crosswalks striped along each approach. Both Pennsylvania Avenue and Linden Boulevard are two-way roadways; specifically, Linden Boulevard is configured as a main line with eastbound/westbound service roads. The majority of project-generated trips at this intersection would be through volumes (a maximum of about 140 vph between the northbound and southbound Pennsylvania Avenue approaches) and only a modest number of vehicle trips would be turning vehicles (no more than eight vph among all intersection approaches). Measures to improve pedestrian and bicyclist safety at this intersection could include improving the lighting at this intersection for better visibility outside of daylight hours. As part of the Vision Zero initiative, recent projects along Linden Boulevard at similar intersections include the construction or expansion of concrete medians, improved lane striping and lane use designations, and increased area for pedestrian refuge spaces.

Pennsylvania Avenue and Stanley Avenue

During the three-year period mentioned above, a total of 50 crashes, including 44 personal injuries, and four pedestrian/bicyclist-related crashes occurred at this intersection. Based on a review of the crash data, of the four pedestrian/bicycle crashes that occurred from 2017 to 2019, three involved conflicts with turning vehicles; no other prevailing trends were identified as the primary cause for other crashes at this intersection. The intersection is signalized and operates in three phases (including a protected northbound/southbound left turn phase) with pedestrian countdown clocks and high visibility crosswalks striped along each approach. Both Pennsylvania Avenue and Stanley Avenue are two-way roadways. In the spring of 2018, improvements to the intersection were implemented by NYC DOT, including the protected Pennsylvania Avenue left turn phase. As a result of this change, the overall level of pedestrian and bicyclist safety should improve at this intersection.

Pennsylvania Avenue and Wortman Avenue

The intersection of Pennsylvania Avenue and Wortman Avenue was identified as a high-crash location due to the five crashes involving pedestrians or bicyclists in 2019. A total of 39 crashes, including 23 personal injuries and seven pedestrian/bicyclist-related crashes, occurred at the intersection of Pennsylvania Avenue and Wortman Avenue from 2017 to 2019. Based on a review of the crash data, of the seven pedestrian/bicycle crashes that occurred in this time period, five involved conflicts with turning vehicles, and three involved pedestrians crossing during dark hours. The intersection is signalized and operates in three phases (including a protected northbound/southbound left turn phase) with pedestrian countdown clocks and high visibility crosswalks striped along each approach. Both Pennsylvania Avenue and Wortman Avenue are two-way roadways. In the spring of 2018, improvements to the intersection were implemented by NYC DOT, including the protected Pennsylvania Avenue left turn phase. As a result of these changes, the overall level of pedestrian and bicyclist safety should improve at this intersection.

Pennsylvania Avenue and Cozine Avenue

A total of 21 crashes, including one fatality, 17 personal injuries, and five pedestrian/bicyclist-related crashes, occurred at the intersection of Pennsylvania Avenue and Cozine Avenue from 2017 to 2019. Based on a review of the crash data, of the five pedestrian/bicycle crashes that occurred in this time period, one involved a conflict with a turning vehicle, and two occurred during dark hours; no other prevailing trends were identified as the primary cause for other crashes at this intersection. The intersection is signalized and operates in three phases (including a leading pedestrian interval) with pedestrian countdown clocks and high visibility crosswalks striped along each approach. Both Pennsylvania Avenue and Cozine Avenue are two-way roadways. In the spring of 2021, improvements to the intersection were implemented by NYC DOT, including the leading pedestrian interval. As a result of this change, the overall level of pedestrian and bicyclist safety should improve at this intersection.

Pennsylvania Avenue and Flatlands Avenue

A total of 78 crashes, including two fatalities, 53 personal injuries and ten pedestrian/bicyclist-related crashes, occurred at the intersection of Pennsylvania Avenue and

Flatlands Avenue from 2017 to 2019. Based on a review of the crash data, of the ten pedestrian/bicycle crashes that occurred in this time period, eight involved conflicts with turning vehicles, seven occurred during dark hours, and one involved a pedestrian crossing against the signal. The intersection is signalized and operates in four phases (including a protected northbound/southbound left phase, and a protected eastbound/westbound left turn phase that operates concurrently with northbound/southbound right turns) with pedestrian countdown clocks and high visibility crosswalks striped along each approach. Both Pennsylvania Avenue and Flatlands Avenue are two-way roadways. In 2018, NYC DOT implemented improvements at this intersection as part of the implementation of B82 Selected Bus Service along this corridor. Improvements included striping of high-visibility crosswalks and bus lanes, peg-a-traks to guide vehicle turns, and an extension of the concrete median tip along the northbound Pennsylvania Avenue approach. Additional measures are planned as part of the Southern Brooklyn Crosstown (B82) Select Bus Service project including crosswalk restriping and an extension of the southeast corner curb to provide additional pedestrian space. As a result of these changes, the overall level of pedestrian and bicyclist safety should improve at this intersection.

Pennsylvania Avenue and Vandalia Avenue

A total of 20 crashes, including 17 personal injuries and five pedestrian/bicyclist-related crashes, occurred at the intersection of Pennsylvania Avenue and Vandalia Avenue from 2017 to 2019. Based on a review of the crash data, of the five pedestrian/bicycle crashes that occurred in this time period, four involved a conflicting with a turning vehicle; no other prevailing trends were identified as the primary cause for other crashes at this intersection. The intersection is signalized and operates in three phases (including a protected northbound/southbound left phase) with pedestrian countdown clocks and high visibility crosswalks striped along each approach. Both Pennsylvania Avenue and Vandalia Avenue are two-way roadways. In 2018, NYC DOT implemented improvements at this intersection as part of the implementation of B82 Selected Bus Service along this corridor which included the widening of the northbound and southbound approach concrete medians. Additional measures are planned as part of the Southern Brooklyn Crosstown (B82) Select Bus Service project including crosswalk restriping and an extension of the northeast, northwest, and southeast corner curbs to provide additional pedestrian space. As a result of these changes, the overall level of pedestrian and bicyclist safety should improve at this intersection.

Pennsylvania Avenue and Twin Pines Drive

A total of 18 crashes, including 11 personal injuries and three pedestrian/bicyclist-related crashes, occurred at the intersection of Pennsylvania Avenue and Twin Pines Drive from 2017 to 2019. Based on a review of the crash data, there are no prevailing trends identified as the primary cause for the crashes at this intersection. The intersection is signalized and operates in two phases with pedestrian countdown clocks and high visibility crosswalks striped along each approach. The intersection is a T-intersection, and both Pennsylvania Avenue and Twin Pines Drive are two-way roadways. In 2018, NYC DOT implemented improvements at this intersection as part of the implementation of B82 Selected Bus Service along this corridor which included the widening of the northbound approach concrete median. Additional measures are planned as part of the Southern Brooklyn Crosstown (B82) Select Bus Service project including crosswalk restriping and an extension of the northwest and southwest

corner curbs to provide additional pedestrian space. In the fall of 2021, additional improvements to the intersection were implemented, including a Pennsylvania Avenue northbound lead phase. As a result of these changes, the overall level of pedestrian and bicyclist safety should improve at this intersection.

Pennsylvania Avenue and Seaview Avenue

A total of 54 crashes, including 31 personal injuries and one pedestrian-related crashes, occurred at the intersection of Pennsylvania Avenue and Seaview Avenue from 2017 to 2019. Based on a review of the crash data, the pedestrian crash that occurred in 2018 involved a conflict with turning vehicles. The intersection is signalized and operates in three phases (including a protected northbound/southbound left turn phase) with pedestrian countdown clocks and high visibility crosswalks striped along each approach. The intersection is located at the entrance of the Belt Parkway with on- and off-ramp connections. Both Pennsylvania Avenue and Seaview Avenue are two-way roadways. Safety measures are planned as part of the Southern Brooklyn Crosstown (B82) Select Bus Service project including crosswalk restriping and hardscaping the northwest corner curb. As a result of these changes, the overall level of pedestrian and bicyclist safety should improve at this intersection.

14

Air Quality

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

Introduction

This section examines the potential for air quality impacts from the Proposed Development. According to the *2021 CEQR Technical Manual*, air quality impacts can be characterized as either direct or indirect impacts. Direct impacts result from emissions generated by stationary sources, such as stack emissions from on-site fuel burned for boilers and heating, ventilation, and air conditioning (HVAC) systems. Indirect effects are caused by off-site emissions associated with a project, such as emissions from on-road motor vehicles ("mobile sources") traveling to and from a development site.

Consistent with the *2021 CEQR Technical Manual*, air quality analyses for a proposed project focus on these main areas of potential concern:

- Potential impacts from mobile sources introduced by a project.
- Emissions from a project's parking facilities.
- Potential impacts from project's HVAC system.

› Potential impacts on the Proposed Project from either manufacturing/processing facilities or large/major sources that are located near the Development Site.

The Development Site is located in East New York, Brooklyn on the south side of Flatlands Avenue between Louisiana and Pennsylvania Avenues. The Proposed Actions would facilitate development ten buildings ranging from two to 15 stories. The proposed building program for the site would include approximately 1,645,820 gsf of residential space accommodating approximately 2,050 residential units; approximately 100,904 gsf of community facility space, including general community facility space to include a day care (approximately 12,320 gsf), other community facility uses such as a senior center or medical clinic (approximately 9,900 gsf), and the existing CCC facility (78,684 gsf); approximately 110,570 gsf of commercial space that includes a grocery store (approximately 14,300 gsf) and local retail space (approximately 65,670 gsf), a trade school (approximately 14,100 gsf) to be located in one wing of the existing CCC building (thereby reclassifying approximately 14,100 gsf of existing community facility space to commercial space) and a PAC (approximately 16,500 gsf); and approximately 343,244 gsf of parking, including 145,684 gsf of below grade parking and a 197,560-gsf public parking garage that would accommodate accessory parking for the retail and community facility uses.[1] **Figure 14-1** shows the illustrative axonometric diagram for the Proposed Development.

Principal Conclusions

The air quality analysis addressed mobile sources, parking facilities, emissions from the HVAC and hot water systems and from industrial sources.

Mobile Sources

The number of incremental trips generated by the Proposed Actions would be higher than the screening thresholds for carbon monoxide (CO) and particulate matter ($PM_{2.5}$) identified in the *2021 CEQR Technical Manual*. A mobile source screening assessment was undertaken, which indicated the need for additional analysis. Based on screening analysis results and consultation with the NYC Department of City Planning (NYC DCP), the intersection of Louisiana Avenue and Flatlands Avenue was selected as a worst-case location. A microscale analysis for CO and PM was conducted for this location using the weekday traffic. The highest predicted CO and PM concentrations were below respective National Ambient Air Quality Standards (NAAQS) and the City's *de minimis* ~~value~~values.

Parking Facilities

A parking garage analysis was undertaken for the two largest proposed parking garages. One facility is a subgrade accessory parking garage that would be mechanically ventilated; the other is a naturally ventilated seven-story public parking garage. The accessory parking facility would be located under Buildings 3 and 4, while the public parking garage would be a standalone structure next to Buildings 9 and 10. The analysis determined that emissions

[1] The 197,560-gsf public parking garage includes 18,400 sf of flex space that would be provided on the roof to allow for increased parking capacity during the church's peak parking periods (Sundays and Tuesday evenings). At all other times, this space would be reserved for recreational space.

from both parking facilities would not result in a significant adverse air quality impact. Since the two other proposed accessory parking facilities (under Buildings 1 and 2 and Buildings 9 and 10) would have lower parking capacities and lower inbound and outbound traffic volumes, it was determined that no impacts would result from these facilities. Overall, no significant adverse air quality impacts are expected from the parking facilities.

Stationary Sources

An analysis of the potential for the Proposed Actions to result in stationary source impacts was undertaken. The detailed analysis of HVAC and hot water systems emissions from Buildings 1 through 10 and the PAC demonstrated that these buildings must use natural gas with low NO_x burners in their fossil fuel-fired heating and hot water systems[2] and ensure that the exhaust stacks are located at the highest proposed building tier and at specified height above grade to avoid any potential significant adverse air quality impact. Further, the exhaust stacks for Building 4 must be located at a certain horizontal distance from northern and eastern edge of the building to avoid potential significant adverse air quality impacts. These commitments are memorized in an (E) designation for the Proposed Actions (E-679). With these measures, the Proposed Development would not result in significant adverse stationary source air quality impacts.

Industrial Sources

No industrial sources were identified within a 400-foot radius of the Project Area and no large or major sources were identified within a 1,000-foot radius of the Project Area. Therefore, the analysis of industrial, large or major sources was not warranted.

[2] While the stationary source assessment assumes the use of natural gas for conservative analysis purposes, the Applicant may consider the use of electric heating and hot water systems.

Figure 14-1 Innovative Urban Village Site Axonometric Diagram



National Ambient Air Quality Standards

In accordance with the requirements of the Clean Air Act, as amended in 1990, the U.S. Environmental Protection Agency (EPA) has promulgated NAAQS (40 CFR part 50) for pollutants considered harmful to public health and the environment. The NAAQS are presented in **Table 14-1**.

The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as sick, children, and elderly populations. Secondary standards set limits to protect public welfare, including protection against decreased visibility and protections against damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards has set NAAQS for six principal pollutants, which are called "criteria" pollutants. These six pollutants are ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) and less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$), and lead (Pb). Units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air ($\mu g/m^3$).

These standards are reviewed periodically and may be revised. The State of New York has adopted similar standards as those set by the EPA, with the exception of sulfur dioxide, particulates, fluorides, and hydrogen sulfide.

Table 14-1 National and New York Ambient Air Quality Standards

Pollutant [links to historical tables of NAAQS reviews]		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3 month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb (2)	Annual Mean
Ozone (O_3)		primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	$PM_{2.5}$	primary	1 year	12.0 µg/m^3	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m^3	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		primary	1 hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m3 as a calendar quarter average) also remain in effect.
(2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.
(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O_3 standards.
(4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated non-attainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Pollutants of Concern

Air pollution is of concern because of its demonstrated effects on human health. Of special concern are the cardiovascular and respiratory effects of air pollutants and their potential toxic effects, as described below.

Carbon monoxide (CO) is a colorless and odorless gas that is a product of incomplete combustion. Carbon monoxide is absorbed by the lungs and reacts with hemoglobin to reduce the oxygen carrying capacity of the blood. At low concentrations, CO has been shown to aggravate the symptoms of cardiovascular disease. It can cause headaches, nausea, and at sustained high concentration levels, can lead to coma and death.

Particulate matter is made up of small solid particles and liquid droplets. PM_{10} refers to particulate matter with a nominal aerodynamic diameter of 10 micrometers or less, and $PM_{2.5}$ refers to particulate matter with an aerodynamic diameter of 2.5 micrometers or less. Particulates can enter the body through the respiratory system. Particulates over 10 micrometers in size are generally captured in the nose and throat and are readily expelled from the body. Particulates smaller than 10 micrometers, and especially particles smaller than 2.5 micrometers, can reach the air ducts (bronchi) and the air sacs (alveoli) in the lungs. Particulates are associated with increased incidence of respiratory diseases, cardiopulmonary disease, and cancer.

Nitrogen oxides (NO_X), the most significant of which are nitric oxide (NO) and nitrogen dioxide (NO_2), can occur when fossil fuel combustion temperatures are extremely high (such as in engines), and atmosphere nitrogen gas combines with oxygen gas. NO is relatively harmless to humans but quickly converts to NO_2. Nitrogen dioxide has been found to be a lung irritant and can lead to respiratory illnesses. Nitrogen oxides, along with VOCs, are also precursors to ozone formation.

Sulfur Dioxide (SO_2) emissions are the main components of the "oxides of sulfur," a group of highly reactive gases from fossil fuel combustion at power plants, other industrial facilities, industrial processes, and burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. High concentrations of SO_2 will lead to formation of other sulfur oxides. By reducing the SO_2 emissions, other forms of sulfur oxides are also expected to decrease. When oxides of sulfur react with other compounds in the atmosphere, small particles that can affect the lungs can be formed. This can lead to respiratory disease and aggravate existing heart disease.

Regulatory Context

The 1990 Clean Air Act with Amendments resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of four categories: attainment, unclassified, maintenance, or non-attainment depending upon air quality data and ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant are below the respective NAAQS; non-attainment areas are those where concentrations exceed the NAAQS. Maintenance areas are former non-attainment that achieved attainment. An unclassified area is a region where data are insufficient to make a determination and is generally considered as an attainment area for

administrative purposes. A single area can be in attainment of the standards for some pollutants while being in non-attainment for others.

Kings County is designated as a serious non-attainment area for the 2008 8-hour ozone standard and a moderate non-attainment area for the 2015 8-hour ozone standard. Both designations are part of the larger New York-Northern New Jersey-Long Island, NY-NJ-CT non-attainment areas. Kings County has been designated as a maintenance area for CO as of May 20, 2002, and for the 2006 $PM_{2.5}$ standard as of April 18, 2014. Kings County is in attainment for all other criteria pollutants (PM_{10}, Pb, NO_2, and SO_2).

Impact Criteria

The predicted concentrations of pollutants of concern associated with a proposed project are compared with either the NAAQS for criteria air pollutants or ambient guideline concentrations for non-criteria pollutants. In general, if a project would cause the standards for any pollutant to be exceeded, it would likely result in a significant adverse air quality impact. In addition, the City's de minimis criteria are also used to determine significance of impacts for CO and $PM_{2.5}$.

CO De Minimis Criteria

New York City has developed de minimis criteria to assess the significance of the increase in CO concentrations that would result from the introduction of project-generated mobile sources, as set forth in the *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant adverse environmental impact. Significant increases of CO concentrations in New York City are defined as:

- An increase of 0.5 ppm or more in the maximum eight-hour average CO concentration at a location where the predicted No-Action eight-hour concentration is equal to or between 8.0 and 9.0 ppm; or
- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the eight-hour standard, when No-Action concentrations are below 8.0 ppm.

$PM_{2.5}$ De Minimis Criteria

New York City uses de minimis criteria to determine a project's potential to result in a significant adverse $PM_{2.5}$ impact under CEQR. The de minimis criteria are as follows:

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 µg/m3 at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or

› Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 µg/m3 at a discrete receptor location (elevated or ground level).

Non-Criteria Pollutant Thresholds

Non-criteria, or toxic air pollutants include a multitude of pollutants of variable toxicity. No federal ambient air quality standards have been promulgated for toxic air pollutants. However, NYSDEC has issued guideline non-criteria pollutant ambient air concentrations and acceptable risk management range to determine the potential effects to the public.

The NYSDEC DAR-1 guidance document presents guideline concentrations in micrograms per cubic meter (µg/m^3) for the one-hour (SGC) and annual average time (AGC) periods for various air toxic compounds[3]. The offsite concentration should not exceed the SGC at any time.

In order to evaluate residual risk of non-carcinogenic toxic air emissions, hazard index is calculated based on annual exposure limits. If the combined ratio of pollutant concentration divided by its annual exposure threshold for each of the toxic pollutants is found to be less than 2.0, according to DAR-1, the residual risk is deemed acceptable.

In addition, the potential cancer risk associated with each carcinogenic pollutant, as well as the total cancer risk of the releases of all the carcinogenic toxic pollutants combined, can be estimated. If the total incremental cancer risk of all the carcinogenic toxic pollutants combined is less than ten-in-one million, the residual risk is deemed acceptable.

Background Concentrations

Background concentrations are ambient pollution levels associated with existing stationary, mobile, and other area emission sources, but not with the Proposed Development. The latest three years of monitoring data (2018 to 2020) from the representative monitoring stations were used to develop background concentrations for all pollutants. CO, NO_2 and ozone levels were collected at the Queens College monitoring station located at 65-30 Kissena Boulevard, $PM_{2.5}$ -- from the station at JHS 126, 424 Leonard Street in Brooklyn. 1-hour and annual NO_2 background concentrations were developed from monitoring data collected in 2017-2019 to account for pre-COVID conditions. These concentrations were estimated using the form of the NAAQS (see the "Form" column in **Table 14-1** for more information).

Table 14-2 summarizes the background concentrations for each of the pollutants.

Potential CO and $PM_{2.5}$ impacts are also assessed on an incremental basis and compared with the respective CO or $PM_{2.5}$ *de minimis* criteria. Based on the background concentrations, the 8-hour CO *de minimis* is 3.7 ppm, 24-hour $PM_{2.5}$ *de minimis* is 8.2 µg/m^3.

[3] NYSDEC DAR-1 - http://www.dec.ny.gov/docs/air_pdf/dar1.pdf.

Table 14-2 Background Concentrations

Pollutant	Averaging Time	Monitoring Location	Background Concentration
Carbon Monoxide	1-Hour	Queens College 2	2.1 ppm
	8-Hour	Queens College 2	1.6 ppm
Nitrogen Dioxide (NO_2)	1-Hour	Queens College 2	104.1 µg/m^3
	Annual	Queens College 2	27.5 µg/m^3
Particulate Matter ($PM_{2.5}$)	24-Hour	JHS 126	18.7 µg/m3
	Annual	JHS 126	7.6 µg/m3
Particulate Matter (PM_{10})	24-Hour	Queens College 2	34.3 µg/m3

Source: EPA Monitor Values Report, Outdoor Air Quality Data, https://www.epa.gov/outdoor-air-quality-data/monitor-values-report

Methodology and Screening Analyses-Mobile Sources

Mobile Sources

Mobile Source Screening Analysis

A screening analysis of mobile source emissions of Carbon Monoxide (CO) and Particulate Matter (PM) on ambient pollutant levels in the study area was conducted pursuant to guidance in the *2021 CEQR Technical Manual*. For the project's study area, as described in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*, the threshold for conducting an analysis of CO emissions corresponds to 170 project-generated vehicles at a given intersection in the peak hour. The need for conducting an analysis of PM emissions is based on road type and the number of project-generated peak hour heavy-duty diesel vehicles or its equivalency (HDDVs) in vehicular $PM_{2.5}$ emissions as determined using the worksheet ~~provided~~referenced on page 17-12 of the *2021 CEQR Technical Manual*.

Detailed Mobile Source Analysis

The CEQR threshold for CO and $PM_{2.5}$ were exceeded at several intersections. The intersections were ranked by the generated traffic volume, HDDVs, and level of service for weekday, Saturday and Sunday to select the worst-case location(s) for modeling. One intersection, Louisiana Avenue and Flatlands Avenue, was selected for detailed modeling based on the ranking results and in consultation with the lead agency, NYC DCP. Detailed microscale analysis of particulate matter ($PM_{2.5}$ and PM_{10}) and CO was conducted for this intersection.

Vehicle Emissions

Vehicular CO, PM emission factors utilized in the dispersion modeling were computed using the latest version of the EPA's Motor Vehicle Emission Simulator, MOVES3. This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or compressed 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 an inspection maintenance program.

MOVES input files (i.e., fuel data, county-specific hourly temperature and relative humidity data, inspection/maintenance coverage, etc.) for ~~Queens~~Kings County were obtained from NYSDEC. Source type age distribution data were obtained from NYSDEC and processed using the EPA's *Age Distribution Projection Tool for MOVES3*.[4]

Traffic Data

Traffic information from **Chapter 13, Transportation** and speeds developed specifically for this analysis on the basis of speed runs collected for the project were used to estimate emissions and to develop geometries for the dispersion modeling.

CO Emissions

CO emissions were estimated for the month of January, which is the highest month of the year for CO emissions. MOVES3 runs for CO were conducted for ~~four~~two peak periods (weekday ~~AM, midday,~~ PM and Saturday midday) for both No-Action and With-Action conditions.

PM Emissions

Following the EPA's *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Non-attainment and Maintenance Areas*,[5] particulate matter MOVES runs were conducted for January, and for the peak AM, midday, PM, and overnight time periods. For peak AM, midday, and PM analyses, traffic volumes were based on volumes presented in **Chapter 13, Transportation**. For the overnight period, the midday traffic volumes were used as a reference and were then factored down to reflect projected overnight volumes. The runs were made for the No-Action and With-Action conditions for each link used in the intersection model utilizing link-specific parameters and data.

Fugitive Dust

In addition to exhaust, tire and brake-wear emission factors estimated by MOVES3 for particulate matter, fugitive dust emissions were estimated using EPA's Compilation of Air Emissions Factors (AP-42)[6] guidance for paved roads. Fugitive dust emissions were used in the short-term, 24-hour modeling of $PM_{2.5}$ and PM_{10}. Consistent with NYCDEP's conclusion that fugitive dust has insignificant contribution on the neighborhood scale, fugitive dust emissions were not used in the annual $PM_{2.5}$ modeling (i.e., neighborhood scale analysis).

Dispersion Model

The EPA AERMOD model (version 21112) was used in the analyses of CO, $PM_{2.5}$ at the selected intersections. The intersection links were modeled using the line source option in the model and following the EPA's PM Transportation Conformity Guidance. Initial vertical and horizontal dimensions and source release heights were determined based on the source

[4] EPA. Age Distribution Projection Tool for MOVES3.xlsx <Tools to Develop or Convert MOVES Inputs | US EPA>

[5] https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100NMXM.pdf

[6] EPA. AP-42, chapter 13.2.1 Paved Roads. https://www.epa.gov/sites/production/files/2020-10/documents/13.2.1_paved_roads.pdf

types in the fleet as described in Appendix J.3 to the EPA PM Guidance. CO analysis used peak hour emission rates at each link, while PM analysis utilized variable hourly emission rates.

Receptor Placement

Sensitive receptors near the intersection were placed at the existing sidewalks under No-Action and With-Action conditions at 1.8 meters above grade. For the assessment of short-term impacts, receptors were placed at the sidewalks around the intersection at approximately 10 feet from the curb. For compliance with the annual neighborhood $PM_{2.5}$ criterion, receptors were placed at 15 meters away from the curb.

Analysis Year

The mobile sources analyses were performed for 2031, the analysis year for this EIS.

Meteorological Data

Dispersion analysis used the latest available five years (2016-2020) of hourly meteorological observations from JFK Airport National Weather Service station and upper air data obtained from the Brookhaven station, New York. JFK Airport is located not far from the project location in East New York and was considered to be more representative of the Project Area than LaGuardia Airport.

Parking Facilities

Under the With-Action condition, several parking garages would be constructed on the Development Site. This includes a naturally ventilated multi-level public parking garage and three below grade mechanically ventilated accessory parking garages under Buildings 1 and 2, Buildings 3 and 4, and Buildings 8 and 9. The potential for air quality impacts was estimated for the above-grade public parking garage and from the largest of the three mechanically ventilated accessory parking garages. In consultation with the MEP engineer for the project it was determined that above-parking entrance louvers would be used for the ventilation of exhaust from the below grade accessory parking garages. The parking facilities were analyzed following the procedures described in sections 311.2 and 321.2 in Chapter 17 of the *2021 CEQR Technical Manual* and as detailed in the Appendix to this chapter.

Stationary Sources

HVAC Analysis

The Proposed Project would include a total approximate 2,200,538-gsf development with ten buildings ranging from two to 15 stories. Based on the number of proposed buildings, the *2021 CEQR Technical Manual* requires a detailed dispersion analysis using the EPA's AERMOD model. For conservative analysis purposes it was assumed that the proposed buildings would utilize natural gas-fueled low NO_x boilers for the HVAC and hot-water systems. However, it should be noted that the Applicant may consider the use of electric heating and hot water systems. The HVAC analysis assesses the potential for cumulative

emissions from the proposed buildings and for emissions from each individual building to significantly impact the nearest receptor buildings.

AERMOD Dispersion Modeling

The dispersion modeling for the HVAC analysis was conducted using AERMOD version 21112. 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. The AERMOD model calculates pollutant concentrations from one or more points (e.g., exhaust stacks) based on hourly meteorological data and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. AERMOD can be run with and without building downwash. The downwash option accounts for the effects on plume dispersion created by the structure the stack is located on, and other nearby structures.

Emission Rates and Stack Parameters

The MEP engineer for the project provided information on HVAC and hot water equipment. As described above, it was assumed that natural gas would be used for HVAC and hot water.[7] Short-term emission rates for the proposed HVAC and hot-water systems were estimated using the MEP-provided boiler sizes and emission factors from AP-42, EPA's Compilation of Air Emissions.[8] Annual emission rates were calculated using short-term emission rates and a factor of 100/365.

Exhaust stack parameters such as temperature, velocity and diameter were obtained from the MEP specifications. Exhaust stacks for the proposed HVAC and hot-water systems were analyzed on the highest roof of each respective building and were assumed to rise 3 feet above the tallest mechanical bulkhead of each building.

Methodology Utilized for Estimating NO_2 Concentrations

The 1-hour NO_2 concentration associated with the Proposed Development was estimated using the AERMOD Plume Volume Molar Ratio Method (PVMRM) module. The PVMRM module limits the NO_x to NO_2 conversion by considering NO_2 formation based on the amount of ozone within the plume volume. Hourly background ozone concentrations from the Queens College ambient monitoring station for the latest five years (2016-2020) of hourly data were incorporated into the model. Hourly background NO_2 concentrations from the Queens College monitoring station for the years 2017 to 2019 (as opposed to latest three years of 2018-2020) were conservatively used to account for higher concentrations from pre-COVID conditions. Overall, the total 1-hour NO_2 concentration was estimated using 5 years of background ozone concentrations and seasonal hourly background NO_2

[7] While the stationary source assessment assumes the use of natural gas for conservative analysis purposes, the Applicant may consider the use of electric heating and hot water systems.

[8] https://www.epa.gov/sites/production/files/2020-09/documents/1.4_natural_gas_combustion.pdf

concentrations directly in the model. The annual NO_2 concentrations were estimated using the 0.75 conversion rate.

Receptor Locations

Receptors were placed on the nearest affected receptor buildings. The nearest receptors to the proposed buildings would be the other buildings that would be constructed in conjunction with the Proposed Development. Therefore, receptors were placed 20 feet apart horizontally on each floor of the proposed buildings.

Meteorological Data

The same meteorological data that was used in the mobile source analysis was used in the HVAC analysis.

Industrial Source Analysis

As described in Section 220 and Section 321 in Chapter 17 of the *CEQR Technical* Manual, an air quality assessment is required to evaluate the potential impacts of air toxics emissions from ventilation exhaust systems of manufacturing or processing facilities within a 400-foot radius of a project site when a project would result in new sensitive uses (particularly residences, schools, hospitals, or parks). If any sources are identified, a screening analysis is performed based on Table 17-3 in Chapter 17 of the *CEQR Technical Manual*. The screening table provides the maximum 1-hour, 8-hour, 24-hour and annual average modeled values based on a generic emission rate of 1 gram per second of a pollutant from a 20-foot-tall point source for the distances between 30 feet and 400 feet from the receptor of same height. Potential impacts predicted from the industrial source of concern based on the screen table are compared with the short-term guideline concentrations (SGCs) and annual guideline concentration (AGCs) recommended in NYSDEC's DAR-1 AGC/SGC Tables. If a proposed project fails the above screening analysis, or the screening analysis methodology is not applicable to the project, further refined analysis using EPA's AERSCREEN and/or AERMOD model is warranted to determine any potential for significant adverse impacts.

Large or Major Source Analysis

As described in Section 220 and Section 321 in Chapter 17 of the *CEQR Technical Manual*, an air quality assessment is required to evaluate the potential impacts of emissions from a "large" or "major" emission source within a 1,000-foot radius of a project site. "Major" sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits. "Large" sources are identified as sources located at facilities that require a State Facility Permit. A detailed analysis is usually performed for such sources, if any are identified, to determine any potential for significant adverse impact.

Existing Condition

Existing conditions in the area are characterized by the monitored concentrations representative of the Project Area. The background concentrations (see **Table 14-2**) are representative of the existing conditions in the Project Area for the presented pollutants. Pollutant concentrations that are not shown in **Table 14-2** are presented in the **Table 14-3**.

Lead concentrations are monitored at only one location in New York City, in the Bronx at IS 52 at 681 Kelly Street. Ozone and SO_2 concentrations were collected at the same Queens College monitoring station as CO, PM_{10} and NO_2 concentrations for **Table 14-2**. Concentrations of all pollutants except ozone are below their respective NAAQS. Ozone concentrations slightly exceeded the 2015 8-hour standard which corresponds with the non-attainment status of Kings County, where the project would be located.

Table 14-3 Existing Monitored Concentrations (2018-2020)

Pollutant	Averaging Time	Concentration	NAAQS
Lead	3-month	0.0033 µg/m^3	0.15 µg/m^3
Ozone	8-Hour	0.071 ppm	0.070 ppm
Sulfur Dioxide	1-Hour	5.7 ppb	75 ppb

Source: VHB, Inc. March 2022
ppm: parts per million; ppb: parts per billion

Assessment

Mobile Sources

Screening Analysis

The Proposed Actions would facilitate a mixed-use development with residential, local retail and community facility uses. As described in **Chapter 13, Transportation**, the Proposed Development would generate mostly auto trips. The generated peak hour (AM, MD, PM, Saturday, and Sunday) trips were screened using the CEQR screening threshold for CO and $PM_{2.5}$. The Project Area has a number of signalized and unsignalized intersections that would be affected by the Proposed Development. **Table 14-4** and **Table 14-5** list signalized intersections ranked by the number of total generated trips for the weekday and weekend, respectively. Several intersections failed the CO screening threshold of 170 trips per peak hour. The failing intersections in **Table 14-4** and **Table 14-5** are highlighted in bold.

The Proposed Development would not generate heavy-duty diesel vehicle trips, but it will create truck and shuttle bus trips. As shown in **Table 13-9** of **Chapter 13, Transportation**, the number of incremental truck and shuttle bus trips would be highest during the weekday AM peak hour, with a maximum of 38 trips. It is anticipated that the truck trips generated by the Proposed Development would be delivery vehicles (class 3 trucks) and shuttle buses (HDDV3). Shuttle bus trips would be expected to concentrate around the Project Site, while truck volumes would be the highest along the Pennsylvania Avenue corridor. The equivalent $PM_{2.5}$ emissions from the generated vehicles considered LDGT1 and the HDDV3 trips. The resultant trips would exceed the CEQR threshold. Therefore, a microscale intersection PM analysis is warranted.

Based on the screening results presented in **Table 14-4** and **Table 14-5**, on $PM_{2.5}$ screening and in consultation with NYC DCP, the intersection of Louisiana Avenue and Flatlands Avenue was selected for the detailed mobile source analysis.

Table 14-4 Weekday Signalized Intersections Project-Generated Trips Screening

	AM		MD		PM	
Intersection	**Vehicle Volume**	**LOS**	**Vehicle Volume**	**LOS**	**Vehicle Volume**	**LOS**
Flatlands and Georgia	**319**	B	**276**	B	**438**	B
Flatlands and Louisiana	**320**	D	**296**	D	**410**	D
Flatlands and Pennsylvania	**287**	D	**212**	C	**279**	D
Flatlands and East 108 Street	**188**	C	159	C	**218**	D
Cozine and Pennsylvania	**173**	D	133	C	**173**	D
Stanley and Pennsylvania	**181**	C	129	C	164	C
Wortman and Pennsylvania	**175**	D	130	C	168	C
Linden Blvd and Pennsylvania	**173**	F	120	E	152	E
Flatlands and Rockaway Pkwy	134	D	106	D	141	E
Twin Pines Drive East and Pennsylvania	127	B	97	B	135	C
Vandalia and Pennsylvania	122	C	87	D	124	C
Seaview and Pennsylvania	119	D	82	C	113	C
Vandalia and Louisiana	90	B	90	B	130	B

Source: VHB, Inc. March 2022

In order to select the appropriate condition for the PM analysis, the weekday and the weekend, Saturday and Sunday, conditions were considered. The weekend conditions reflect the trips associated with retail and community facility uses and additional trips related to church services on Sundays. Trips generated during weekend peak periods are presented in **Table 14-5**. While the weekend peak hour volumes are higher than the weekday peak hour volumes, the average weekend incremental trips are comparable to or lower than the weekday volumes because of the lower increment during the other hours of the day. Sunday vehicle increments are directly related to the two church services and are limited to pre- and post-service times. Saturday incremental vehicle trips are higher during midday hours, but the average daily trips would be similar to the weekday. As such, it is anticipated

that the 24-hour PM weekday impacts would be similar to or higher than on a weekend. Therefore, weekday impacts were considered in the PM analysis.

Table 14-5 Weekend Signalized Intersections Project-Generated Trips Screening

	Saturday		Sunday	
Intersection	**Volume**	**LOS**	**Volume**	**LOS**
Flatlands and Georgia	**497**	B	**571**	C
Flatlands and Louisiana	**422**	E	**395**	E
Flatlands and Pennsylvania	**305**	D	**320**	D
Flatlands and East 108 Street	**235**	E	**237**	N/A
Cozine and Pennsylvania	**184**	D	**189**	N/A
Stanley and Pennsylvania	**178**	D	**186**	N/A
Wortman and Pennsylvania	**179**	C	**185**	N/A
Linden Blvd and Pennsylvania	164	D	**173**	N/A
Flatlands and Rockaway Pkwy	153	F	158	N/A
Twin Pines Drive East and Pennsylvania	138	B	143	D
Vandalia and Pennsylvania	128	C	136	E
Seaview and Pennsylvania	119	C	125	D
Vandalia and Louisiana	123	B	118	B

Source: VHB, Inc. March 2022

Microscale Intersection Analysis

Microscale intersection analysis compares the future No-Action condition to the With-Action condition at the intersection selected for analysis. It is assumed that if no significant adverse impacts are identified at the selected intersection with the highest volumes and poor level of service, other intersections would not experience significant adverse air quality impacts.

In the No-Action condition, the Proposed Development would remain unchanged from existing conditions. The No-Action condition considers the effects of background growth and growth generated by known projects (e.g., developments that are under construction,

planned, or proposed by the 2031 build year; see **Table 13-32** in the **Chapter 13, Transportation**).[9]

CO Analysis

Emissions from vehicles at the intersection selected for analysis were estimated using EPA's MOVES3 mobile source emissions model and NYSDEC inputs for Kings County. The analysis was conducted for the two highest peak periods, the weekday PM, and the Saturday peak hours. It is anticipated that if no adverse impacts are identified during the highest peak hours, there would not be adverse impacts during the other hours. CO emissions were conservatively estimated using the month of January as the PM peak hour emissions. The other assumptions are described above in the **Analysis Approach** section.

The results of the AERMOD analysis are presented in **Table 14-6** for the highest CO concentrations. All estimated concentrations were below respective CO NAAQS and CEQR *de minimis* criterion.

Table 14-6 Highest 1-Hour and 8-Hour CO Concentrations for No-Action and With Action Conditions in 2031 (ppm)

		1-Hour		8-Hour		
Intersection	**Time Period**	**No-Action[1]**	**With Action[2]**	**No-Action[1]**	**With Action[2]**	**Increment**
Louisiana & Flatlands Ave	Weekday PM	2.7	2.9	2.0	2.1	0.11
	Saturday	2.8	3.4	2.1	2.4	0.36
CO NAAQS/*de minimis*		**35**		**9**		**3.7**

Source: VHB, Inc. March 2022

Note:

No-Action and With Action total results include background concentrations from **Table 14-2.**

~~Source: VHB, Inc. March 2022~~

~~Notes:~~

~~[1] No-Action and With-Action concentrations are highest second highest 1 or 8-hour concentrations.~~

~~[2] Resultant concentrations include background concentrations from *Table 14-2.*~~

The highest impacts were estimated for the Saturday peak period. As the results show, the highest modeled concentrations under the No-Action and With Action conditions at the selected intersections were below the 1 and 8-hour NAAQS. The 8-hour impact of the With Action condition over the No-Action was below the CEQR *de minimis* criterion for CO. As such, the Proposed Project would not adversely impact ~~the~~ CO levels near the affected intersections.

[9] The FEIS microscale intersection analysis has lower speeds in the overall With-Action condition and a greater difference in the speed increments as compared to the DEIS as a result of an adjustment made to the No-Action and With-Action condition speed equations. Subsequently, the analysis was refined to account for a more detailed link coverage close to the intersection. The vehicle source type percentages in the With-Action condition were adjusted to include shuttle buses generated by the Project.

PM Analysis

The particulate matter analysis was conducted to estimate the 24-hour $PM_{2.5}$ and PM_{10} and annual $PM_{2.5}$ concentrations and to compare them with the CEQR *de minimis* thresholds for 24-~~hours~~hour and ~~for the~~ annual ~~period~~$PM_{2.5}$, and NAAQS for PM_{10}. The 24-hour hourly traffic conditions were composed of blocks of time reflective of the AM, midday, and PM peak periods. The overnight traffic was estimated by using midday traffic as a reference and adjusting the volumes down. Weekend hour-by-hour 24-hour traffic is lighter than the weekday traffic and therefore impacts of weekend traffic emissions were assumed to be lower than weekday traffic emissions.

$PM_{2.5}$ concentrations were estimated for the 24-hour and annual periods. **Table 14-7** presents the 24-hour results in comparison with the 24-hour de minimis criterion and **Table 14-8** presents the annual results.

Table 14-7 Highest 24-Hour $PM_{2.5}$ Concentrations for No-Action and With Action Conditions in 2031 (μg/m³)

Intersection	Time Period	No-Action Impact	No-Action Total[1,2]	With Action Impact	With Action Total[1,2]	Increment
Louisiana Ave & Flatlands Ave	weekday	7.9	26.6	8.9	27.6	1.0
$PM_{2.5}$ NAAQS/ *de minimis*			35		35	8.2

Source: VHB, Inc. March 2022

Notes:

[1] ~~No~~[1]No-Action and With-Action impacts are the ~~average of 98th percentile of the annual 24-hour~~ concentrations ~~over the modeled five years of meteorological observations. These levels correspond to~~ associated with the highest 24-hour ~~impact of With-Action over~~$PM_{2.5}$ incremental concentration and are not in the form of 24-hour NAAQS. These higher levels were estimated for the purpose of calculating the ~~No-Action condition~~highest increment to compare to the CEQR *de minimis* threshold.

[2] No-Action and With Action total results include background concentrations from **Table 14-2**.

Table 14-8 Highest Annual $PM_{2.5}$ Concentrations for No-Action and With-Action Conditions in 2031 (μg/m³)

Intersection	Time Period	No-Action Impact[1]	No-Action Total[2]	With-Action Impact[1]	With-Action Total[2]	Increment
Louisiana Ave & Flatlands Ave	weekday	0.35	7.95	0.43	8.03	0.085
$PM_{2.5}$ NAAQS/*de minimis*			12.0		12.0	0.1

Source: VHB, Inc. March 2022

Notes:

[1] No-Action and With Action impacts are the average ~~levels~~concentrations over the modeled five years of meteorological observations corresponding to the highest annual incremental impact.

[2] No-Action and With Action total results include background concentrations from **Table 14-2**.

PM_{10} concentrations were estimated for the 24-hour period. Results of this analysis are presented in **Table 14-9** in comparison with the PM_{10} NAAQS.

Table 14-9 Highest 24-Hour PM_{10} Concentrations for With Action Conditions in 2031 ($\mu g/m^3$)

Intersection	Time Period	With Action Impact	With Action Total[1]
Louisiana Ave & Flatlands Ave	weekday	29.4	63.7
PM_{10} NAAQS			150

Source: VHB, Inc. March 2022
Notes:
[1] Total results include background concentrations from *Table 14-2*.

The results presented in **Table 14-7** through **Table 14-9** indicate that the 24-hour and annual $PM_{2.5}$ and 24-hour PM_{10} concentrations at the modeled intersection would be below the NAAQS for both No-Action and With-Action conditions. The 24-hour $PM_{2.5}$ increments of With-Action over the No-Action condition would be below the CEQR *de minimis* threshold for 24 hours at ~~all~~the modeled ~~intersections~~intersection. The annual $PM_{2.5}$ increments would be below the CEQR *de minimis* threshold for the annual averaging period.

Parking Assessment

Two types of parking garages are proposed on the Development Site; three below-grade accessory parking garages with a total of approximately 386 parking spaces and a seven-story public parking garage that would be naturally ventilated with approximately 500 spaces for the CCC, PAC and other visitors (see **Figure 14-2**). Accessory parking would be located under Buildings 1 and 2, Buildings 3 and 4, and Buildings 9 and 10. Each accessory garage would be mechanically ventilated with the louvres for the exhaust located above the entrance and exit ramps (see **Figure 14-2**).

An air quality analysis was conducted to assess the potential for impacts related to emissions from these parking garages. The analysis estimated emissions from the above-grade public parking garage structure and from the largest accessory garage as it would be the garage with the highest emissions and would be representative of the other two below-grade parking facilities. The selection between the accessory garages was based on the vehicular volumes arriving to and departing from each of these garages. The garage with the highest inbound and outbound trips was considered to be representative of the condition with the highest emissions. Further, the hourly ins and outs were examined to identify the hour of the highest vehicle volumes for each of the public and accessory garages selected for analysis. The hour with the highest vehicle volumes was considered to represent the hour of the highest emissions for the short-term analysis. The 24-hour and annual impacts were assessed using the highest 24-hour average of the ins and outs between the weekday, Saturday and Sunday.

The hourly ins and outs for the accessory garage under Buildings 3 and 4 are shown in **Table 14-10**. Based on the projected vehicle volumes, the Sunday 3 to 4 PM time period was selected for the analysis of the accessory parking. The Saturday 24-hour average was the highest and was used for the 24-hour and annual analysis.

Table 14-11 presents the hourly ins and outs for the public parking garage. Based on the hourly volumes the 10 to 11 AM hour on a Sunday was conservatively selected for the analysis of the public parking garage, and the Saturday average 24-hour ins and outs were used for the annual impacts.

Figure 14-2 Proposed Parking Garages



Table 14-10 Hourly In and Out Volumes for the Accessory Garage Under Buildings 3 and 4

	Weekday			Saturday			Sunday		
Time	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
12-1 AM	22	9	31	41	27	68	38	23	61
1-2 AM	8	3	11	26	14	40	29	13	42
2-3 AM	5	2	7	21	6	27	22	7	29
3-4 AM	4	3	7	15	8	23	15	4	19
4-5 AM	4	5	9	10	5	15	10	6	16
5-6 AM	5	17	22	5	7	12	5	4	9
6-7 AM	15	41	56	10	12	22	5	12	17
7-8 AM	38	99	137	22	38	60	16	25	41
8-9 AM	74	179	253	46	70	116	41	54	95
9-10 AM	56	103	159	63	100	163	57	90	147
10-11 AM	50	82	132	81	112	193	73	115	188
11 AM-12 PM	68	80	148	100	123	223	99	130	229
12-1 PM	88	87	175	115	136	251	106	132	238
1-2 PM	103	103	206	115	122	237	117	122	239
2-3 PM	90	90	180	126	121	247	114	124	238
3-4 PM	106	92	198	**154**	**158**	**312**	**154**	**166**	**320**
4-5 PM	**161**	**120**	**281**	135	120	255	113	109	222
5-6 PM	129	95	224	137	121	258	115	109	224
6-7 PM	108	97	205	120	106	226	117	93	2120
7-8 PM	132	100	232	107	100	207	108	86	194
8-9 PM	113	74	187	103	87	190	102	76	178
9-10 PM	91	53	144	86	67	153	73	56	129
10-11 PM	65	31	96	65	55	120	55	38	93
11 PM-12 AM	48	19	67	52	42	94	36	20	56

Source: VHB, Inc. March 2022

The analysis of the residential facility used the 2021 CEQR parking analysis spreadsheet for a mechanically ventilated garage to estimate CO and PM impacts of idling, starting, and running emissions from vehicles in the garage. Vehicular emission rates were calculated using MOVES3 for Kings County with similar assumptions as in the intersection analysis for the year 2031. The impacts of garage emissions on the opposite sidewalk were estimated using contribution from parking garage under buildings 3 and 4 and on-street traffic that combined traffic from both parking garages on Street C. The results presented in the **Table 14-12** indicate that the resultant concentrations would be below the applicable NAAQS and CEQR *de minimis* values. As a result, there would be no potential for parking emissions from residential garages to have significant adverse impacts on the air quality levels.

Table 14-11 Hourly In and Out Volumes for the Public Parking Garage

	Weekday			Saturday			Sunday		
Time	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
12-1 AM	0	0	0	0	0	0	0	0	0
1-2 AM	0	0	0	0	0	0	0	0	0
2-3 AM	0	0	0	0	0	0	0	0	0
3-4 AM	0	0	0	0	0	0	0	0	0
4-5 AM	0	0	0	0	0	0	0	0	0
5-6 AM	0	0	0	0	0	0	0	0	0
6-7 AM	0	0	0	0	0	0	111	0	111
7-8 AM	3	1	4	1	0	1	280	0	280
8-9 AM	11	1	12	3	0	3	84	0	84
9-10 AM	4	3	7	2	1	3	57	95	152
10-11 AM	4	3	7	2	1	3	**310**	**271**	**581**
11 AM-12 PM	6	3	9	2	1	3	26	37	63
12-1 PM	4	3	7	4	1	5	27	311	338
1-2 PM	8	8	16	9	1	10	21	112	133
2-3 PM	3	4	7	1	2	3	1	50	51
3-4 PM	3	6	9	3	8	11	3	32	35
4-5 PM	**10**	**14**	**24**	**8**	**5**	**13**	8	5	13
5-6 PM	3	9	12	4	3	7	4	3	7
6-7 PM	2	3	5	2	10	12	2	10	12
7-8 PM	0	3	3	2	5	7	2	5	7
8-9 PM	0	0	0	2	4	6	2	4	6
9-10 PM	0	0	0	0	0	0	0	3	3
10-11 PM	0	0	0	0	0	0	0	0	0
11 PM-12 AM	0	0	0	0	0	0	0	0	0

Source: VHB, Inc. March 2022

The multilevel public parking garage emissions were also analyzed using the *2021 CEQR Technical Manual* parking analysis spreadsheet. The multilevel public parking facility would consist of seven floors and an open-air roof level. Contributions from all eight parking levels were accounted for in the analysis of CO and PM. The results presented in **Table 14-12** indicated that concentrations from this garage would be below the appropriate criteria and no significant adverse air quality impacts would be expected.

Table 14-12 Highest Concentrations from Parking Garages

Garage	Receptor Location	CO (ppm) 8-hr	$PM_{2.5}$ ($\mu g/m^3$) 24-hr	$PM_{2.5}$ ($\mu g/m^3$) Annual
Accessory	Near side	2.1/0.5	2.15	0.19
	Far side	2.1/0.5	1.86	0.19
Public	Far side	1.7	0.24	0.01
Criteria		***9/3.7***	***8.2***	***0.3***

HVAC Analysis

Refined HVAC Analysis

As described above and as shown in **Figure 14-1**, the Proposed Actions would facilitate the development of a RWCDS consisting of ten buildings ranging from two to 15 stories, and the PAC would be approximately 50 feet tall.

Based on the MEP information, it was assumed that the proposed buildings would use natural gas-fueled low NO_x 20 ppm boilers to service the HVAC and hot-water systems.[10] According to the MEP engineer for the project, the HVAC and hot-water systems would use three boilers in each building, with each boiler exhausting through its own individual stack. The combined Buildings 7-8 and Buildings 9-10 would have three boilers for each combined building. The HVAC analysis assesses the potential for individual and cumulative boiler emissions to significantly impact the nearest affected receptor buildings. However, emission rates were estimated using EPA's AP-42 for low NO_x (approximately 41 ppm) emission factor which was conservative for the low NO_x 20 ppm boilers.

Stacks were assumed to be 3 feet above the elevation of the highest bulkhead on the proposed buildings. Building sizes and heights are presented in **Table 14-13**. Emission rates and stack parameters for each modeled building are shown in **Table 14-14** and **Table 14-15**.

[10] While the stationary source assessment assumes the use of natural gas for conservative analysis purposes, the Applicant may consider the use of electric heating and hot water systems.

Table 14-13 Proposed Building Sizes and Heights

Building	Approximate Building Size (gsf)*	Approximate Building Height** (ft)
Building 1	261,140	142.5
Building 2	200,110	145
Building 3	245,225	149.8
Building 4	323,235	143.7
Building 5	138,050	152.7
Building 6	177,760	154.8
Building 7/8	208,670	134.2
Building 9/10	264,800	133.5
PAC	16,500	49.5

Source: VHB, Inc. April 2022

*Excludes parking garage areas, the existing CCC building (which will also include the Trade School), and the public parking garage.

**The highest roof height of the building

Table 14-14 HVAC and Hot Water Systems Emission Rates (for each Boiler)

Building	No. of Boilers	1-hr NOx Emission Rate (g/s)	Annual NOx Emission Rate (g/s)	24-hr PM2.5 Emission Rate (g/s)	Annual PM2.5 Emission Rate (g/s)
Building 1	3	1.88E-02	5.14E-03	2.82E-03	7.72E-04
Building 2	3	1.88E-02	5.14E-03	2.82E-03	7.72E-04
Building 3	3	1.88E-02	5.14E-03	2.82E-03	7.72E-04
Building 4	3	2.50E-02	6.86E-03	3.76E-03	1.03E-03
Building 5	3	9.39E-03	2.57E-03	1.41E-03	3.86E-04
Building 6	3	9.39E-03	2.57E-03	1.41E-03	3.86E-04
Building 7/8	3	1.25E-02	3.43E-03	1.88E-03	5.14E-04
Building 9/10	3	1.88E-02	5.14E-03	2.82E-03	7.72E-04
PAC	3	1.56E-03	4.29E-04	2.35E-04	6.43E-05

Source: VHB, Inc. January 2022

Table 14-15 HVAC and Hot Water Systems Exhaust Stack Parameters (for each Stack)

Building	No. of Stacks	Stack Height (m)	Exhaust Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
Building 1	3	54.52	338.7	9.3	0.254
Building 2	3	48.09	338.7	9.3	0.254
Building 3	3	51.14	338.7	9.3	0.254
Building 4	3	44.72	338.7	8.6	0.3048
Building 5	3	52.05	338.7	12.9	0.1524
Building 6	3	52.68	338.7	12.9	0.1524
Building 7/8	3	46.38	338.7	9.7	0.2032
Building 9/10	3	46.07	338.7	9.3	0.254
PAC	3	20.56	338.7	4.8	0.1016

Source: VHB, Inc. January 2022

AERMOD was run with and without the downwash algorithm to assess the potential direct impact of the HVAC exhaust and potential impact with the added turbulence from the surrounding structures of each individual building. The highest results of the dispersion analysis for each individual building are presented in **Table 14-16** for NO_2 and $PM_{2.5}$. As shown in **Table 14-16**, all resultant concentrations and impacts are below the relevant NAAQS and CEQR *de minimis* criteria.

Table 14-16 Maximum NO_2 and $PM_{2.5}$ Concentrations from Each Building (µg/m^3)

Building	1-hr NO_2 Concentration	Annual NO_2 Concentration	24-hr $PM_{2.5}$ Concentration	Annual $PM_{2.5}$ Concentration
Building 1	100.7	27.7	0.9	0.03
Building 2	152.0	28.0	3.3	0.09
Building 3	119.2	27.9	2.9	0.07
Building 4	170.8	28.6	6.2	0.21
Building 5	98.2	27.7	0.8	0.03
Building 6	98.5	27.6	0.4	0.02
Building 7/8	101.3	27.7	1.0	0.04
Building 9/10	102.2	27.8	1.0	0.05
PAC	134.3	27.8	2.4	0.06
NAAQS/CEQR *de minimis*	**188**	**100**	**8.2**	**0.3**

Source: VHB, Inc. January 2022

Table 14-17 presents the highest cumulative results from emissions of all buildings together. The table demonstrates that the combined impact of all proposed building emissions results in concentrations below the applicable NAAQS and *CEQR de minimis* thresholds. As such, no significant adverse air quality impacts are anticipated from the Proposed Project's HVAC and hot-water systems.

Table 14-17 Maximum Cumulative NO_2 and $PM_{2.5}$ Concentrations ($\mu g/m^3$)

Building	1-hr NO_2 Concentration	Annual NO_2 Concentration	24-hr $PM_{2.5}$ Concentration	Annual $PM_{2.5}$ Concentration
All buildings	171	29	6.8	0.3
NAAQS/CEQR *de minimis*	**188**	**100**	**8.2**	**0.3**

Source: VHB, Inc. January 2022

To ensure that there would be no significant adverse impacts from the HVAC and hot-water systems of the Proposed Project, certain restrictions related to the fuel type and stack locations would be incorporated into an E-Designation for air quality (E-679).

The E-Designation text would be as follows:

Block 4430, Lot 1, Block 4434, Lots 1 and 10: Buildings 1-10 and Performing Arts Center Building

Block 4434, Lot 10, Building 1

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 41 ppm) burners and have a stack at least 178.9 feet above grade.

Block 4434, Lot 10, Building 2

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 41 ppm) burners and have a stack at least 157.8 feet above grade to avoid any significant adverse air quality impacts.

Block 4434, Lot 1, Building 3

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 41 ppm) burners and have a stack at least 167.8 feet above grade to avoid any significant adverse air quality impacts.

Block 4434, Lot 1, Building 4

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 41 ppm) burners and have a stack at least 146.7 feet above grade. Additionally, HVAC stacks must be located on the highest roof of the building at a minimum of 18.5 feet away from the northern facade of Building 4 facing Flatlands Avenue and 55 feet west of the eastern facade of Building 4 facing Pennsylvania Avenue. With these stack restrictions there would not be any significant adverse air quality impacts.

Block 4430, Lot 1, Building 5

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with

low-NO_x (up to 41 ppm) burners and have a stack at least 170.8 feet above grade to avoid any significant adverse air quality impacts.

Block 4430, Lot 1, Building 6

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 41 ppm) burners and have a stack at least 172.8 feet above grade to avoid any significant adverse air quality impacts.

Block 4430, Lot 1, Building 7 & 8

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 41 ppm) burners and have a stack at least 152.2 feet above grade.

Block 4430, Lot 1, Building 9 & 10

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 41 ppm) burners and have a stack at least 151.1 feet above grade to avoid any significant adverse air quality impacts.

Block 4430, Lot 1, PAC Building

Any new residential or mixed-use development on the above-referenced property, if using fossil-fuel fired HVAC or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 41 ppm) burners and have a stack at least 67.5 feet above grade to avoid any significant adverse air quality impacts.

Industrial Source Analysis

To assess potential air quality impacts on the Proposed Development from existing industrial sources that emit toxic air contaminants, an investigation of existing land uses within a 400-foot radius of the Development Site was conducted to identify potential sources and determine if there are active permits associated with those sources. The presence of "large" or "major" sources was investigated using the NYSDEC Title V and State Facility Permit website along with maps and aerial photos. Based on this review, there are no existing industrial sources within 400-foot radius of the Development Site. No "large" or "major" emission sources within a 1,000-foot radius of the Development Site were identified. Therefore, no significant adverse impacts from existing industrial, "large" or "major" emission sources on the Proposed Development are anticipated, and no further analysis is warranted.

15

Greenhouse Gas Emissions and Climate Change

This chapter describes the potential impact of the Proposed Actions on greenhouse gas (GHG) emissions and considers whether the Proposed Actions are consistent with the Citywide GHG emissions reduction goals.

Introduction

The Applicant, Innovative Urban Living, LLC, is seeking several discretionary approvals from the City Planning Commission (CPC), including a zoning map amendment, zoning text amendments, and various special permits collectively referred to as the "Proposed Actions."

The Proposed Actions would facilitate the development of a mixed-use, purpose-built community on the campus of the Christian Cultural Center (CCC), which would be comprised of income-based affordable housing; a performing arts center (PAC); local retail; and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood (the Proposed Project). The Proposed Project would be developed in the East New York neighborhood of Brooklyn on Block 4430, Lot 1; and Block 4434, Lots 1 and 10 (the Development Site). The Proposed Actions would result in the development of approximately 1,645,820 gross square feet (gsf) of residential space, approximately 110,570 gsf of commercial uses, 100,904 gsf of community facility uses, public and private open space, and accessory and public parking related to the proposed on-site uses of approximately 343,244 gsf.

A portion of the Project Area is located within the 500-year flood plain (prone to flooding from 0.2 percent annual chance of storm)—as defined by Federal Emergency Management Agency (FEMA). Therefore, a storm surge or coastal flooding assessment was conducted for the Proposed Project.

As discussed in the *2021 CEQR Technical Manual*, increased concentrations of greenhouse gases change the global climate and result in 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. New York City's sustainable development policy, starting with PlaNYC and continued and enhanced in OneNYC, established sustainability initiatives and goals for greatly reducing GHG emissions and for adapting to climate change in the City. In 2014, the City Council passed a bill to reduce citywide greenhouse gas emissions by 80 percent by 2050 (Local Law 66 of 2014). The New York Climate Mobilization Act, Local Law 97 of 2019, the most recent legislation, is the most aggressive climate legislation to date. It requires buildings larger than 25,000 square feet to meet strict GHG emission limits starting in 2024. Buildings are the largest source of greenhouse gas emissions, representing nearly 70 percent of New York City's total emissions. Focusing on the city's largest buildings will promote energy efficiency and renewable energy and discourage reliance on fossil fuels. The GHG emission reduction goal for NYC buildings is 40 percent by 2030 and 80 percent by 2050, compared to 2005.

The contribution of a proposed project's GHG emissions to global GHG emissions is likely to be considered insignificant when measured against the scale and magnitude of global climate change. However, certain projects' contribution of GHG emissions still should be analyzed to determine their consistency with the City's GHG reduction goal, which is currently the most appropriate standard by which to analyze a project under CEQR. The GHG consistency assessment focuses on those projects that have the greatest potential to produce GHG emissions and evaluates their potential to result in significant inconsistencies with the GHG reduction goal.

Principal Conclusions

The Proposed Actions would be consistent with the applicable City GHG emissions reduction and climate change goals, and there would be no significant adverse GHG emission or climate change impacts as a result of the Proposed Actions.

Following the methodology provided in the *CEQR Technical Manual*, it is estimated that the Proposed Actions would result in approximately 7,682 metric tons of carbon dioxide equivalent (CO_2e) emissions from its annual operations and 8,110 metric tons a year of CO_2e emissions from mobile sources. This represents less than 0.03 percent of the City's overall 2019 GHG emissions of 55.1 million metric tons, an insignificant contribution.

The Proposed Project will comply with the 2020 Energy Conservation Construction Code of New York State and 2020 New York City Energy Conservation Code, which govern performance requirements of heating, ventilation, and air conditioning systems, as well as the exterior building envelope of new buildings. As a result, the Proposed Project will generate emissions below the Local Law 97 requirements and will contribute towards the NYC GHG reduction goals.

Since the Development Site is located within the 0.2 percent annual chance floodplain, the potential effects of global climate change have been considered and are presented in **Appendix A: Waterfront Revitalization Program Consistency Assessment**. The assessment considers the effects of climate change on rising sea levels, storm surge, and coastal flooding resulting from the Proposed Actions. As detailed in the Appendix, it was determined that the Proposed Project would be supportive of Policy 6.2 of the New York City Waterfront Revitalization Program (WRP). Therefore, adverse impacts to climate change are not anticipated as a result of the Proposed Actions.

Pollutants of Concern

GHGs are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere, and clouds. This property causes the general warming of the Earth's atmosphere, or the "greenhouse effect." Some GHGs, such as carbon dioxide (CO_2), occur both naturally and are emitted into the atmosphere through human activities. The *CEQR Technical Manual* lists six GHGs that could potentially be included in the scope of an environmental impact assessment: CO_2, nitrous oxide (N_2O), methane (CH_4), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF_6).

GHGs differ in their ability to trap heat. To compare emissions of GHGs, compilers use a weighting factor called a Global Warming Potential (GWP), where the heat-trapping ability of 1 metric ton (1,000 kilograms) of CO_2 is taken as the standard, and emissions are expressed in terms of CO_2 equivalents (CO_2e), but can also be expressed in terms of carbon equivalents. The GHGs which are emitted as a result of human activities and their GWPs are presented in **Table 15-1**.

Table 15-1 Global Warming Potential for Primary Greenhouse Gases

Greenhouse Gas	Common Sources	Global Warming Potential
CO_2 - Carbon Dioxide	Fossil fuel combustion, forest clearing, cement production	1
CH_4 - Methane	Landfills, production and distribution of natural gas and petroleum, anaerobic digestion, rice cultivation, fossil fuel combustion	21
N_2O - Nitrous Oxide	Fossil fuel combustion, fertilizers, nylon production, manure	310
HFCs - Hydrofluorocarbons	Refrigeration gases, aluminum smelting, semiconductor manufacturing	140–11,700
PFCs - Perfluorocarbons	Aluminum production, semiconductor manufacturing	6,500–9,200
SF_6 - Sulfur Hexafluoride	Electrical transmissions and distribution systems, circuit breakers, magnesium production	23,900

- Carbon Dioxide (CO_2). CO_2 enters the atmosphere via the combustion of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). CO_2 is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle. Although not the GHG with the strongest effect per molecule, CO_2 is by far the most abundant and, therefore, the most influential GHG.
- Methane (CH_4). CH_4 is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices, as well as by the decay of organic waste in municipal solid waste landfills. Methane, in addition to nitrous oxide (noted below), plays an important role in GHG emissions since the removal processes for these compounds are limited and they have a relatively high impact on global climate change as compared to an equal quantity of CO_2 as reflected in their high global warming potential.
- Nitrous Oxide (N_2O). N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste.
- Fluorinated Gases. Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are powerful synthetic greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). These gases are typically emitted in smaller quantities. However, because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases (High GWP gases).

This analysis focuses on CO_2, N_2O, and CH_4 (collectively as CO_2e) as there are no significant direct or indirect sources of HFCs, PFCs, or SF_6 associated with the Proposed Actions.

Because of the growing consensus that GHG emissions resulting from human activity have the potential to profoundly impact the Earth's climate, countries around the world have undertaken efforts to reduce emissions by implementing both global and local measures that address energy consumption and production, land use, and other areas. Although the U.S. has not ratified the international agreements that set emissions targets for GHGs, in December 2015, the U.S. signed the international Paris Agreement[1], which pledged deep cuts in emissions and has a stated goal of reducing annual emissions to a level that, by 2025, would be between 26 and 28 percent lower than 2005 emissions.[2]

Regardless of the Paris Agreement, the U.S. Environmental Protection Agency (EPA) is required to regulate GHGs under the Clean Air Act and has begun preparing and implementing regulations. In coordination with the National Highway Traffic Safety Administration (NHTSA), EPA currently regulates GHG emissions from newly manufactured on-road vehicles. In addition, EPA regulates transportation fuels via the Renewable Fuel Standard program, which will phase in a requirement for the inclusion of renewable fuels, increasing annually up to 36.0 billion gallons in 2022. In 2015, EPA also finalized rules to address GHG emissions from both new and existing power plants that would, for the first time, set national limits on the amount of carbon pollution that power plants can emit. The Clean Power Plan sets carbon pollution emissions guidelines and performance standards for existing, new, and modified and reconstructed electric utility generating units. On February 9, 2016, the Supreme Court stayed implementation of the Clean Power Plan pending judicial review. On March 28, 2017, the President of the U.S. signed an executive order directing the EPA to review the Clean Power Plan, and, in May 2019, the EPA administrator announced plans to change the way the EPA calculates health risks of air pollution, known as the Affordable Clean Energy Rule.

There are also regional and local efforts to reduce GHG emissions. In 2009, then New York State Governor David Paterson issued Executive Order No. 24, establishing a goal of reducing GHG emissions in New York State by 80 percent, compared with 1990 levels, by 2050, and creating a Climate Action Council tasked with preparing a climate action plan outlining the policies required to attain the GHG reduction goal; an interim draft plan has been published.[3] The State is now seeking to achieve some of the emission reduction goals via local and regional planning and projects and though its Cleaner Greener Communities and Climate Smart Communities programs. The State also has adopted California's GHG vehicle standards (which are at least as strict as the federal standards).

The New York State Energy Plan outlines the State's energy goals and provides strategies and recommendations for meeting them. The latest version of the plan was published in June 2015. The new plan outlines a vision for transforming the state's energy sector that would result in increased energy efficiency (both demand and supply), increased carbon-free power production, and cleaner transportation in addition to achieving other goals not related to GHG emissions. The 2015 plan also establishes new targets: (1) reducing GHG emissions in New York State by 40 percent, compared with 1990 levels, by 2030; (2) providing 50 percent of electricity generation in the state from renewable sources by 2030;

[1] Conference of the Parties, 21st Session. *Adoption of The Paris Agreement, decision -/CP.21*. Paris, December 12, 2015.

[2] Unites States of America. *Intended Nationally Determined Contributions (INDCs)* as submitted. March 31, 2015.

[3] New York State Climate Action Council. New York State Climate Action Plan Interim Report. November 2010.

and (3) increasing building energy efficiency gains by 600 trillion British thermal units (Btu) by 2030.

To meet its commitment to the Regional Greenhouse Gas Initiative (RGGI), New York State has also developed regulations to cap and reduce CO_2 emissions from power plants. Under the RGGI agreement, the governors of nine northeastern and Mid-Atlantic states have committed to regulate the amount of CO_2 that power plants are allowed to emit, gradually reducing annual emissions to half the 2009 levels by 2020. The RGGI states and Pennsylvania have also announced plans to reduce GHG emissions from transportation, through the use of biofuel, alternative fuel, and efficient vehicles.

Many local governments worldwide, including New York City, are participating in the Cities for Climate Protection™ campaign and have committed to adopting policies and implementing quantifiable measures to reduce local GHG emissions, improve air quality, and enhance urban livability and sustainability. New York City's long-term comprehensive plan for a sustainable and resilient New York City, which began as PlaNYC 2030 in 2007, and continues to evolve today as OneNYC, includes GHG emissions reduction goals, many specific initiatives that can result in emission reductions, and initiatives aimed at adapting to future climate change impacts. The goal to reduce citywide GHG emissions to 30 percent below 2005 levels by 2030 ("30 by 30") was codified by Local Law 22 of 2008, known as the New York City Climate Protection Act (the "GHG reduction goal").[4] The City also has announced a longer-term goal of reducing emissions to 80 percent below 2005 levels by 2050 ("80 by 50"), which was codified by Local Law 66 of 2014, and has published a study evaluating the potential for achieving that goal. More recently, as part of OneNYC, the City has announced a more aggressive goal for reducing emissions from building energy down to 30 percent below 2005 levels by 2025.

In December 2009, the New York City Council enacted four laws addressing energy efficiency in large new and existing buildings, in accordance with PlaNYC. The laws require owners of existing buildings larger than 50,000 square feet to conduct energy efficiency audits and retro-commissioning every 10 years, to optimize building energy efficiency, and to "benchmark" the building energy and water consumption annually, using an EPA online tool. By 2025, commercial buildings over 50,000 square feet also will require lighting upgrades, including the installation of sensors and controls, more efficient light fixtures, and the installation of submeters, so that tenants can be provided with information on their electricity consumption. The legislation also creates a local New York City Energy Conservation Code, which along with the Energy Conservation Construction Code of New York State (as updated in 2016), requires equipment installed during a renovation to meet current efficiency standards.

To achieve the 80 by 50 goal, the City is convening Technical Working Groups to analyze the GHG reduction pathways from the building, power, transportation, and solid waste sectors to develop action plans for these sectors. The members of the Technical Working Groups will develop and recommend the data analysis, interim metrics and indicators, voluntary actions, and potential mandates to effectively achieve the City's emissions reduction goal. In 2016, the City published the building sector Technical Working Group report, which included

[4] Administrative Code of the City of New York, §24-803.

commitments by the City to change building energy codes and take other measures aimed at substantially reducing GHG emissions.

For certain projects subject to CEQR (e.g., projects with 350,000 gsf or more of development or other energy intense projects), an analysis of the projects' contributions to GHG emissions is required to determine consistency with the City's reduction goal, which is currently the most appropriate standard by which to analyze a project under CEQR and is therefore applied in this chapter.

A number of benchmarks for energy efficiency and green building design have also been developed. For example, the LEED system is a benchmark for the design, construction, and operation of high-performance green buildings that includes energy efficiency components. EPA's Energy Star is a voluntary labeling program designed to identify and promote the construction of new energy efficient buildings, facilities, and homes and the purchase of energy efficient appliances, heating and cooling systems, office equipment, lighting, home electronics, and building envelopes.

Climate Change Initiatives

There are also several local initiatives related to assessing the potential local impacts to global climate change and development strategies to make existing and proposed infrastructure and development more resilient to the effects of climate change.

One such initiative is the Climate Change Adaptation Task Force that the City launched in 2008. The Task Force was charged with developing strategies to secure the City's critical infrastructure against the potential threats introduced by the climate changes such as rising sea levels and temperatures and changing precipitation patterns. It is composed of 40 City, State, and federal agencies, public authorities, and private companies that are involved in the operations of maintaining and regulating critical infrastructure in New York City. At least 100 types of infrastructure were identified that would be vulnerable to the impacts of climate chance and this inventory will help the Task Force develop coordinated strategies to increase the resilience of the region's infrastructure.

The City convened the New York City Panel on Climate Change (NPCC) composed of academic, policy advisors, and agencies to develop climate change projections of New York City. The 2009 *Climate Risk Information* report was prepared by the NPCC as part of PlaNYC to advice the Mayor and the Task Force on issue related to potential impacts on infrastructure due to climate change including, temperature, precipitation, rising sea levels, and extreme weather events. The NPCC developed projections using the Intergovernmental Panel on Climate Change (IPCC)-based methods to generate model-based probabilities for temperature, precipitation, sea level rise, and extreme events including coastal flooding in the 1 percent annual chance floodplain for the 2020s to the 2080s. These projections were developed using 16 global climate model (GCM) simulations and three GHGH emission scenarios. The NPCC released *Climate Change Adaptation in New York City: Building a Risk Management Response* in 2010 to serve as a basis for climate change adaptation in the City. In June 2013, the NPCC published *Climate Risk Information 2013: Observations, Climate Change Projections, and Maps* which outlines the most recent NPCC future climate projections. The NPCC regularly assesses climate change projections and updates those

projections regularly. The resulting reports serve as a guide in the City's policymaking process.

The City established an interagency group to work with the Federal Emergency Management Agency (FEMA) to revise the Flood Insurance Rate Maps (FIRMs) for the City, which set the base flood elevations for development on the floodplain and triggers the City's building code flood protection requirements. Currently, the FIRMs are undergoing revision to reflect changes in coastal shorelines and elevation, but the city's Building Code requirements will continue to reflect the 2015 Preliminary FIRMs.

There are also several plans to prepare the City for extreme climate events outlined in the: Natural Hazard Mitigation Plan, Coastal Storm Plan, Heat Emergency Plan, Debris Management Plan, Power Disruption Plan, Winter Weather Emergency Plan, and Flash Flood Emergency Plan. The Natural Hazard Mitigation Plan will be integrated with climate projections and include climate change as a hazard.

The New York City Department of Environmental Protection (DEP) also issued several plans aimed at evaluating and implementing adaptive strategies for infrastructure. These include the New York City Green Infrastructure Plan and Sustainable Stormwater Management Plan. In 2013, DEP released the NYC Wastewater Resiliency Plan that identifies wastewater treatment plants and pumping stations vulnerable to flooding, estimates potential coasts of future damages, and recommends protective measures such as waterproofing or elevation critical equipment out of flood elevations to reduce the risk of damage and loss of services.

The Department of City Planning (DCP) developed the WRP which serves as the City's principal coastal management tool and established the City's policies for development and use on the waterfront. It requires that proposed developments in the 1 percent annual change floodplain meet the goals set forth in the policies outlined in WRP, including Policy 6, where a development would need to assess current and future sea-level rise and flooding scenarios and implement flood resiliency measures.

DCP also published the Zoning for Coastal Flood Resiliency (ZCFR), a series of zoning changes for developments on the floodplain. ZCFR expands the geography where optional zoning rules apply to include the 0.2 percent annual chance floodplain, allows optional flexibility to adjust the building envelope from a reference plane, allows certain exemptions in floor area, introduces flexibility for existing non-compliant and/or non-conforming buildings to be retrofitted or reconstructed to meet or exceed flood-resistant construction standards, and permitted obstruction rules for buildings to elevate mechanical, electrical and plumbing equipment, among other modifications and provisions.

Methodology

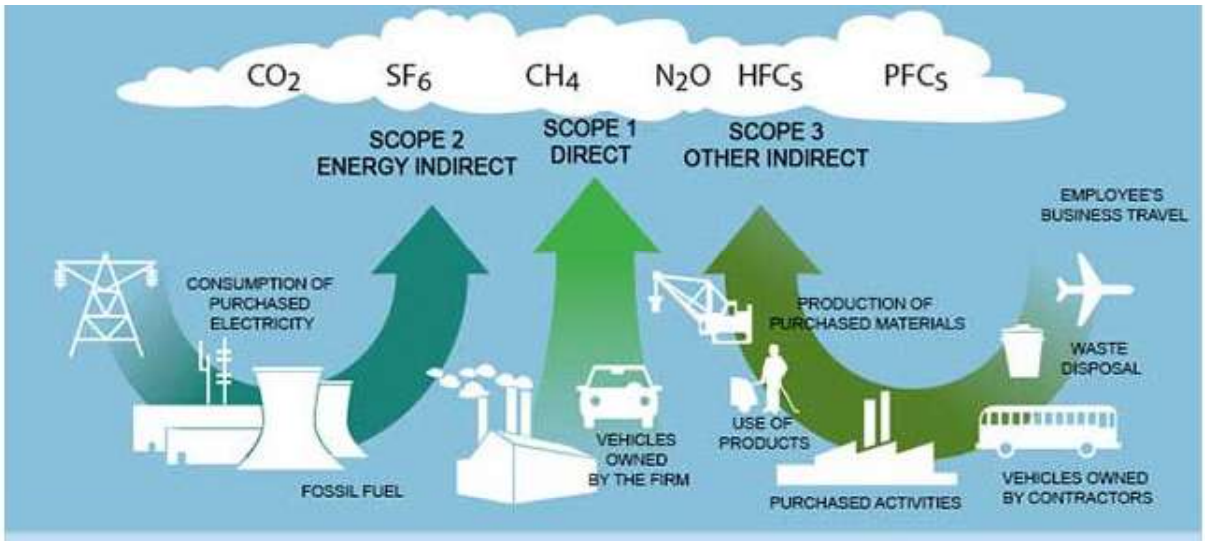
GHG Emissions Assessment

According to the *CEQR Technical Manual*, a GHG emissions assessment is typically conducted for larger projects undergoing an environmental impact statement, especially projects that would result in development of 350,000 square feet or greater. The Proposed Actions would result in the total development of approximately 2,200,538 gsf on the Development Site of which approximately 1,857,294 gsf would include residential,

commercial, and community facility uses. This latter amount was used in the GHG emissions assessment.

GHG emissions are generally divided into three types, three scopes, as illustrated in **Figure 15-1**.

Figure 15-1 Three Scopes of GHG Emissions



Source: http://synergyfiles.com/2017/04/scope-ghg-emissions/

Scope 1, or direct emissions, are emissions resulting from the fossil fuel combustion by the proposed buildings or by vehicles owned or operated by the proposed building management. Emissions from heating, ventilation, and air conditioning (HVAC) systems are the most typical source of GHG emissions for new building projects in New York City. Scope 2, or indirect emissions, are emissions from the generation of purchased electricity used by the buildings. Scope 3 are all other GHG emissions, including emissions from the vehicular trips generated by the proposed building, like employees' commute.

A project's GHG emissions under CEQR are assessed in two steps: first, GHG emissions of the proposed action are estimated, and second, the proposed action is assessed in comparison with the City goals for reducing GHG emissions. The *CEQR Technical Manual* recommends that the project's emissions be estimated with respect to the following main emissions sources: on-site operational emissions (direct and indirect); mobile source emissions (direct and indirect); and, when applicable, construction emissions and emissions from solid waste management. Pursuant to *CEQR Technical Manual* methodology, the assessment is based on the GHG emissions associated with the Proposed Actions.

Operational and mobile source emissions were quantified for this analysis. Emissions associated with construction are described qualitatively. The Proposed Project is not expected to fundamentally change the City's solid waste management system, therefore, no estimate of emissions from solid waste management is warranted.

Climate Change Assessment

According to the *CEQR Technical Manual*, an analysis of consistency with Policy 6.2 of the WRP may provide sufficient information to access the potential effects of sea-level rise, storm surge, and coastal flooding.

Assessment

Direct GHG Emissions

Operational GHG emissions would be generated by the Proposed Project's HVAC systems. The Proposed Project is not planning to own or operate any vehicles. Direct emissions from the operation of the natural gas-fired boilers of HVAC systems in the Proposed Project would result in a total of 4,891 metric ~~ton~~tons of CO_2e annually as shown in **Table 15-2**. However, it should be noted that natural gas-fired boilers are assumed for conservative analysis purposes only as the Applicant intends to utilize non-fossil fuel options for heating and cooling.

Table 15-2 GHG Emissions from Natural Gas-Fired HVAC Systems

		Unit
HVAC Energy Use Intensity	49.5	kBtu/gsf
***2021 CEQR TM* CO_2e Carbon Conversion Factor**	53.196	kg CO_2e/MMBtu
HVAC CO_2e	4,890,630	kg CO_2e
	4,891	MT CO_2e

Indirect GHG Emissions

Indirect GHG emissions would be generated to produce electricity for the Proposed Project. Electricity consumption is consistent with a DOAS HVAC systems. Estimates of the GHG emissions from the electricity are presented in **Table 15-3**. A total of 2,792 metric tons of CO_2e per year would be generated to satisfy the Proposed Project's annual consumption.

Table 15-3 GHG Emissions from Electricity Generation

		Unit
Building Electricity Use Intensity	12.28	kWhr/gsf
***2021 CEQR TM* CO_2e Carbon Conversion Factor**	35.902	kg CO_2e/MMBtu
Electricity CO_2e	2,791,835	kg CO_2e
	2,792	MT CO_2e

Mobile Source Emissions

The number of annual vehicle trips by mode (cars, taxis, and trucks) that would be generated by the Proposed Actions was calculated using the transportation planning assumptions

developed for the traffic analysis and presented in **Chapter 13, Transportation**. The number of project-generated trips by autos, taxis and trucks was obtained from the transportation analysis. Annual VMT was estimated based on the weekday trips and the average one-way distances as shown in Table 18-6 and Table 18-7 of the *CEQR Technical Manual*. The average truck trip was assumed to be 38 miles as per the *CEQR Technical Manual*. Tables 18-6 and 18-7 of the *CEQR Technical Manual* were used to determine the one-way trip distances for personal and taxi trips in Brooklyn and the mobile GHG emissions calculator provided in the *CEQR Technical Manual* was used to obtain an estimate of auto, taxi, and truck CO_2e emissions attributable to the Proposed Actions. The resultant GHG emissions are presented in **Table 15-4**. The total CO_2e emissions from the mobile sources attributable to the Proposed Action would be 8,110 metric tons annually.

Table 15-4 GHG Emissions from Mobile Sources

Vehicle Type	Annual VMT generated	Annual CO_2e [MT]
Auto	12,877,584	4,943
Taxi	172,099	59
Truck	1,913,946	3,108
Total	14,963,629	8,110

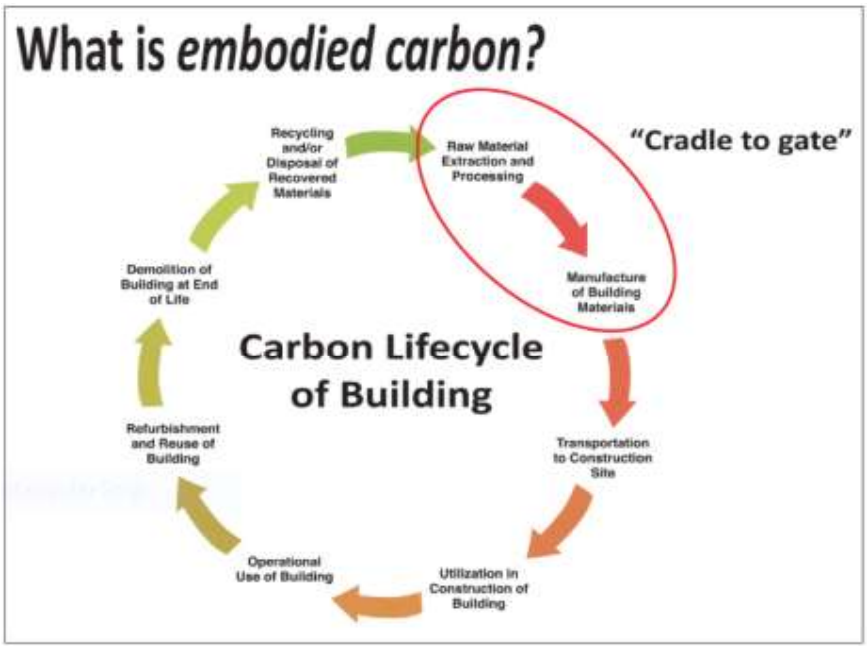
Note: All trips were assumed on arterial roadways in Brooklyn

Construction Emissions

Construction of the Proposed Project would comply with the New York City Air Pollution Control Code, the latest version of which was adopted on May 12, 2020. As per *CEQR Technical Manual* guidance, emissions associated with construction of the Proposed Project have been assessed qualitatively. Typical construction emissions and emissions of embodied carbon (see **Figure 15-2**) can account for about 5 to 10 years of building operational GHG emissions, i.e., approximately from 38,412 to 76,825 MT of CO_2e. The actual amount of CO_2e could change depending on the efficiency of building operations and efficiency and use of sustainable practices during construction.

Construction of the Proposed Project would follow New York City regulations and codes for construction that require the use of recycled materials, reduced diesel emissions, limited idle time for vehicles and equipment on-site, and other measures to reduce carbon emissions. In addition, following these practices would contribute to the overall goal of reducing GHG emissions from construction.

Figure 15-2 Embodied Carbon of a Building



Source: NE Sustainable Energy Association

Thus, construction of the Proposed Project would adhere to the City goals to reduce GHG.

Consistency with the GHG Reduction Goals

According to the *CEQR Technical Manual*, the assessment of consistency with the City GHG reduction goals should answer the following question: Is the project consistent with the goal of reducing GHG emissions, specifically the attainment of the City's established goal of reducing Citywide GHG emissions by 80 percent below 2005 levels by 2050? The other more immediate goal is to meet the requirements of the Local Law 97, Climate Mobilization Act. This Act requires that all newly constructed New York buildings larger than 25,000 square feet become more efficient and reduce their GHG under a certain level depending on the building size. **Table 15-5** presents the Local Law 97 carbon intensity rates by the future year that include the residential and community facility square footages of the largest development – Building 4 – proposed on the Development Site.

Table 15-5 GHG Limits of the Proposed Project's Largest Building

	2030-2034	
Land Use	**Carbon Intensity Rate Kg of CO2e/sq ft**	**Total Operational CO2e Emission Limit in MT**
Residential	4.07	1,035
Institutional	5.98	74
	Total	**1,108**

Building 4: Total Development = 266,530 gsf; Residential = 254,210 gsf; Institutional (community facility) = 12,320 gsf [excludes parking]

The total direct and indirect operational emissions estimated using the *CEQR Technical Manual* CO_2e conversion factors of the largest development would be 1,102 metric tons. This is below the Local Law 97 limit for the years 2030-2034. Operational emissions would be even lower if the more recent CO_2e conversion factors were used for NYC electricity and natural gas. The estimate based on the 2017 NYC GHG Inventory showed that the total operational GHG emissions for the largest building of the Proposed Project could be approximately 164 metric tons lower than emissions calculated from the *2021 CEQR Technical Manual* factors.

The overall GHG emissions from the Proposed Project constitute approximately 0.03 percent of the 2019 NYC annual GHG emissions of 55.1 million metric tons (MMT) of CO_2e.

In addition, the *2021 CEQR Technical Manual* outlines four major goals towards the GHG reduction:

- Construct new resource- and energy-efficient buildings (including the use of sustainable construction materials and practices) and improve the efficiency of existing buildings; and,
- Encourage sustainable transportation through improving public transit, improving the efficiency of private vehicles, and decreasing the carbon intensity of fuels.

The Proposed Project is consistent with some of these goals, as follows:

- The Proposed Actions would allow increases in residential and commercial density in the Development Site and would expand community amenities through the construction of the Performing Arts Center and trade school, while also providing community facilities such as a childcare facility.
- The Proposed Project would be built in accordance with the latest NYS and NYC codes, including the 2020 Energy Conservation Construction Codes of New York State (ECCNYS) and 2020 New York City Energy Conservation Code (NYCECC)—both of which govern building efficiency in the choice of HVAC system and the exterior building envelope.

Accordingly, the Proposed Project would be in compliance with the NYC GHG reduction goals for large buildings and would contribute towards the goal of reducing Citywide GHG emissions by 40 percent by 2030 and 80 percent by 2050 compared to 2005 levels.

Resilience to Climate Change

As discussed in **Appendix A: Waterfront Revitalization Program Consistency Assessment**, the Development Site is located within the City's Coastal Zone, specifically the northern portion of the Development Site boundary abuts the 0.2 percent annual chance minimal flood hazard area also known as the 500-year floodplain. Based on current projections, the Development Site is not projected to enter the 1 percent annual chance floodplain until the 2080s.

Because the Development Site would be constructed in the 0.2 percent annual floodplain, the potential effects of climate change as it relates to current and future sea-level rise scenarios are considered in this assessment. According to the *CEQR Technical Manual*, an analysis of consistency with Policy 6.2 of the WRP may provide sufficient information to access the potential effects of sea-level rise, storm surge, and coastal flooding. Policy 6.2

identifies three basic steps to determine the consistency of a project with this policy: (1) identify vulnerabilities and consequences; (2) identify adaptive strategies; and (3) assess policy consistency.

Building features are defined in one of four categories: (1) vulnerable: project features that have the potential to incur significant damage if flooded; (2) critical: project features that if damaged would have severe impacts on the project and its ability to function as designed; (3) potentially hazardous: project features that if damaged or made unsecure by flooding could potentially adversely affect the health and safety of the public and the environment; and (4) other: project features that are entirely open and unenclosed spaces, except the open storage of potentially hazardous materials, which may be damaged by flooding, but are not likely to present significant consequences and are more easily repaired. These features are assessed against sea level rise and Mean Higher High Water (MHHW) projections ranging from low to high estimates produced by the NPCC. Adaptive strategies to mitigate the impacts of sea-level rise and flooding on vulnerable and critical features and additional measures taken to protect the project from additional coastal hazards such as waves, high winds, or debris are discussed.

As detailed in **Appendix A**, the Proposed Actions would promote Policy 6.2. The Proposed Project would not result in development of any vulnerable, critical, or potentially hazardous features, within areas exposed to 1 percent annual chance flooding or MHHW by the 2050s under the 90th percentile projections.

16

Noise

The goal of this chapter is to determine whether the Proposed Actions would have a significant adverse impact on the environment at existing noise-sensitive receptors and whether noise levels at any new receptors at the Development Site would exceed applicable New York City noise limits.

Introduction

The Proposed Actions would facilitate the development of a mixed-use community on the campus of the CCC, which would be comprised of income-based affordable housing; retail spaces; new publicly accessible open space; a garage with recreational space on the roof, and a variety of community facilities including a performing arts center (PAC) (the Proposed Project). The Proposed Project would be constructed in phases over a planned 10-year period, with 12 buildings ranging from two to 15 stories. The buildings would be occupied as they are constructed in the phased development.

The Proposed Actions would introduce new noise-sensitive receptors including residences, community facility spaces, and the PAC. Retail space is not considered to be sensitive to noise and according to the *2021 CEQR Technical Manual*. Publicly accessible space or open space is only sensitive to noise if serenity and quiet are an extraordinarily important part of their purpose and serve as important public need. Quiet and serenity are not expected to be a key element to the proposed publicly accessible space. The Proposed Actions would generate noise from mobile sources and stationary equipment such as rooftop mechanical equipment which has the potential to increase noise at noise sensitive receptors. The

Proposed Actions would introduce outdoor recreational areas, including a playground for the new childcare facility on the southeast area of Proposed Building 4 and a playground with a basketball court on the rooftop of the proposed parking garage to the east of Proposed Building 9/10. The proposed playground would replace an existing ground-level basketball court. Per the *2021 CEQR Technical Manual*, a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would be located in an area with high ambient noise levels. The purpose of the noise assessment under CEQR is to determine if:

- The Proposed Actions would have a significant adverse environmental impact by significantly increasing sound levels from mobile and stationary sources at existing sensitive noise receptors adjacent to the Development Site, including residential and commercial land uses; and
- New noise receptors introduced at the Development Site would be in an acceptable ambient sound level environment ~~as defined in applicable provisions of the City's noise code.~~

The noise assessment includes the following:

- Background on metrics used to describe noise;
- The methodology and criteria used to assess potential impacts;
- An assessment of the potential for the Proposed Actions to significantly affect existing receptors due to the introduction of new mobile or stationary sources;
- Results from ambient sound level monitoring in the Project Area; and
- An evaluation of the ambient sound levels at new receptor locations.

This noise analysis considers two receptor types when evaluating noise: existing and new receptor(s). Since the Proposed Project would introduce new buildings with residential and community facility spaces, these are considered "new receptors." The analysis also considers "existing receptors" which are the current noise-sensitive uses such as commercial and residential properties surrounding the Development Site. The following describes the results of the noise assessment for these two types of receptors.

Principal Conclusions

A noise assessment was conducted to determine whether the Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors, and if new noise receptors that would be introduced would be in an acceptable ambient sound level environment ~~as defined in applicable provisions of the City's noise code.~~

Existing Noise Receptors

The Project Area includes existing residential and community facility receptors. The Proposed Actions would introduce new stationary and mobile sources of noise.

The increase in noise due to mobile sources with the No-Action and With-Action conditions have been determined with proportional noise modeling at 13 intersections and 6 monitoring locations throughout the study area. Mobile source noise levels would increase

by up to 1.2 dBA for the With-Action condition compared to No-Action condition due to traffic generated by the Proposed Actions. Mobile source noise levels would increase up to 1.8 dBA for the With-Action condition compared to existing conditions due to background traffic growth and traffic generated by the Proposed Actions.

The closest existing noise-sensitive building is a New York City Housing Authority (NYCHA) property at 1 Vandalia Avenue southeast of the Project Area. The building includes a 10-story portion approximately 108 feet from the Project Site and the proposed rooftop basketball court. No-Action noise levels at this receptor would range from 56.5 dBA to 66.7 dBA (Leq). With-Action noise levels at this receptor including stationary and mobile sources would range from 58.0 to 67.6 dBA (Leq). The Proposed Actions would result in an increase up to 1.6 dBA (Leq) in noise. Since noise levels would not increase by 3 dBA or more at these receptors, there would be no significant adverse impacts due to mobile and stationary sources.

The residential building at 1180 Pennsylvania Avenue is approximately 80 feet from the Project Site and proposed daycare recreational area. No-Action noise levels at this receptor would range from 52.8 to 66.5 dBA (Leq). With-Action noise levels at this receptor including stationary and mobile sources would range from 59.4 to 67.7 dBA (Leq). The Proposed Actions would result in an increase up to 6.5 dBA (Leq) in noise. Since noise levels would increase by 5 dBA or more at these receptors, there would be a significant adverse noise impacts due to mobile and stationary sources.

New Noise Receptors

The noise analysis for new receptors evaluates whether receptors would be introduced into an environment with acceptable ambient noise conditions. With-Action noise levels have been evaluated at new receptors based on ambient noise measurements, mobile source proportional noise modeling, and modeling of noise from proposed recreation areas. Between Draft and Final EIS, CadnaA model (TNM module) analysis was conducted to determine if Sunday peak hour vehicles coming in and out of the Project Site would cause a need for more attenuation at Project Buildings.

The With-Action noise level at the northern and eastern facades of Building 1 including mobile and stationary sources would be up to 78.6 dBA (L_{10}). Therefore, the eastern façade along Pennsylvania Avenue, the northern façade along Flatlands Avenue, the western façade within 50 feet of Flatlands Avenue, and the southern façade within 50 feet of Pennsylvania Avenue would require a minimum composite window/wall of 35 OITC.

The With-Action noise level at the eastern façade of Building 2 including mobile and stationary sources would be up to 78.6 dBA (L_{10}). Therefore, the eastern façade along Pennsylvania Avenue and the northern and southern façades within 50 feet of Pennsylvania Avenue would require a minimum composite window/wall of 35 OITC.

The With-Action noise level at the northern façade of Building 3 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the southern façade of Building 4 including mobile and stationary sources and the new childcare facility playground would be up to 75.9 dBA (L_{10}). Therefore, the southern ~~façade~~, eastern, and western façades of Building 4 within 50 feet of the proposed childcare facility playground would require a minimum composite window/wall sound attenuation of 31 OITC.

The With-Action noise level at the northern façade of Buildings 5 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the northern façade of Buildings 6 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the northern, western, and southern façades of Building 7/8 including mobile and stationary sources would be up to 74.5 dBA (L_{10}). Therefore, the northern, western, and southern façades of Building 7/8 would require a minimum composite window/wall sound attenuation of 31 OITC.

The With-Action noise level at all façades of Building 9/10 including mobile and stationary sources and the proposed rooftop basketball court would be up to 75.5 dBA (L_{10}). Therefore, all façades of Building 9/10 would require a minimum composite window/wall sound attenuation of 31 OITC.

Other facades of the proposed buildings and the PAC are setback from Louisiana Avenue, Flatlands Avenue, and Pennsylvania Avenue where With-Action noise levels would be below 70 dBA (L_{10} or L_{eq}). Therefore, there would be no need for a minimum composite window/wall sound attenuation requirement at these locations.

To implement these attenuation requirements, an (E) designation (E-679) would be applied to the Development Site specifying the appropriate amount of window/wall attenuation and an alternate means of ventilation. With these commitments, the Proposed Project would not result in any significant adverse noise impacts.

Noise Background

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, work, or recreation. How people perceive sound depends on several measurable physical characteristics. These factors include:

- **Level:** Sound level is based on the amplitude of sound pressure fluctuations and is often equated to perceived loudness.
- **Frequency:** Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz (Hz). Pure tones have energy concentrated in a narrow frequency range and can be more audible to humans than broadband sounds. Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB). Because sound levels are measured in

dB, the addition of two sound levels is not linear. Adding two equal sound levels results in a 3 dB increase in the overall level. Research indicates the following general relationships between sound level and human perception:

- A 3-dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
- A 10-dB increase is a tenfold increase in acoustic energy and is perceived as a doubling in loudness to the average person.

Audible sound is comprised of acoustic energy over a range of frequencies typically from 20 to 20,000 Hz. The human ear does not perceive sound levels at each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighting (dBA) is used to evaluate environmental noise levels. **Table 16-1** presents a list of common outdoor and indoor sound levels.

Table 16-1 Common Indoor and Outdoor Sound Levels

Outdoor Sound Levels	Sound Pressure μPa		Sound Level dBA	Indoor Sound Levels
	6,324,555	-	110	Rock Band at 5 m
Jet Over-Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area—Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
	20,000	-	60	
Quiet Urban Area—Daytime		-	55	Quiet Conversation at 1 m
	6,325	-	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		-	45	
	2,000	-	40	Empty Theater or Library
Quiet Suburb—Nighttime		-	35	
	632	-	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	
Reference Pressure Level	20	-	0	Threshold of Hearing

μPA MicroPascals describe pressure. The pressure level is what sound level monitors measure
dBA A-weighted decibels describe pressure logarithmically with respect to 20 μPa (the reference pressure level)
Source: Highway Noise Fundamentals, Federal Highway Administration, September 1980

Because sound levels change over time, a variety of sound level metrics can be used to describe environmental noise. The following is a list of sound level descriptors that are used in the noise analysis:

- L_{10} is the sound level which is exceeded for 10 percent of the time during a given time period. Therefore, it represents the higher end of the range of sound levels. The unit is commonly used in the *2021 CEQR Technical Manual* to evaluate acceptable thresholds for noise exposure for new receptors that would be introduced by a proposed development.
- L_{eq} is the energy-average A-weighted sound level. The L_{eq} is a single value that is equivalent in sound energy to the fluctuating levels over a period of time. Therefore, the L_{eq} considers how loud noise events are during the period, how long they last, and how many times they occur. L_{eq} is commonly used to describe environmental noise and relates well to human annoyance. In accordance with the *2021 CEQR Technical Manual*, the L_{eq} sound level is used to assess the potential for significant increases in noise due to a proposed development at existing receptors in the study area.

Noise Assessment for Existing Receptors

Noise impact at existing nearby sensitive receptors is assessed according to the relative increase between No-Action and With-Action sound levels. Noise impact is assessed according to the increase in the L_{eq} sound level in accordance with the *2021 CEQR Technical Manual*. If mobile or stationary sources associated with the proposed project would increase L_{eq} sound levels by 3 dB or more and absolute levels would exceed 65 dBA L_{eq}, the proposed project would cause a significant adverse impact prior to mitigation. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5-dB increase would be considered a significant adverse noise impact.

Mobile Sources

As described in **Chapter 13, Transportation**, a detailed traffic analysis has been conducted at 13 intersections to evaluate Existing, No-Action, and With-Action traffic volumes for the weekday AM, midday, PM, and Saturday PM periods, and seven intersections for Sunday AM periods near the Development Site including the following:

- Pennsylvania Avenue and Seaview Avenue
- Pennsylvania Avenue and Twin Pines Dr
- Pennsylvania Avenue and Vandalia Avenue
- Pennsylvania Avenue and Flatlands Avenue
- Pennsylvania Avenue and Cozine Avenue
- Pennsylvania Avenue and Wortman Avenue
- Pennsylvania Avenue and Stanley Avenue
- Pennsylvania Avenue and Linden Boulevard
- Louisiana Avenue and Vandalia Avenue
- Louisiana Avenue and Flatlands Avenue
- Flatlands Avenue and Georgia Avenue/Site Driveway

› Flatlands Avenue and East 108th Street

› Flatlands Avenue and Rockaway Parkway

The traffic analysis evaluated vehicle classification counts as part of the turning movement counts at these intersections. The increase in noise for the No-Action and With-Action conditions has been evaluated at existing receptors based on proportional noise modeling of noise passenger-car equivalents (PCEs) for these 13 intersections and 6 monitoring locations. Existing, No-Action, and With-Action noise conditions at new receptors have been determined based on ambient sound monitoring and proportional noise modeling at roadway segments or intersections nearest the noise monitoring locations. Between Draft and Final EIS, additional Sunday noise monitoring locations were measured at the Project Site and With-Action noise levels at these additional monitoring locations were calculated using CadnaA model (TNM module) analysis.

If the proposed project would result in a doubling or more of PCEs, it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double due to the proposed project, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *2021 CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

› Each automobile or light truck: 1 noise PCE

› Each medium truck: 13 noise PCEs

› Each bus: 18 noise PCEs

› Each heavy truck: 47 noise PCEs

Future With-Action noise increases are calculated using the following equation:

$$With\ Action\ L_{eq}\ Increase = 10 * \log\left(\frac{With\ Action\ PCE}{No\ Action\ PCE}\right)$$

Table 16-2 presents the Existing, No-Action, and With-Action PCE values at study area intersections and the sound increment between conditions. This table shows that traffic noise would increase by up to 0.6 dBA in the No-Action condition compared to the Existing condition. The highest increase in noise would be at the Flatlands Avenue and Georgia Avenue/Site Driveway intersection. Traffic noise would increase up to 1.2 dBA at all intersections in the With-Action condition compared to the No-Action condition. The total increase in noise in the With-Action condition compared to the Existing condition would be up to 1.8 dBA.

The Proposed Actions would not result in a doubling of PCEs compared to the No-Action condition, and noise levels would increase by less than 3 dB at all intersections. Therefore, there would not be significant adverse noise impact at these intersections or receptors at the intersections. Potential mobile source impact for existing receptors farther from the intersections has been assessed in the following sections.

Table 16-2 Mobile Source Noise Analysis at Intersections for Existing Receptors

Intersection	Period	Existing PCEs	No-Action PCEs	No-Action Sound Increment (dBA)[1]	With-Action PCEs	With-Action minus No-Action Sound Increment[2] (dBA)	With-Action minus Existing Sound Increment[3] (dBA)
1 Flatlands Avenue and Rockaway Parkway	Morning	7,536	8,220	0.4	8,602	0.2	0.6
	Afternoon	5,830	6,497	0.5	6,735	0.2	0.6
	Evening	5,830	6,488	0.5	6,780	0.2	0.7
	Saturday	3,652	4,057	0.5	4,284	0.2	0.7
2 Flatlands Avenue and East 108th Street	Morning	6,687	7,350	0.4	7,894	0.3	0.7
	Afternoon	5,695	6,398	0.5	6,775	0.2	0.8
	Evening	5,967	6,620	0.5	7,048	0.3	0.7
	Saturday	3,796	4,202	0.4	4,548	0.3	0.8
3 Louisiana Avenue and Flatlands Avenue	Morning	6,196	6,818	0.4	7,637	0.5	0.9
	Afternoon	5,216	5,870	0.5	6,518	0.5	1.0
	Evening	5,331	5,907	0.4	6,600	0.5	0.9
	Saturday	3,666	4,051	0.4	4,627	0.6	1.0
	Sunday	5,368	5,915	0.4	6,553	0.4	0.9
4 Flatlands Avenue and Georgia Avenue/Site Driveway	Morning	4,418	4,954	0.5	6,079	0.9	1.4
	Afternoon	3,770	4,329	0.6	5,055	0.7	1.3
	Evening	4,467	5,062	0.5	6,164	0.9	1.4
	Saturday	2,680	3,026	0.5	4,032	1.2	1.8
	Sunday	4,097	4,548	0.5	5,206	0.6	1.0
5 Pennsylvania Avenue and Flatlands Avenue	Morning	9,318	10,176	0.4	10,770	0.2	0.6
	Afternoon	8,612	9,477	0.4	9,885	0.2	0.6
	Evening	7,600	8,375	0.4	8,787	0.2	0.6
	Saturday	4,995	5,485	0.4	5,905	0.3	0.7
	Sunday	5,518	6,075	0.4	6,542	0.3	0.7
6 Pennsylvania Avenue and Linden Boulevard	Morning	16,753	17,697	0.2	18,078	0.1	0.3
	Afternoon	17,092	17,922	0.2	18,178	0.1	0.3
	Evening	13,374	14,086	0.2	14,319	0.1	0.3
	Saturday	6,357	6,691	0.2	6,924	0.1	0.4
7 Pennsylvania Avenue and Stanley Avenue	Morning	7,829	8,340	0.3	8,733	0.2	0.5
	Afternoon	7,281	7,672	0.2	7,948	0.2	0.4
	Evening	5,059	5,376	0.3	5,612	0.2	0.5
	Saturday	3,570	3,778	0.2	4,037	0.3	0.5
8 Pennsylvania Avenue and Wortman Avenue	Morning	7,125	7,591	0.3	7,956	0.2	0.5
	Afternoon	6,251	6,587	0.2	6,847	0.2	0.4
	Evening	4,903	5,206	0.3	5,449	0.2	0.5
	Saturday	3,510	3,714	0.2	3,979	0.3	0.5

Table 16-2 Mobile Source Noise Analysis at Intersections for Existing Receptors

Intersection	Period	Existing PCEs	No-Action PCEs	No-Action Sound Increment (dBA)[1]	With-Action PCEs	With-Action minus No-Action Sound Increment[2] (dBA)	With-Action minus Existing Sound Increment[3] (dBA)
9 Pennsylvania Avenue and Cozine Avenue	Morning	7,327	7,797	0.3	8,149	0.2	0.5
	Afternoon	6,938	7,304	0.2	7,577	0.2	0.4
	Evening	5,048	5,353	0.3	5,608	0.2	0.5
	Saturday	3,678	3,887	0.2	4,149	0.3	0.5
10 Pennsylvania Avenue and Vandalia Avenue	Morning	5,177	5,388	0.2	5,619	0.2	0.4
	Afternoon	4,637	4,826	0.2	4,987	0.1	0.3
	Evening	3,880	4,035	0.2	4,221	0.2	0.4
	Saturday	2,802	2,915	0.2	3,089	0.3	0.4
	Sunday	3,115	3,240	0.2	3,397	0.2	0.4
11 Pennsylvania Avenue and Twin Pines Drive	Morning	4,638	4,827	0.2	5,041	0.2	0.4
	Afternoon	3,801	3,956	0.2	4,110	0.2	0.3
	Evening	3,603	3,749	0.2	3,939	0.2	0.4
	Saturday	2,668	2,776	0.2	2,958	0.3	0.4
	Sunday	3,033	3,156	0.2	3,331	0.2	0.4
12 Pennsylvania Avenue and Seaview Avenue	Morning	5,901	6,142	0.2	6,371	0.2	0.3
	Afternoon	4,262	4,433	0.2	4,591	0.2	0.3
	Evening	3,877	4,034	0.2	4,206	0.2	0.4
	Saturday	2,839	2,954	0.2	3,110	0.2	0.4
	Sunday	2,989	3,111	0.2	3,264	0.2	0.4
13 Louisiana Avenue and Vandalia Avenue	Morning	1,321	1,375	0.2	1,532	0.5	0.6
	Afternoon	1,170	1,220	0.2	1,374	0.5	0.7
	Evening	1,137	1,181	0.2	1,349	0.6	0.7
	Saturday	993	1,034	0.2	1,175	0.6	0.7
	Sunday	1,040	1,082	0.2	1,195	0.4	0.6

[1] Sound increment represents No-Action sound levels minus Existing sound levels
[2] Sound increment represents With-Action sound levels minus No-Action sound levels
[3] Sound increment represents With-Action sound levels minus Existing sound levels
Source: VHB, 2022

Stationary Sources

The Proposed Project is not anticipated to include any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment, loudspeaker systems, stationary diesel engines, or other similar types of uses. The Proposed Project would introduce outdoor recreational areas, including a playground for the new childcare facility on the southeast area of Proposed Building 4 and a basketball court on the rooftop of the

proposed parking garage to the east of Proposed Building 9/10. The basketball court would replace an existing ground-level basketball court.

The design and specifications for mechanical equipment – such as heating, ventilation, and air conditioning – would incorporate sufficient noise reduction to comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code, Subchapter 5, §24-227, the New York City Department of Building Code. This would ensure that mechanical equipment does not result in any significant increase in noise levels, either by itself or cumulatively with other project noise sources.

Noise from the proposed recreational areas have been evaluated based on the 1992 SCA Playground Noise Study that is referenced in the CEQR TM. The evaluation assumes sound from the basketball court based on a middle school which is 71.0 dBA (L_{eq}) at the playground boundary and sound from the childcare facility based on an early childhood center which is 71.5 dBA (L_{eq}). Sound levels at receptors farther than the playground boundary are reduced by 4.8 dBA at 20 feet, 6.8 dBA at 30 feet, 9.1 dBA at 40 feet, and a 4.5-dB per doubling of distance between 40 and 300 feet.

Potential noise impact has been assessed for existing and new receptors including the noise from the recreational areas in the following sections.

Noise Assessment for Monitoring Locations and New Receptors

With-Action noise conditions at new sensitive receptors that would be introduced by the Proposed Project are evaluated according to absolute exterior sound level. The noise exposure guidelines for acceptable ambient conditions depend on the type of land use; for residential and community facility spaces, the goal is to maintain interior noise levels of 45 dBA or lower. With-Action exterior sound levels are evaluated to determine if receptors would be in an acceptable ambient sound level environment. It is generally assumed that without specific information on a building's window and wall construction, the outdoor-to-indoor noise reduction of the building is 25 decibels. As shown in **Table 16-3**, exterior ambient sound levels exceeding 70 dBA (L_{10}) during the daytime (7 AM to 10 PM) are considered Marginally Unacceptable. Exterior sound levels exceeding 80 dBA (L_{10}) are considered Clearly Unacceptable. If there would be Marginally Unacceptable or Clearly Unacceptable ambient noise conditions, there is a need to provide window/wall sound attenuation that is sufficient to reduce interior sound levels to acceptable levels.

Since the Proposed Actions would introduce new residential and community facility spaces, the highest L_{10} or L_{eq} sound level among all of the peak transportation periods (i.e., weekday morning, midday, and afternoon, Saturday afternoon, and Sunday morning) is used to evaluate whether the Proposed Project would introduce new receptors into an acceptable noise environment.

Noise Exposure Guidelines

The *2021 CEQR Technical Manual* provides noise exposure guidelines for assessing ambient noise conditions at new residential and community facility receptors, as shown in **Table 16-3**.

Table 16-3 Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable External Exposure	Marginally Acceptable External Exposure	Marginally Unacceptable External Exposure	Clearly Unacceptable External Exposure
Residential	10 PM to 7 AM	$L_{10} \leq 55$ dBA	$55 < L_{10} \leq 70$ dBA	$70 < L_{10} \leq 80$ dBA	$L_{10} > 80$ dBA
Residential and Community Facility	7 AM to 10 PM	$L_{10} \leq 65$ dBA	$65 < L_{10} \leq 70$ dBA	$70 < L_{10} \leq 80$ dBA	$L_{10} > 80$ dBA

Source: Table 19-2, *2021 CEQR Technical Manual*

Existing Noise Levels

To characterize existing conditions, noise measurements were conducted at six locations throughout the Development Site as shown in **Figure 16-1**. Noise measurements have been conducted for 20-minutes in duration during the weekday morning (7:00 to 9:00 AM), midday (11:00 AM to 2:00 PM), and evening (4:00 to 6:00 PM), Saturday afternoon (12:00 to 4:00 PM), and Sunday morning (9:00 to 11:00 AM) peak periods including simultaneous traffic counts. Measurements were conducted on June 2, 2021 (weekday), June 7, 2021 (Saturday), and September 26, 2021 (Sunday) which are dates approved by NYCDOT for traffic counts and were not subject to a measurement pause due to COVID-related traffic effects. Existing noise measurements were adjusted based on the difference between the vehicle counts conducted during noise measurement and the existing vehicle counts collected and summarized in **Chapter 13, Transportation**.

As shown in **Figure 16-1**, additional measurements were conducted at Locations 7 and 8 between Draft and Final EIS in order to assess attenuation requirement at interior facades of proposed buildings as a result of vehicles coming out and going into the Project Site during the Sunday church service peak hour (9:00 to 11:00 AM). Noise measurements were conducted on June 5th, 2022 (Sunday) and have been conducted for 20-minutes at Monitoring Location 7 and for 1-hour at Monitoring Location 8. Monitoring Locations 7 and 8 were analyzed with detailed CadnaA modeling analysis to determine the potential need for attenuation requirement at project buildings at interior facades during the Sunday church service and are not used to determine significant noise increases at existing receptors.

Measurements were conducted using Type I sound level meters at ground level and followed the procedures outlined in the *2021 CEQR Technical Manual*, which include documenting significant sources of sound, conducting spot counts of traffic by vehicle classification. The noise monitors were placed with a minimum of four feet between the microphone and nearby reflecting surfaces. Data collected included A-weighted overall and one-third octave band sound levels including minimum (L_{min}), maximum (L_{max}), statistics (L_{xx}), and energy-average noise levels (L_{eq}). Atmospheric conditions including air temperature, wind speed, wind direction, relative humidity, and precipitation were recorded from a nearby weather station. The atmospheric conditions were within acceptable ranges and did not influence the measurement results.

Table 16-4 presents the measured L_{eq}, L_{10}, L_{50}, and L_{90} sound level at each of the measurement locations and each time period. Existing sound levels ranged from 52.5 to 75.1 dBA (L_{eq}) and from 53.8 to 75.6 dBA (L_{10}).

Table 16-4 Sound Level Measurement Results

Site	Monitoring Location	Time Period	L_{eq}	L_{10}	L_{50}	L_{90}
1	Louisiana Avenue at Proposed Building 7/8	Morning	66.3	69.1	62.9	57.7
		Midday	67.9	72.3	64.7	58.4
		Evening	65.3	68.3	62.7	57.9
		Saturday	66.9	68.7	64.2	59.6
		Sunday	64.1	67.5	61.7	56.4
2	Louisiana Avenue at Proposed Building 9/10	Morning	62.8	63.9	60.6	56.0
		Midday	59.0	61.9	56.3	53.3
		Evening	54.8	56.0	53.5	51.6
		Saturday	61.5	65.5	57.9	53.8
		Sunday	57.5	60.1	55.9	53.5
3	Flatlands Avenue between Alabama Avenue and Georgia Avenue	Morning	64.6	68.2	61.4	55.2
		Midday	66.6	67.4	62.2	57.9
		Evening	67.5	69.8	62.8	56.9
		Saturday	66.3	68.9	62.2	55.6
		Sunday	66.0	68.6	64.2	59.0
4	Project Site near Existing Receptors West of 1180 Pennsylvania Avenue	Morning	52.5	54.1	51.5	50.4
		Midday	64.6	65.2	61.6	50.0
		Evening	52.8	53.8	52.2	51.3
		Saturday	54.0	55.2	53.6	52.6
		Sunday	55.3	56.8	54.3	52.6
5	Corner of Flatlands Avenue and Pennsylvania Avenue	Morning	72.2	74.6	69.8	64.4
		Midday	75.1	75.6	70.3	66.0
		Evening	71.6	73.8	69.9	65.0
		Saturday	71.7	74.5	69.3	65.2
		Sunday	70.3	72.6	67.2	61.5
6	Pennsylvania Avenue	Morning	62.0	59.9	55.2	52.4
		Midday	62.1	64.2	59.3	56.1
		Evening	62.9	59.9	54.1	50.1
		Saturday	57.7	59.8	56.6	54.0
		Sunday	59.8	62.2	58.9	55.6

Source: VHB, 2022

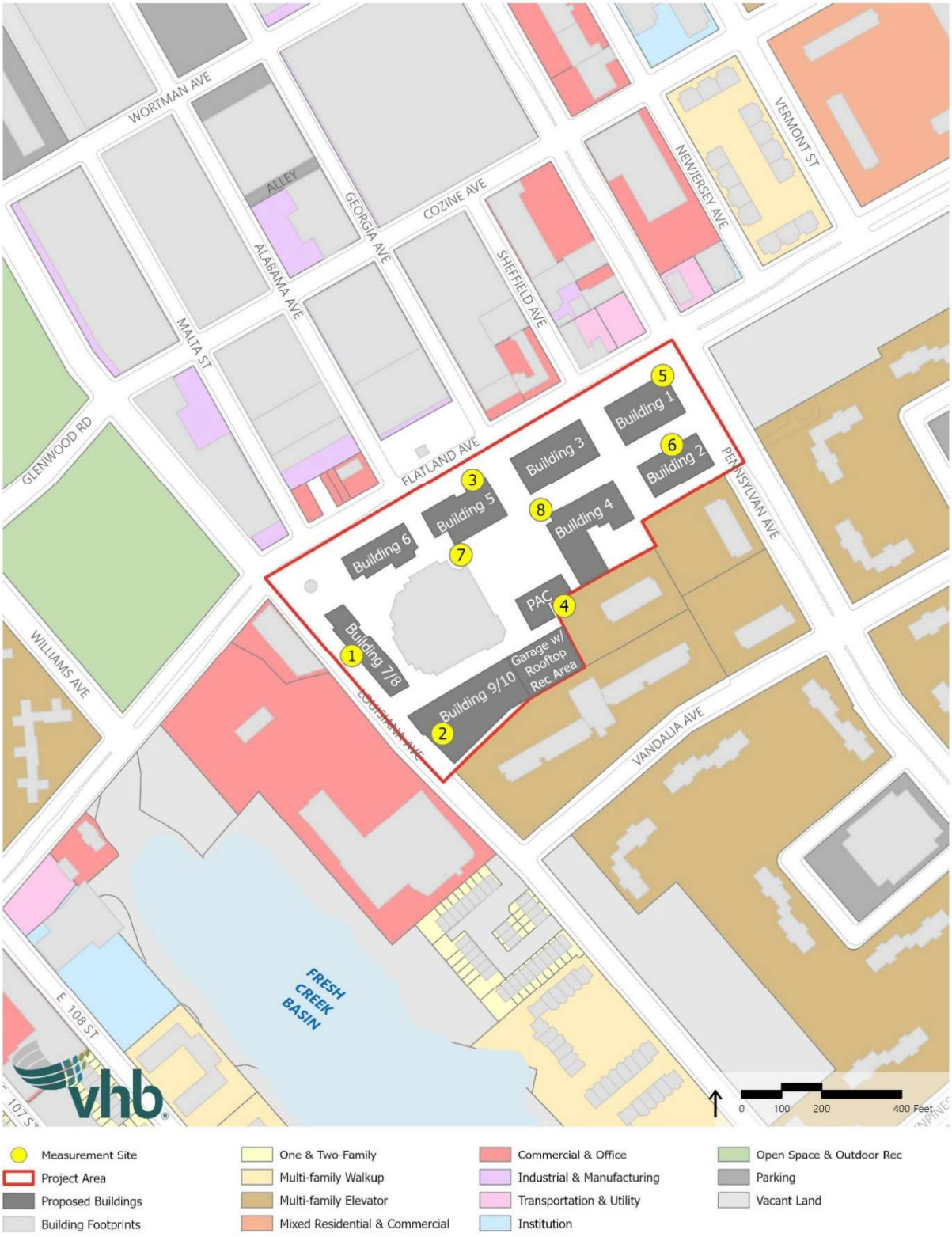
Table 16-5 presents the measured L_{eq}, L_{10}, L_{50}, and L_{90} sound level at the two measurement locations for Sunday church service period. Existing sound levels ranged from 56.0 to 58.2 dBA (L_{eq}) and from 58.6 to 60.3 dBA (L_{10}).

Table 16-5 Sound Level Measurement Results for Sunday AM

Site	Monitoring Location	Time Period	L_{eq}	L_{10}	L_{50}	L_{90}
7	South façade of Proposed Building 5	Sunday	58.2	60.3	57.1	54.4
8	South façade of Proposed Building 3	Sunday	56.0	58.6	53.9	50.6

Source: VHB, 2022

Figure 16-1 Noise Monitoring Locations



Source: VHB, 2022

Mobile Source Noise Analysis

A mobile source analysis has been conducted for existing receptors at corresponding roadway segments and new receptors based on proportional noise modeling to determine the traffic adjusted Existing, No-Action, and With-Action noise levels, and noise increases at monitored locations. Traffic volumes and vehicle classifications along the roadway segments contributing to the noise measurements have been used.

Table 16-6 presents the results of the mobile source noise analysis for new receptors. This table includes the PCEs based on the traffic counts conducted during the noise measurements, the Existing, No-Action, and With-Action traffic conditions as well as the change in noise levels compared to the measured conditions. Adjusted Existing noise levels have been computed based on the sound increment between the vehicle counts conducted during the noise measurement and the existing vehicle counts collected and summarized in **Chapter 13, Transportation**. No-Action noise levels have been computed based on the sound increment between the No-Action PCEs and the Existing PCEs. Similarly, the With-Action noise levels have been computed based on the With-action PCEs and the No-Action PCEs. This table shows that With-Action noise levels would generally be 0 to 1 dBA and up to 1.1 dBA higher than the No-Action noise levels during the weekday morning, midday, and afternoon peak periods. With-Action noise levels would be up to 0.9 dBA compared to No-Action noise levels on Saturday and Sunday. According to the *2021 CEQR Technical Manual* guidelines, increases of less than 3 dBA would be barely perceptible. As Proposed Actions would not increase noise levels by 3 dBA or more compared to No-Action conditions, there would not be significant noise impact at existing receptors due to mobile sources.

Table 16-6 Mobile Source Noise Analysis at Roadway Segments for New Receptors

Measurement Site	Roadway Intersection / Segment	Time Period	Noise Measurement Traffic PCEs	Existing PCEs	Noise Increment from Existing Traffic Adjustment (dBA)	No-Action PCEs	With-Action PCEs	No-Action minus Existing Sound Levels (dBA)	With-Action minus No-Action Sound Levels (dBA)
1	Louisiana Avenue	Morning	1,314	1,293	-0.1	1,344	1,674	0.2	1.0
		Midday	867	1,128	1.1	1,175	1,447	0.2	0.9
		Evening	1,530	1,011	-1.8	1,053	1,301	0.2	0.9
		Saturday	1,101	965	-0.6	1,004	1,230	0.2	0.9
		Sunday	554	1,126	3.1	1,171	1,328	0.2	0.5
2	Louisiana Avenue	Morning	1,257	1,330	0.2	1,383	1,709	0.2	0.9
		Midday	483	1,128	3.7	1,175	1,447	0.2	0.9
		Evening	648	1,019	2.0	1,061	1,308	0.2	0.9
		Saturday	1,101	965	-0.6	1,004	1,230	0.2	0.9
		Sunday	396	1,126	4.5	1,171	1,328	0.2	0.5
3	Flatlands Avenue	Morning	3,858	4,303	0.5	4,859	5,488	0.5	0.5
		Midday	4,116	2,919	-1.5	3,368	3,855	0.6	0.6
		Evening	4,866	4,127	-0.7	4,697	5,343	0.6	0.6
		Saturday	2,427	2,555	0.2	2,894	3,377	0.5	0.7
		Sunday	1,856	3,464	2.7	3,898	4,460	0.5	0.6
4	Louisiana Avenue	Morning	1,131	1,163	0.1	1,209	1,552	0.2	1.1
		Midday	816	1,208	1.7	1,259	1,514	0.2	0.8
		Evening	1,032	1,464	1.5	1,525	1,753	0.2	0.6
		Saturday	1,101	973	-0.5	1,012	1,238	0.2	0.9
		Sunday	679	1,126	2.2	1,171	1,328	0.2	0.5
5	Flatlands Avenue and	Morning	6,918	9,318	1.3	10,176	10,770	0.4	0.2
		Midday	9,162	8,612	-0.3	9,477	9,885	0.4	0.2

Table 16-6 Mobile Source Noise Analysis at Roadway Segments for New Receptors

Measurement Site	Roadway Intersection / Segment	Time Period	Noise Measurement Traffic PCEs	Existing PCEs	Noise Increment from Existing Traffic Adjustment (dBA)	No-Action PCEs	With-Action PCEs	No-Action minus Existing Sound Levels (dBA)	With-Action minus No-Action Sound Levels (dBA)
	Pennsylvania Avenue	Evening	4,776	7,600	2.0	8,375	8,787	0.4	0.2
		Saturday	2,316	4,995	3.3	5,485	5,905	0.4	0.3
		Sunday	2,746	4,507	2.2	4,962	5,335	0.4	0.3
6	Pennsylvania Avenue	Morning	3,975	4,031	0.1	4,196	4,438	0.2	0.2
		Midday	4,665	3,189	-1.7	3,319	3,525	0.2	0.3
		Evening	2,913	2,951	0.1	3,070	3,300	0.2	0.3
		Saturday	2,370	2,208	-0.3	2,297	2,509	0.2	0.4
		Sunday	1,293	2,310	2.5	2,404	2,598	0.2	0.3

Source: VHB, 2022

As shown in **Table 16-7,** the adjusted Existing noise levels adjusted based on the difference between the vehicle counts conducted during noise measurement and the existing vehicle counts collected and summarized in **Chapter 13, Transportation**. These sound levels would range from 52.7 to 75.0 dBA L_{eq} levels and L_{10} levels would range from 54.2 to 77.8 dBA.

Table 16-7 Adjusted Existing Sound Levels

Site	Monitoring Location	Time Period	Intersection/ Segment	L_{eq}	L_{10}	L_{50}	L_{90}
1	Louisiana Avenue at Proposed Building 7/8	Morning	Louisiana Avenue	66.2	69.0	62.8	57.6
		Midday		69.1	73.4	65.8	59.5
		Evening		63.5	66.5	60.9	56.1
		Saturday		66.4	68.1	63.6	59.0
		Sunday		67.2	70.6	64.8	59.5
2	Louisiana Avenue at Proposed Building 9/10	Morning	Louisiana Avenue	63.0	64.1	60.8	56.2
		Midday		62.6	65.6	60.0	57.0
		Evening		56.8	58.0	55.5	53.6
		Saturday		60.9	64.9	57.3	53.2
		Sunday		62.0	64.6	60.4	58.0
3	Flatlands Avenue between Alabama Avenue and Georgia Avenue	Morning	Flatlands Avenue	65.1	68.7	61.9	55.7
		Midday		65.1	65.9	60.7	56.4
		Evening		66.8	69.1	62.1	56.2
		Saturday		66.5	69.1	62.4	55.8
		Sunday		68.7	71.3	66.9	61.7
4	Project Site near Existing Receptors West of 1180 Pennsylvania Avenue	Morning	Louisiana Avenue	52.7	54.2	51.6	50.5
		Midday		66.3	66.9	63.3	51.7
		Evening		54.3	55.3	53.7	52.8
		Saturday		53.5	54.7	53.1	52.1
		Sunday		57.5	59.0	56.5	54.8
5	Corner of Flatlands Avenue and Pennsylvania Avenue	Morning	Flatlands Avenue and Pennsylvania Avenue	73.5	75.9	71.1	65.7
		Midday		74.8	75.4	70.0	65.7
		Evening		73.6	75.8	71.9	67.0
		Saturday		75.0	77.8	72.6	68.5
		Sunday		72.4	74.8	69.4	63.7
6	Pennsylvania Avenue	Morning	Pennsylvania Avenue	62.0	60.0	55.3	52.5
		Midday		60.4	62.5	57.6	54.4
		Evening		62.9	60.0	54.2	50.2
		Saturday		57.4	59.5	56.3	53.7
		Sunday		62.4	64.7	61.4	58.1

Source: VHB, 2022

As shown in **Table 16-8,** the No-Action noise levels including the increase in mobile sources would range from 52.8 to 75.4 dBA L_{eq} levels and L_{10} levels would range from 54.4 to 78.2 dBA.

Table 16-8 No-Action Sound Levels

Site	Monitoring Location	Time Period	Intersection/ Segment	L_{eq}	L_{10}	L_{50}	L_{90}
1	Louisiana Avenue at Proposed Building 7/8	Morning	Louisiana Avenue	66.4	69.2	63.0	57.8
		Midday		69.2	73.6	66.0	59.7
		Evening		63.6	66.7	61.1	56.3
		Saturday		66.5	68.3	63.8	59.2
		Sunday		67.3	70.7	64.9	59.6
2	Louisiana Avenue at Proposed Building 9/10	Morning	Louisiana Avenue	63.2	64.3	61.0	56.4
		Midday		62.8	65.8	60.2	57.2
		Evening		57.0	58.1	55.6	53.7
		Saturday		61.1	65.1	57.5	53.4
		Sunday		62.2	64.8	60.6	58.2
3	Flatlands Avenue between Alabama Avenue and Georgia Avenue	Morning	Flatlands Avenue	65.6	69.2	62.4	56.2
		Midday		65.7	66.5	61.3	57.0
		Evening		67.3	69.6	62.6	56.7
		Saturday		67.1	69.7	63.0	56.4
		Sunday		69.2	71.8	67.4	62.2
4	Project Site near Existing Receptors West of 1180 Pennsylvania Avenue	Morning	Louisiana Avenue	52.8	54.4	51.8	50.7
		Midday		66.5	67.1	63.5	51.9
		Evening		54.5	55.5	53.9	53.0
		Saturday		53.7	54.8	53.2	52.2
		Sunday		57.7	59.2	56.7	55.0
5	Corner of Flatlands Avenue and Pennsylvania Avenue	Morning	Flatlands Avenue and Pennsylvania Avenue	73.9	76.2	71.4	66.1
		Midday		75.3	75.8	70.4	66.2
		Evening		74.0	76.2	72.3	67.4
		Saturday		75.4	78.2	73.0	68.9
		Sunday		72.8	75.2	69.8	64.1
6	Pennsylvania Avenue	Morning	Pennsylvania Avenue	62.2	60.1	55.4	52.6
		Midday		60.6	62.7	57.8	54.6
		Evening		63.1	60.1	54.3	50.3
		Saturday		57.6	59.7	56.5	53.9
		Sunday		62.5	64.9	61.6	58.3

Source: VHB, 2022

As shown in **Table 16-9,** the With-Action L_{eq} levels would range from 53.9 to 75.8 dBA and the L_{10} levels would range from 55.5 to 78.6 dBA. With-Action sound levels would be below 70 dBA (L_{eq} or L_{10}) at measurement Site 2, Site 4, and Site 6 which are all setback 50 feet or

farther from Louisiana Avenue, Flatlands Avenue, or Pennsylvania Avenue. With-Action sound levels would exceed 70 dBA (L_{eq} or L_{10}) at measurement locations Site 1, Site 3, and Site 5, which are all representative of the mobile source sound level at façades of the proposed buildings nearest to Louisiana Avenue, Flatlands Avenue, Pennsylvania Avenue, or the proposed recreational facilities. It is noted that an additional noise measurement ~~is needed~~location was added, and subsequent analysis ~~should be~~was performed between the DEIS and FEIS in order to estimate noise levels generated by interior traffic patterns.

Table 16-9 With-Action Sound Levels

Site	Monitoring Location	Time Period	Intersection/ Segment	L_{eq}	L_{10}	L_{50}	L_{90}
1	Louisiana Avenue at Proposed Building 7/8	Morning	Louisiana Avenue	67.3	70.2	64.0	58.8
		Midday		70.2	74.5	66.9	60.6
		Evening		64.6	67.6	62.0	57.2
		Saturday		67.4	69.2	64.7	60.1
		Sunday		67.9	71.3	65.5	60.2
2	Louisiana Avenue at Proposed Building 9/10	Morning	Louisiana Avenue	64.1	65.2	61.9	57.3
		Midday		63.7	66.7	61.1	58.1
		Evening		57.9	59.1	56.6	54.7
		Saturday		62.0	66.0	58.4	54.3
		Sunday		62.7	65.4	61.2	58.8
3	Flatlands Avenue between Alabama Avenue and Georgia Avenue	Morning	Flatlands Avenue	66.1	69.7	62.9	56.7
		Midday		66.3	67.1	61.9	57.6
		Evening		67.9	70.2	63.2	57.3
		Saturday		67.7	70.3	63.6	57.0
		Sunday		69.8	72.4	68.0	62.8
4	Project Site near Existing Receptors on Vandalia Avenue	Morning	Louisiana Avenue	53.9	55.5	52.9	51.8
		Midday		67.3	67.9	64.3	52.7
		Evening		55.1	56.1	54.5	53.6
		Saturday		54.6	55.7	54.1	53.1
		Sunday		58.2	59.7	57.2	55.5
5	Corner of Flatlands Avenue and Pennsylvania Avenue	Morning	Pennsylvania Avenue and Flatlands Avenue	74.1	76.5	71.7	66.3
		Midday		75.4	76.0	70.6	66.3
		Evening		74.3	76.4	72.5	67.6
		Saturday		75.8	78.6	73.4	69.3
		Sunday		73.1	75.5	70.1	64.4
6	Pennsylvania Avenue	Morning	Pennsylvania Avenue	62.5	60.4	55.7	52.9
		Midday		60.9	63.0	58.1	54.9
		Evening		63.4	60.4	54.6	50.6
		Saturday		58.0	60.0	56.8	54.2
		Sunday		62.9	65.2	61.9	58.6

Source: VHB, 2022

Table 16-10 presents the results of the mobile source noise analysis for new receptors during the Sunday AM period. This table includes the comparison between the Cadna modeled noise level based on the traffic counts conducted during the noise measurements and the actual measured noise level. The difference between the measured and modeled results are up to 2.7 dBA, which is within the validation criteria of +/- 3 dB(A) identified in the *CEQR Technical Manual*. Therefore, the traffic noise model is validated and provides accurate results without the need for additional calibration procedure.

Table 16-10 Modeled Sound Level Results for Street A

Site	Monitoring Location	Time Period	Measured L_{eq}	Measured L_{10}	CadnaA Modeled L_{eq}	Difference L_{eq}
1	Louisiana Avenue at Proposed Building 7/8	Sunday Service Time	64.1	67.5	61.6	-2.5
3	Flatlands Avenue between Alabama Avenue and Georgia Avenue	Sunday Service Time	66.0	68.6	64.9	-1.1
5	Corner of Flatlands Avenue and Pennsylvania Avenue	Sunday Service Time	70.3	72.6	67.6	-2.7
7	Inside Gotham CCC South façade of Proposed Building 5	Sunday Service Time	58.2	60.3	59.0	0.8
8	Inside Gotham CCC South façade of Proposed Building 3	Sunday Service Time	56.0	58.6	58.6	2.6

Source: VHB, 2022

The model was then used to predict the With-Action noise levels for the Sunday AM period. The With-Action noise levels have been computed based on the vehicle volumes summarized in **Chapter 13, Transportation**. **Table 16-11** shows that With-Action L_{eq} levels would range from 53.6 to 63.6 dBA and the L_{10} levels would range from 56.6 to 66.6 dBA. With-Action sound levels would be below 70 dBA (L_{eq} or L_{10}) on all façades facing the proposed Street A between Louisiana Avenue and Street B.

Table 16-11 Modeled Sound Level Results for Street A

Buildings	Facade	Time Period	With-Action L_{eq}	With-Action L_{10}[A]
Building 3	South	Sunday	53.6	56.6
	West	Sunday	63.3	66.3
Building 4	West	Sunday	58.2	61.2
	North	Sunday	55.1	58.1
Building 5	East	Sunday	60.4	63.4
	South	Sunday	62.8	65.8
Building 7/8	South	Sunday	61.6	64.6
Building 9/10	North	Sunday	62.2	65.2
PAC	West	Sunday	63.6	66.6
	North	Sunday	55.1	58.1

Note: L_{10} was conservatively calculated assuming 3 dBA higher than L_{eq} noise levels.
Source: VHB, 2022

Stationary Source Noise Analysis

The Project Area includes existing residential and community facility receptors. The Proposed Actions would introduce new stationary and mobile sources of noise. Noise from recreational areas have been evaluated based on the 1992 SCA Playground Noise Study and the nearest measurement location, Measurement Location 4.

Existing Receptors

The closest existing noise-sensitive building to the existing ground-level recreational area is a New York City Housing Authority (NYCHA) property at 1 Vandalia Avenue southeast of the Project Area. This playground/basketball court will be relocated to the top of the proposed public parking garage, approximately 60 feet above ground level.

A 10-story portion of the building at 1 Vandalia is approximately 108 feet from the proposed playground boundary. As shown in **Table 16-12**, the With-Action sound levels including mobile and stationary sources would range from 58.0 to 67.6 dBA (L_{eq}). Therefore, With-Action noise levels including mobile and stationary sources would increase up to 1.6 dBA from the No-Action condition. Since With-Action noise levels including mobile and stationary sources would not increase by 3 dBA or more, there would be no significant adverse impact at 1 Vandalia Avenue due to the Proposed Actions.

~~Table 16-10~~Table 16-12 With-Action Sound Level at 1 Vandalia Avenue

Time Period	No-Action Sound Level, Site 4 (L_{eq})	No-Action + Street Level Playground Noise (L_{eq})	With-Action + Garage Roof Playground Noise (L_{eq})	Sound Level Increase (With-Action minus No-Action)
Morning	52.8	56.5	58.0	1.6
Midday	66.5	66.7	67.6	0.9
Afternoon	54.5	57.3	58.5	1.3
Saturday	53.7	56.9	58.3	1.5
Sunday	57.7	59.2	60.2	1.0

Source: VHB, 2022

The closest existing noise-sensitive building to the proposed childcare facility playground at Building 4 is the residential property at 1180 Pennsylvania Avenue approximately 80 feet from the proposed boundary of the childcare facility playground boundary. As shown in **Table 16-13**, the With-Action noise levels including mobile and stationary noise sources would range from 59.4 to 67.7 dBA (Leq). With-Action noise levels including mobile and stationary sources would increase up to 6.5 dBA from the No-Action condition. Since With-Action noise levels including mobile and stationary sources would increase more than 5 dBA, primarily resulting from the proposed childcare facility playground at Building 4, there would be significant adverse noise impact at 1180 Pennsylvania Avenue due to the Proposed Actions. However, the existing window and through-wall air conditioners would provide enough attenuation to maintain an interior noise level of 45 dBA or below. Therefore, interior noise to would be at an acceptable level and would result in a finding of no unavoidable significant adverse noise impacts at this location.

~~Table 16-11~~Table 16-13 With-Action Sound Level at 1180 Pennsylvania Avenue

Time Period	No-Action Sound Level, Site 4 (L_{eq})	With-Action (With-Action plus Mobile Source Increment and New Playground Source) (L_{eq})	Sound Level Increase (With-Action minus No-Action)
Morning	52.8	59.4	6.5
Midday	66.5	67.7	1.3
Afternoon	54.5	59.7	5.2
Saturday	53.7	59.5	5.9
Sunday	57.7	61.1	3.4

Source: VHB, 2022

New Receptors

With-Action noise levels at new receptors that would be introduced by the Proposed Actions have been determined including mobile and stationary sources. The following summarizes the noise assessment at new receptors including mobile and stationary sources:

The With-Action noise level at the north and east facades of Building 1 and the east façade of Building 2 including mobile and stationary sources would be up to 78.6 dBA (L_{10}).

The With-Action noise level at the north facades of Buildings 3, 5 and 6 including mobile and stationary sources would be up to 72.4 dBA (L_{10}).

As shown in **Table 16-14**, the With-Action noise level at the south façade of Building 4 including mobile and stationary sources would be up to 75.9 dBA (L_{10}).

~~Table 16-12~~Table 16-14 With-Action Sound Levels at Building 4 Recreational Area

Recreational Area	Location	Baseline Sound Level at boundary (L_{eq})	Time Period	Total With-Action Sound Level	
				L_{eq}	L_{10}
Childcare Facility	Building 4 – south facade	71.5	Morning	71.6	74.6
			Midday	72.9	75.9
			Afternoon	71.6	74.6
			Saturday	71.6	74.6
			Sunday	71.7	74.7

Source: VHB, 2022.

The With-Action noise level at the north, west, and south facades of Buildings 7/8 including mobile and stationary sources would be up to 74.5 dBA (L_{10}).

As shown in **Table 16-15**, the With-Action noise level at all façades of Building 9/10 would be up to 75.5 dBA (L_{10}) including noise from the proposed rooftop basketball court.

~~Table 16-13~~Table 16-15 With-Action Sound Levels at Building 9/10 Recreational Area

Recreational Area	Location	Baseline Sound Level at boundary (L_{eq})	Time Period	Total With-Action Sound Level	
				L_{eq}	L_{10}
Basketball Court	Building 9/10 – north, west, and south facades	70.0	Morning	71.1	74.1
			Midday	72.5	75.5
			Afternoon	71.1	74.1
			Saturday	71.1	74.1
			Sunday	71.2	74.2

Source: VHB, 2022

Other facades of the proposed buildings farther (e.g., more than 50 feet) from the dominant noise source and the PAC are setback from Louisiana Avenue, Flatlands Avenue, and Pennsylvania Avenue where With-Action noise levels would be below 70 dBA (L_{10} or L_{eq}).

Acceptability Assessment

The *2021 CEQR Technical Manual* provides noise exposure guidelines for assessing ambient sound levels, as shown in **Table 16-3**. Based on these noise exposure guidelines, noise has been assessed to determine the level of acceptability for new sensitive receptors introduced by the Proposed Project. **Table 16-16** summarizes the maximum With-Action L_{10} or L_{eq} level at each proposed building for each façade based on results of the noise monitoring and cumulative noise analysis including mobile and stationary sources and whether the With-

Action sound levels are considered to be acceptable according to the *2021 CEQR Technical Manual*. At the interior facades of the proposed Buildings facing Street A, the modeled noise level for Sunday AM were used to determine the level of acceptability for the new receptors to account for existing and new mobile sources and the shielding provided by the proposed Buildings.

~~Table 16-14~~Table 16-16 Sound Level Acceptability, dBA

Building	Façade	Noise Site	Time Period	With-Action Sound Level (dBA)	Acceptability
Building 1	North	5	Saturday	**78.6 (L_{10})**	**Marginally Unacceptable**
	East	5	Saturday	**78.6 (L_{10})**	**Marginally Unacceptable**
	West	6	Sunday	65.2 (L_{10})	Marginally Acceptable
	South	6	Sunday	65.2 (L_{10})	Marginally Acceptable
Building 2	North	6	Sunday	65.2 (L_{10})	Marginally Acceptable
	East	5	Saturday	**78.6 (L_{10})**	**Marginally Unacceptable**
	West	6	Sunday	65.2 (L_{10})	Marginally Acceptable
	South	6	Sunday	65.2 (L_{10})	Marginally Acceptable
Building 3	North	3	Sunday	**72.4 (L_{10})**	**Marginally Unacceptable**
	East	6	Sunday	65.2 (L_{10})	Marginally Acceptable
	West	Modeled [A]	Sunday	66.3 (L_{10})	Marginally Acceptable
	South	Modeled [A]	Sunday	56.6 (L_{10})	Marginally Acceptable
Building 4	North	Modeled [A]	Sunday	58.1 (L_{10})	Marginally Acceptable
	East	6	Sunday	65.2 (L_{10})	Marginally Acceptable
	West	Modeled [A]	Midday	61.2 (L_{10})	Marginally Acceptable
	South	4[B]	Midday	**75.9 (L_{10})**	**Marginally Unacceptable**
Building 5	North	3	Sunday	**72.4 (L_{10})**	**Marginally Unacceptable**
	East	Modeled [A]	Sunday	63.4 (L_{10})	Marginally Acceptable
	West	6	Sunday	65.2 (L_{10})	Marginally Acceptable
	South	Modeled [A]	Sunday	65.8 (L_{10})	Marginally Acceptable
Building 6	North	3	Sunday	**72.4 (L_{10})**	**Marginally Unacceptable**
	East	6	Sunday	65.2 (L_{10})	Marginally Acceptable
	West	6	Sunday	65.2 (L_{10})	Marginally Acceptable
	South	6	Sunday	65.2 (L_{10})	Marginally Acceptable
Building 7/8	North	1	Midday	**74.5 (L_{10})**	**Marginally Unacceptable**
	East	2	Midday	66.7 (L_{10})	Marginally Acceptable
	West	1	Midday	**74.5 (L_{10})**	**Marginally Unacceptable**
	South	1	Midday	**74.5 (L_{10})**	**Marginally Unacceptable**
Building 9/10	North	1	Midday	**74.5 (L_{10})**	**Marginally Unacceptable**
	East (inset)	4[B]	Midday	**75.5 (L_{10})**	**Marginally Unacceptable**
	West	1	Midday	**74.5 (L_{10})**	**Marginally Unacceptable**
	South	1	Midday	**74.5 (L_{10})**	**Marginally Unacceptable**
PAC	North	4	Midday	67.9 (L_{10})	Marginally Acceptable
	East	4	Midday	67.9 (L_{10})	Marginally Acceptable
	West	4	Midday	67.9 (L_{10})	Marginally Acceptable
	South	4	Midday	67.9 (L_{10})	Marginally Acceptable

Note: Although not included in this table, additional facades within 50 feet of dominant noise source were considered with attenuation requirement based on Monitoring Location directly in front of Louisiana/Flatland/Pennsylvania Avenues as depicted in **Figure 16-2**

A~~A~~A: Based on CadnaA modeling analysis described above.

B: Includes sound level from recreational area

Source: VHB, 2022

According to the noise exposure guidelines in the *CEQR Technical Manual*, With-Action sound levels would be Marginally Unacceptable on the facades of Buildings 1, 2, 3, 4, 5, 6, 7/8, and 9/10, which are closest to Louisiana Avenue, Flatlands Avenue, Pennsylvania Avenue, or the proposed recreational areas, since sound levels would be between 70 and 80 dBA. With-Action sound levels would be Marginally Acceptable at the facades of Buildings 1, 2, 3, 4, 5, 6, 7/8, and the PAC, which are set back 50 feet or farther from Louisiana Avenue, Flatlands Avenue, or Pennsylvania Avenue. Additional noise assessment ~~would be~~were conducted between DEIS and FEIS for more refined assessment.

Based on the finding of Marginally Unacceptable sound levels, sufficient outdoor-to-indoor sound attenuation of the window/wall must be specified to provide acceptable sound attenuation from the window/wall materials.

Noise Attenuation Measures

The most common measure for reducing interior noise from ambient sources is to specify sufficient outdoor-to-indoor sound attenuation for the proposed building. As shown in **Table 16-17**, the required level of attenuation varies based on the exterior sound levels and type of receptor.

~~Table 16-15~~Table 16-17 Required Attenuation Values

	Marginally Unacceptable				Clearly Unacceptable
With-Action Sound Level Based on Vehicular Traffic	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Attenuation A	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	Attenuation required to achieve an interior level of 45 dBA

Note: [A] The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dBA less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.
Source: New York City Department of Environmental Protection (*2021 CEQR Technical Manual*, Table 19-3)

The results show new residential and community facility spaces would require a minimum composite window/wall sound attenuation to maintain an interior noise level not greater than 45 dBA. In order to maintain acceptable interior noise conditions an alternative means of ventilation must be included such as, but not limited to, central air conditioning, to provide ventilation during the closed window condition.

The composite OITC value of the window-wall structure is used to determine the necessary sound attenuation. The OITC classification is defined by ASTM International (ASTM E1331-10a) and provides a single number rating that is used for designing a building façade, including walls, doors, glazing, and combinations thereof. Sound attenuation measures would be achieved through construction materials and techniques with sufficient OITC-rated windows and walls.

The With-Action sound levels presented in **Table 16-16** were compared to the required attenuation values in **Table 16-17** to determine the sound attenuation needed. As shown in **Figure 16-2**, a minimum composite window/wall sound attenuation would be required on the facades of Buildings 1, 2, 3, 4, 5, 6, 7/8, and 9/10 which are closest to Louisiana Avenue, Flatlands Avenue, Pennsylvania Avenue, or the proposed recreational areas.

The With-Action noise level at the northern and eastern facades of Building 1 including mobile and stationary sources would be up to 78.6 dBA (L_{10}). Therefore, the eastern façade along Pennsylvania Avenue, the northern façade along Flatlands Avenue, the western façade within 50 feet of Flatlands Avenue, and the southern façade of within 50 feet of Pennsylvania Avenue would require a minimum composite window/wall of 35 OITC.

The With-Action noise level at the eastern façade of Building 2 including mobile and stationary sources would be up to 78.6 dBA (L_{10}). Therefore, the eastern façade along Pennsylvania Avenue and the northern and southern façades within 50 feet of Pennsylvania Avenue would require a minimum composite window/wall of 35 OITC.

The With-Action noise level at the northern façade of Building 3 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the southern façade of Building 4 including mobile and stationary sources and the new childcare facility playground would be up to 75.9 dBA (L_{10}). Therefore, the southern ~~façade~~, eastern, and western façades of Building 4 within 50 feet of the proposed childcare facility playground would require a minimum composite window/wall sound attenuation of 31 OITC.

The With-Action noise level at the northern façade of Buildings 5 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the northern façade of Buildings 6 including mobile and stationary sources would be up to 72.4 dBA (L_{10}). Therefore, the northern façade along Flatlands Avenue and the eastern and western façades within 50 feet of Flatlands Avenue would require a minimum composite window/wall sound attenuation of 28 OITC.

The With-Action noise level at the northern, western, and southern façades of Building 7/8 including mobile and stationary sources would be up to 74.5 dBA (L_{10}). Therefore, the northern, western, and southern façades of Building 7/8 would require a minimum composite window/wall sound attenuation of 31 OITC.

The With-Action noise level at all façades of Building 9/10 including mobile and stationary sources and the proposed rooftop basketball court would be up to 75.5 dBA (L_{10}). Therefore, all façades of Building 9/10 would require a minimum composite window/wall sound attenuation of 31 OITC.

Other facades of the proposed buildings and the PAC are setback from Louisiana Avenue, Flatlands Avenue, and Pennsylvania Avenue where With-Action noise levels would be below 70 dBA (L_{10} or L_{eq}). Therefore, there would be no need for a minimum composite window/wall sound attenuation requirement at these locations.

To implement these attenuation requirements, an (E) designation (E-679) would be applied to the Development Site specifying the appropriate amount of window/wall attenuation and an alternate means of ventilation. With these commitments, the Proposed Project would not result in any significant adverse noise impacts.

~~Figure 16-1~~Figure 16-2Composite Window/Wall Sound Attenuation Requirements



Source: VHB, 2022

To implement these attenuation requirements, it is anticipated that an (E) Designation (E-679) for noise would be applied to the Development Site specifying the appropriate amount of window/wall attenuation and an alternate means of ventilation. The text for the (E) Designation (E-679) would be as follows:

Block 4434, Lot 10 (Building 1)

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on the facades facing Flatland Avenue and the facades facing Pennsylvania Avenue and the facades facing Vandalia Avenue within 50 feet of Pennsylvania Avenue and the facades facing Louisiana Avenue within 50 feet of Flatland Avenue to maintain an interior noise level not greater than 45 dBA for residential uses as illustrated in the EIS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4434, Lot 10 (Building 2)

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on the facades facing Pennsylvania Avenue and the facades facing Flatland Avenue within 50 feet of Pennsylvania Avenue and the facades facing Vandalia Avenue within 50 feet of Pennsylvania Avenue to maintain an interior noise level not greater than 45 dBA for residential uses as illustrated in the EIS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4434, Lot 1 (Building 3)

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on the facades facing Flatland Avenue and the facades facing Pennsylvania Avenue within 50 feet of Flatland Avenue and the facades facing Louisiana Avenue within 50 feet of Flatland Avenue to maintain an interior noise level not greater than 45 dBA for residential uses as illustrated in the EIS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4434, Lot 1 (Building 4)

In order to ensure an acceptable interior noise environment, future residential and community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on ~~the southern facade of Building 4 and the eastern~~all facades ~~of Building 4~~ within 50 feet of the proposed childcare facility playground to maintain an interior noise level not greater than 45 dBA for residential and community facility uses as illustrated in the EIS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block ~~4432~~4430, Lot 1 (Building 5)

In order to ensure an acceptable interior noise environment, future residential and community facility uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on the facades facing Flatland Avenue and the facades facing Pennsylvania Avenue within 50 feet of Flatland Avenue and the facades facing Louisiana Avenue within 50 feet of Flatland Avenue to maintain an interior noise level not greater than 45 dBA for residential and community facility uses as illustrated in the EIS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block ~~4431~~4430, Lot 1 (Building 6)

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on the facades facing Flatland Avenue and the facades facing Pennsylvania Avenue within 50 feet of Flatland Avenue and the facades facing Louisiana Avenue within 50 feet of Flatland Avenue to maintain an interior noise level not greater than 45 dBA for residential uses as illustrated in the EIS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4430, Lot 1 ~~& Block 4431, Lots 1 and 200~~ (Buildings 7/8)

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on the facades facing Louisiana Avenue and the facades facing Flatland Avenue and the facades facing Vandalia Avenue to maintain an interior noise level not greater than 45 dBA for residential uses as illustrated in the EIS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block ~~4431, Lots~~4430, Lot 1 ~~and 200~~ (Buildings 9/10)

In order to ensure an acceptable interior noise environment, future residential and community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on all facades to maintain an interior noise level not greater than 45 dBA for residential and community facility uses as illustrated in the EIS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

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Public Health

This chapter addresses the Proposed Project's effect on public health. As defined by the *2021 City Environmental Quality Review (CEQR) Technical Manual*, 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. The goal of CEQR with respect to public health is to determine whether adverse impacts on human health may occur as a result of a proposed project, and if so, to identify measures to mitigate such effects.

Introduction

The *2021 CEQR Technical Manual* states that a public health assessment is not necessary for most projects. Where no significant unmitigated adverse impact is found in other CEQR analysis areas related to public health—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated significant adverse impact is identified in any of these other CEQR analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area.

As described in the relevant analyses of this EIS, upon completion of construction, the Proposed Actions would not result in significant adverse impacts in any of the technical areas related to public health. The relevant analyses for the consideration of public health impacts are summarized and reviewed in this chapter.

Principal Conclusions

As described in the relevant analyses of this EIS, the Proposed Actions would not result in unmitigated significant adverse impacts in any of the technical areas related to public health: hazardous materials, water quality, air quality, or noise.

Due to contamination on the Development Site, Block 4434, Lot 10 has already been entered into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and shall be remediated in accordance with the BCP requirements under NYSDEC regulatory oversight and pursuant to a Brownfield Cleanup Agreement (BCA) Index No. C224290-04-19 dated May 31, 2019. To address the conditions identified on Block 4434, Lot 1, a BCP application and Remedial Investigation Work Plan (RIWP) were submitted to the NYSDEC on January 13, 2022 and were issued for public comment on March 23, 2022. ~~If~~As the site ~~is~~was accepted into the BCP on May 23, 2022, hazardous materials remedial requirements associated with Block 4434, Lot 1 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH, similar to Block 4434, Lot 10. A comprehensive RI will be implemented and documented in a RIR, followed by the preparation of a RAWP and CHASP. Upon completion of the approved remedial action, a FER shall be completed and submitted to NYSDEC and NYSDOH for review and approval. Any potential ICs/ECs relating to site management would be followed in accordance with an NYSDEC-approved SMP. Further, the Proposed Actions would include the placement of an (E) Designation (E-679) for the entire Development Site (Brooklyn Block 4430, Lot 1; Block 4434, Lot 1 and 10). Therefore, the Proposed Actions would not result in any significant adverse impacts with respect to hazardous materials for the Development Site.

The analysis of operational air quality showed that the Proposed Actions would not result in significant adverse air quality impacts from stationary sources including the proposed garages' emissions. A refined analysis of emissions from the HVAC and hot water systems demonstrated that if the fuel is restricted to natural gas, low NO_x boilers are used, and requirements to the stack height for all proposed buildings are memorialized in the (E) Designation (E-679), significant adverse impacts are not anticipated. Additional horizontal restrictions would be imposed on Building 4 in order to avoid significant adverse air quality impacts. A microscale mobile source analysis was conducted for the intersection of Louisiana and Flatlands Avenues, the selected worst-case location. The highest predicted CO and PM concentrations were below respective National Ambient Air Quality Standards (NAAQS) and the City's *de minimis* value.

Mobile source noise levels would increase by up to 1.2 dBA for the With-Action condition compared to No-Action condition due to traffic generated by the Proposed Actions. Therefore, there would be no potential for significant adverse noise impacts due to mobile sources.

The residential property at 1 Vandalia Avenue, located southeast of the Development Site, includes a 10-story portion approximately 108 feet from the Development Site and the

proposed rooftop basketball court. With-Action noise levels at this receptor including stationary and mobile sources would range from 58.0 to 67.6 dBA (Leq). The Proposed Actions would result in an increase of up to 1.6 dBA (Leq) in noise from the No-Action noise levels. Since noise levels would not increase by 3 dBA or more at these receptors, there would be no significant adverse impacts due to mobile and stationary noise sources.

The residential building at 1180 Pennsylvania Avenue is approximately 80 feet from the Development Site and proposed daycare recreational area (to be located at Proposed Building 4). With-Action noise levels at this receptor including stationary and mobile sources would range from 59.4 to 67.7 dBA (Leq). The Proposed Actions would result in an increase of up to 6.5 dBA (Leq) in noise from No-Action noise levels. While the detailed noise analysis concluded that the Proposed Actions could result in noise levels exceeding noise impact criteria for greater than 5 dBA, as this residential building would not experience noise levels in exceedance of 85 dBA, the Proposed Actions are not anticipated to cause excessively high chronic noise exposure and therefore, are not expected to result in a significant adverse public health impact related to operational noise.

As described in **Chapter 9, Natural Resources** and **Chapter 11, Water and Sewer Infrastructure**, the Proposed Actions would not result in significant adverse impacts. Therefore, no water quality impacts are anticipated as a consequence of the Proposed Actions.

In regard to construction impacts from the Proposed Project, with the aforementioned regulatory oversight on the Development Site through the BCP, BCA, and the (E) designation (E-679), the Proposed Actions would not result in any significant adverse impacts with respect to hazardous materials for the Development Site during the construction period. Furthermore, the Proposed Project would not result in significant adverse impacts on air quality during construction. The results of the quantitative on-site construction analysis indicate that the Proposed Project would not exceed NO_2, PM_{10}, and CO NAAQS. In addition, the maximum predicted 8-hour CO concentration would be well below and incremental concentrations of $PM_{2.5}$ would not exceed the City's de minimis criteria. Finally, comparison of intersection traffic under construction conditions with operational conditions demonstrated no potential for significant adverse CO and PM impacts from construction-related traffic.

Construction activities would adhere to existing construction noise regulations and ~~the~~ implement a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot construction noise barrier, and while construction noise would be reduced, the Proposed Actions would result in the potential for significant adverse construction noise impacts. In total, ~~exterior~~ construction noise levels would exceed the ~~exterior increase~~ thresholds for exterior noise increase and acceptable interior noise levels at ~~seven~~six buildings throughout the Development Site, including three existing buildings and ~~four~~three buildings that would be introduced by the Proposed Actions during the phased development. None of the existing or Proposed Buildings in the vicinity of the Development Site would experience elevated noise levels in exceedance of 85 dBA. Additionally, as described in **Chapter 19, Construction,** the predicted noise levels due to construction are associated with specific pieces of equipment that operate intermittently during the construction period. The detailed noise analysis concluded that the Proposed Action could result in noise levels exceeding the acceptable interior noise impact criteria ~~of greater~~

~~than~~and noise increases exceeding 15 dBA for 12 months or more or 20 dBA for 3 months or more. No analyzed noise receptors are expected to experience exterior noise levels in exceedance of the 85 dBA public health threshold. Therefore, there would not be significant adverse public health impacts due to construction of the Proposed Action.

Finally, all project work would be performed under a NYSDEC-approved Stormwater Pollution Prevention Plan (SWPPP) to be prepared in with the terms and conditions of the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001, January 2020). No project work or equipment and materials storage would occur within or adjacent to wetlands. Various project erosion and silt controls would be installed and maintained pursuant to the New York State Standards and Specifications for Erosion and Sediment Control (2016). Thus, significant adverse impacts to public health from construction activities are not anticipated.

Methodology

As noted above, the *CEQR Technical Manual* states that where no significant unmitigated adverse impact is found in other CEQR analysis areas related to public health—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated significant adverse impact is identified in any of these other CEQR analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area. Where significant adverse construction-period noise impacts are identified, it is the New York City Department of City Planning's practice to examine the potential for these construction-period noise impacts to affect public health.

Assessment

Operational Period

Hazardous Materials

Potential health exposures from hazardous materials in soil and dust include metals, hazardous compounds, or dust conditions that the public can be exposed to through ingestion, inhalation, or dermal contact. Health effects of exposure can lead to poisonings, gastroenteric illnesses, chronic illnesses, asthma, or respiratory complaints. The potential for health impacts associated with hazardous materials can be evaluated in terms of potential concentrations from the analysis in **Chapter 10, Hazardous Materials.**

As detailed in **Chapter 10, Hazardous Materials**, subsurface investigations throughout the Development Site confirmed the presence of contamination associated with landfilling activities, a historic gasoline filling station, and auto wrecking on the site. In order to address this contamination, two approaches would be taken with the approval of the Proposed Actions. First, Block 4434, Lot 10 has already been entered into the ~~New York State Department of Environmental Conservation (~~NYSDEC ~~) Brownfield Cleanup Program (~~BCP~~)~~ and shall be remediated in accordance with the BCP requirements under NYSDEC regulatory oversight and pursuant to a ~~Brownfield Cleanup Agreement (BCA)~~BCA Index No. C224290-04-19 dated May 31, 2019. To address the conditions identified on Block 4434, Lot 1, a BCP application and ~~Remedial Investigation Work Plan (~~RIWP~~)~~ were submitted to the NYSDEC on

January 13, 2022 and were issued for public comment on March 23, 2022. ~~If~~As the site ~~is~~was accepted into the BCP on May 23, 2022, hazardous materials remedial requirements associated with Block 4434, Lot 1 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH, similar to Block 4434, Lot 10. A comprehensive RI will be implemented and documented in a RIR, followed by the preparation of a RAWP and CHASP. Upon completion of the approved remedial action, a FER shall be completed and submitted to NYSDEC and NYSDOH for review and approval. Any potential ICs/ECs relating to site management would be followed in accordance with an NYSDEC-approved SMP. Further, the Proposed Actions would include the placement of an (E) Designation (E-679) for the entire Development Site (Brooklyn Block 4430, Lot 1; Block 4434, Lot 1 and 10). The (E) Designation provides a mechanism for regulatory oversight for future remedial action as a pre-construction requirement to ensure the potential risks or exposures associated with the presence of hazardous substances shall be reduced or eliminated to the maximum extent possible as related to the hazardous materials present. Therefore, the Proposed Actions would not result in any significant adverse impacts with respect to hazardous materials for the Development Site.

With the absence of significant adverse impacts to hazardous materials, there is no potential for an adverse impact to public health as a result of exposure during the operational period.

Air Quality

Potential health exposures from inhalation of air pollutants such as fine particles, CO, NO_2 and ozone can lead to the exacerbation of asthma symptoms and can contribute to poor cardiovascular and respiratory health outcomes. Health effects may also occur from exposure to other pollutants from combustion and process emissions such as VOCs. The potential for health impacts associated with air quality conditions can be evaluated from the results of the analysis detailed in **Chapter 14, Air Quality**.

As detailed in **Chapter 14, Air Quality**, the air quality analysis of the Proposed Actions addressed mobile source, parking facilities, and HVAC and hot water system emissions. No industrial, large or major sources were identified in the close vicinity of the project site and therefore no impacts from such sources were considered.

Mobile source analysis results indicated that at traffic emissions at the worst intersection, the intersection of Louisiana and Flatlands Avenues, selected for analysis would not result in concentrations above the respective ~~National Ambient Air Quality Standards (~~NAAQS~~)~~ or the City's *de minimis* thresholds. No significant impacts from CO or PM traffic emissions are anticipated.

Several parking facilities are planned in the Proposed Actions, three subgrade garages under the proposed buildings and a seven-story naturally ventilated garage structure. The air quality analysis of emissions from these facilities indicated that no significant adverse air quality impacts are expected from the proposed garages.

A refined analysis of emissions from the HVAC and hot water systems of each individual proposed building as well as of all these buildings cumulatively demonstrated that with certain restrictions memorized in the (E) Designation (E-679), no significant adverse air quality impacts are anticipated from these sources. The (E) Designation restricts the fuel to natural gas, asks to use low NO_x boilers and sets requirement to the stack height for all

proposed buildings. Additional horizontal restrictions are imposed on Building 4 in order to avoid significant adverse air quality impacts.

As the results of the air quality analysis demonstrated that the Proposed Actions would not generate any significant adverse air quality impacts, the potential for public health impacts from the Proposed Actions emissions is also insignificant.

Noise

Prolonged exposure to high noise levels has the potential to decrease quality of life, raise blood pressure and myocardial infarctions. Chronic exposure to levels above 85 dBA will eventually harm hearing. Noise modeling results from **Chapter 16, Noise** assess whether there will be exceedances of allowable noise levels that may result in public health impacts.

As detailed in **Chapter 16, Noise**, mobile source noise levels would increase by up to 1.2 dBA for the With-Action condition compared to No-Action condition due to traffic generated by the Proposed Actions. Therefore, there would be no potential for significant adverse noise impacts due to mobile sources.

The residential property at 1 Vandalia Avenue, located southeast of the Development Site, includes a 10-story portion approximately 108 feet from the Development Site and the proposed rooftop basketball court. No-Action noise levels at this receptor would range from 56.5 dBA to 66.7 dBA (Leq). With-Action noise levels at this receptor including stationary and mobile sources would range from 58.0 to 67.6 dBA (Leq). The Proposed Actions would result in an increase up to 1.6 dBA (Leq) in noise. Since noise levels would not increase by 3 dBA or more at these receptors, there would be no significant adverse impacts due to mobile and stationary sources.

The residential building at 1180 Pennsylvania Avenue is approximately 80 feet from the Development Site and proposed daycare recreational area. No-Action noise levels at this receptor would range from 52.8 to 66.5 dBA (Leq). With-Action noise levels at this receptor including stationary and mobile sources would range from 59.4 to 67.7 dBA (Leq). The Proposed Actions would result in an increase up to 6.5 dBA (Leq) in noise from No-Action noise levels. While the detailed noise analysis concluded that the Proposed Actions could result in noise levels exceeding noise impact criteria for greater than 5 dBA, the existing window and through-wall air conditioners would provide enough attenuation to maintain an interior noise level of 45 dBA or below. Therefore, interior noise would be at an acceptable level and would result in a finding of no unavoidable significant adverse noise impacts at this location. As such, and as this residential building would not experience noise levels in exceedance of 85 dBA, the Proposed Actions are not anticipated to cause excessively high chronic noise exposure and therefore, are not expected to result in a significant adverse public health impact related to operational noise.

Based on the noise modeling for new sensitive receptors, the With-Action noise conditions would require specific window/wall attenuation on certain facades of all of the proposed buildings (see **Chapter 16, Noise**). An (E) Designation (E-679) would be applied to the Development Site specifying the required window/wall attenuation and an alternate means of ventilation. While the detailed noise analysis concluded that the Proposed Actions could result in With-Action sound levels exceeding the noise exposure guidelines for new receptors, these new receptors would not experience noise levels in exceedance of 85 dBA.

The Proposed Actions are, therefore, not anticipated to cause excessively high chronic noise exposure and are not expected to result in a significant adverse public health impact related to operational noise.

Water Quality

Potential exposures to contaminated water (potable, non-potable, and recreational) from ingestion or secondary contact can cause infectious disease, neurologic effects, and kidney or other organ system effects, or cancers. The potential effects of a project's impact of water quality can be assessed from its potential to impact surrounding natural resources or water systems as analyzed in **Chapter 9, Natural Resources** and **Chapter 11, Water and Sewer Infrastructure**.

The Fresh Creek Nature Preserve and Jamaica Bay are located within the vicinity of the Project Area. As detailed in **Chapter 9, Natural Resources**, the Fresh Creek Nature Preserve contains undeveloped upland and wetland habitats, including ecologically valuable surface water and tidal wetland communities. The tidal wetland communities of the Fresh Creek Nature Preserve provide a number of important ecological functions, including sequestration of nutrients and pollutants and therefore important public health benefits regarding water quality. Jamaica Bay is located approximately 1.25 miles to the south of the Project Area and includes extensive areas of terrestrial lands, underwater lands, and surface waters and drains a surrounding watershed of approximately 142 square miles that includes the Project Area. The chief issues facing Jamaica Bay is the degradation of water quality due to increasing human population and development within the surrounding watershed, resulting in increased impervious surfaces within the Jamaica Bay Watershed and increased sewage discharge, solid waste, and stormwater runoff to the bay, which impact water quality.

As detailed in **Chapter 11, Water and Sewer Infrastructure** the Proposed Project would ensure the appropriate management of project-generated solid waste and sanitary wastewater, and storm water. The Proposed Project would incorporate stormwater best management practices (BMPs) through the incorporation of detention and infiltration techniques such as green and blue roofs, subsurface detention and infiltration, and permeable pavement. One or a combination of these techniques could control peak runoff rates, and the implementation plan will be determined with further refinement of the building design and in consultation with NYC Department of Environmental Protection (DEP). Stormwater source control BMPs that would be required as part of the site connection approval process, with the review and approval of DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Project Area. Therefore, there would be no significant adverse impacts on stormwater conveyance infrastructure.

As detailed in **Chapter 9, Natural Resources**, the implementation of BMPs as discussed above and in **Chapter 11, Water and Sewer Infrastructure** and conformance with NYC DEP, NYSDEC and other regulatory agency regulations and permitting requirements, the Proposed Actions are consistent with the applicable NYC DEP Water Quality and Stormwater Objectives for Jamaica Bay included in the Jamaica Bay Watershed Protection Plan Volume II. Therefore, no significant adverse impacts to natural resources are anticipated due to implementation of the Proposed Actions.

With the absence of significant adverse impacts to natural resources and water infrastructure, there is no potential for an adverse impact to public health as a result of water quality impacts in the operational period.

Construction Period

Hazardous Materials

As discussed above and detailed in **Chapter 10, Hazardous Materials**, to avoid the potential for significant adverse impacts relating to hazardous materials on the Development Site, Block 4434, Lot 10 will be enrolled in the NYSDEC BCP and shall be remediated in accordance with the BCP requirements under NYSDEC regulatory oversight and pursuant to a BCA Index No. C224290-04-19 dated May 31, 2019. To address the conditions identified on Block 4434, Lot 1, a BCP application and Remedial Investigation Work Plan (RIWP) were submitted to the NYSDEC on January 13, 2022 and were issued for public comment on March 23, 2022. ~~If~~As the site ~~is~~was accepted into the BCP on May 23, 2022, hazardous materials remedial requirements associated with Block 4434, Lot 1 shall be completed under the NYSDEC BCP with regulatory oversight provided by NYSDEC and NYSDOH, similar to Block 4434, Lot 10. A comprehensive RI will be implemented and documented in a RIR, followed by the preparation of a RAWP and CHASP. Upon completion of the approved remedial action, a FER shall be completed and submitted to NYSDEC and NYSDOH for review and approval. Any potential ICs/ECs relating to site management would be followed in accordance with an NYSDEC-approved SMP. An (E) Designation (E-679) would also be placed over the entire Project Area to provide a mechanism for regulatory oversight for future remedial action as a pre-construction requirement to ensure the potential risks or exposures associated with the presence of hazardous substances shall be reduced or eliminated to the maximum extent possible as related to the hazardous materials present. Therefore, the Proposed Actions would not result in any significant adverse impacts with respect to hazardous materials for the Development Site during the construction period.

With the absence of significant adverse impacts to hazardous materials, there is no potential for an adverse impact to public health as a result of exposure during the construction period.

Air Quality

As detailed in **Chapter 19, Construction**, Phase 1B was determined to be the peak period for construction air quality emissions. Based on the results of the emissions intensity and quantitative construction air quality analysis for on-site emissions (construction equipment, trucks and fugitive dust from construction of foundations for Buildings 3 and 4 (in Phase 1B) and truck idling and moving on paved and unpaved roads) and based on a comparison to the operational analysis for off-site construction traffic, the Proposed Project would not result in significant adverse impacts on air quality during construction. The results of the quantitative on-site construction analysis indicate that the Proposed Project would not exceed NO_2, PM_{10}, and CO NAAQS. In addition, the maximum predicted 8-hour CO concentration would be well below and incremental concentrations of $PM_{2.5}$ would not exceed the City's de minimis criteria. Finally, the ~~emissions intensity analysis that compares conditions under construction conditions with~~comparison to the operational

~~conditions~~condition demonstrated no potential for significant adverse CO and $PM_{2.5}$ impacts from construction-related traffic.

Noise

As detailed in **Chapter 19, Construction**, construction of the Proposed Project would involve standard construction activities and practices for buildings in New York City. Foundation installation and superstructure phases of construction are typically when the noisiest activities occur. The exterior and interior fit-out phases of construction typically involve minimal exterior equipment and substantially quieter noise conditions. The Development Site is near existing residential, community facility, and commercial land uses, and the introduction of new residences would occur throughout construction of the phased development. Based on the proximity of these noise-sensitive land uses, there is the potential for construction to cause significant adverse noise impacts.

Construction noise from mobile sources has been evaluated from 6:00 AM to 7:00 AM, when construction traffic would be greatest since this is the period that most worker vehicles and trucks arrive at the Development Site. This is a period prior to construction activities and noise from stationary construction equipment would occur. Construction noise from mobile sources would not increase by 3 dBA or more and there would be no significant adverse noise impact due to construction mobile sources.

Construction noise from stationary sources has been evaluated for 16 different phases of construction. For each phase of the Proposed Development (i.e., Phase 1A, Phase 1B, Phase 2A1, Phase 2A2, Phase 2B, and Phase 2C) there would be foundation, superstructure, elevators, exterior construction, and interior fit-out phases of construction of the proposed buildings (i.e., Buildings 1, 2, 3, 4, 5, 6, 7/8, 9/10 and the PAC). See **Chapter 19, Construction** for further details on the period and duration of the different phases of construction.

The potential for significant adverse construction noise impact depends on the intensity and duration of construction activities. As it relates to the Public Health, construction noise would be a significant adverse noise impact if noise levels exceed 85 dBA for a prolonged period of time. If construction noise levels would occur continuously for 24 months or more, a detailed construction noise analysis is warranted and there is a potential for significant adverse noise impact. Construction noise occurring for shorter durations would not typically result in significant adverse noise impact unless there is a higher intensity of noise. For example, construction may cause significant adverse impact if exterior noise levels would increase by 15 dBA or more for 12 months or more or 20 dBA or more for a period of 3 months or more. These criteria apply to residential, community facility, and commercial office spaces, but do not apply to retail spaces. The potential effect of construction noise is also evaluated according to interior noise criteria which are 45 dBA (L10) for residential spaces and 50 dBA (L10) for commercial office spaces.

In total, exterior and interior construction noise levels would exceed the ~~exterior increase~~impact thresholds at ~~seven~~six buildings throughout the Development Site, including three existing buildings and ~~four~~three buildings that would be introduced by the Proposed Actions during the phased development. The following summarizes the results of the construction noise assessment at the closest receptors surrounding the Proposed Project.

- There would be a total of six buildings where construction noise levels would increase by 20 dBA or more over existing conditions for three months or longer ~~including:~~and where this level of noise increase would cause interior noise levels to exceed the acceptable threshold for at least three consecutive months including:
  - Proposed Building 2
  - Proposed Building 3
  - Proposed Building 4
  - 1180 Pennsylvania Avenue
  - 1170 Pennsylvania Avenue
  - 1 Vandalia Avenue
- There would be a total of ~~six~~five buildings where construction noise levels would increase between 15-20 dBA over existing conditions for 12 months or longer ~~including:~~and where this level of noise increase would cause interior noise levels to exceed the acceptable range for at least 12 consecutive months including:
  - ~~Proposed Building 1~~
  - Proposed Building 2
  - Proposed Building 3
  - Proposed Building 4
  - 1180 Pennsylvania Avenue
  - 1170 Pennsylvania Avenue

As presented in **Chapter 20 ~~"~~ Mitigation~~"~~**, potential measures to mitigate the significant adverse construction noise impacts were explored. The impacted existing residential buildings near the Projected Development have insulated glass windows and through-wall air-conditioning, which would be expected to provide 25 dBA window/wall attenuation. Buildings constructed as part of the Proposed Actions are expected to have insulated glass windows and central air-conditioning. Additionally, Facades of specified Proposed Buildings identified in **Chapter 16 ~~"~~ Noise~~"~~** are also required to have a minimum OITC rating up to 35 dBA window/wall attenuation. These provisions would reduce the expected interior noise levels at these residential buildings.

None of the existing or Proposed Buildings in the vicinity of the Projected Development Site would experience elevated noise levels in exceedance of 85 dBA. Additionally, as described in **Chapter 19 ~~"~~ Construction~~"~~** the predicted noise levels due to construction are associated with specific pieces of equipment that operate intermittently during the construction period. The detailed noise analysis concluded that the Proposed Action could result in noise levels exceeding the acceptable interior noise impact criteria ~~of greater than~~and noise increases exceeding 15 dBA for 12 months or more or 20 dBA for 3 months or more. No analyzed noise receptor is expected to experience exterior noise levels in exceedance of the 85 dBA public health threshold. Therefore, there would not be significant adverse public health impacts due to construction of the Proposed Action.

Water Quality

As detailed above, the protection of nearby natural resources is important to the maintenance of water quality, which is connected to public health. In order to protect nearby water resources during the construction period, as detailed in **Chapter 19, Construction**, all project work will be performed under a NYSDEC-approved ~~Stormwater Pollution Prevention Plan (~~SWPPP~~)~~ to be prepared in with the terms and conditions of the ~~State Pollutant Discharge Elimination System (~~SPDES~~)~~ General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001, January 2020). No project work or equipment and materials storage will occur within or adjacent to wetlands. Various project erosion and silt controls will be installed and maintained pursuant to the New York State Standards and Specifications for Erosion and Sediment Control (2016).

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Neighborhood Character

This chapter considers how the Proposed Actions would affect neighborhood character, which is defined as the elements of the environment that combine to create the context and feeling of a neighborhood.

Introduction

This analysis of neighborhood character follows the guidelines set forth in the *2021 City Environmental Quality Review (CEQR) Technical Manual*. As defined within the manual, neighborhood character is an amalgam of various elements that give neighborhoods a distinct "personality," including, land use, socioeconomic conditions, community facilities and services, open space resources, historic and cultural resources, urban design and visual resources, shadows, transportation, and noise. Not all these elements affect neighborhood character in all cases; a neighborhood usually draws its distinctive character from a few defining elements. For a proposed project, a neighborhood character assessment under CEQR first identifies the defining features of the neighborhood and then evaluates whether the project has the potential to affect these defining features, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical analysis areas. Thus, to determine the effects of a proposed project on neighborhood character, the salient features of neighborhood character are considered together. According to the *CEQR Technical Manual*, neighborhood character impacts are rare and occur under unusual circumstances. Moreover, a significant adverse impact identified in one of the technical areas that contribute to a neighborhood's character is not automatically equivalent

to a significant adverse impact on neighborhood character, but, rather, serves as an indication that neighborhood character should be examined.

This section includes a preliminary assessment of neighborhood character; the assessment was prepared in conformance with the *CEQR Technical Manual* using information from the technical analyses presented in other relevant chapters of this EIS.

Principal Conclusions

The Proposed Project would not result in significant adverse impacts to neighborhood character. With the exception of community facilities and services and transportation, the Proposed Actions would not result in significant adverse impacts in any of the technical areas that contribute to neighborhood character (i.e., the Proposed Actions would not result in significant adverse impacts to land use, zoning, and public policy; socioeconomic conditions; historic and cultural resources; urban design and visual resources; or shadows). While the Proposed Actions would result in significant adverse impacts to community facilities and services, the increased demand on early childhood programs and libraries could be mitigated by the introduction of a 12,~~230~~320-gsf childcare facility (implementation would occur in consultation with the New York City Department of Education (DOE)) and the provision of ~~free services and programming for residents typically offered by the Brooklyn Public Library in the common areas of the proposed residential buildings, respectively.~~computer labs that have free internet access within lounge spaces in each building within the Proposed Project for residents and space within the PAC to be provided for use by BPL for programming and additional outdoor space within the Central Quad to be made available for BPL programming. Regarding transportation, traffic impacts at several intersections, pedestrian impacts at several crosswalks, and fare control and bus capacity impacts are all anticipated as a result of the Proposed Actions. Regarding noise, a significant adverse impact at one existing residential building is anticipated as a result of the Proposed Actions. ~~However, mitigation measures would be implemented by the Proposed Project to eliminate or minimize the effects of these potential impacts.~~ However, with the existing window and through-wall AC units, identified significant adverse operational noise impact is already fully mitigated to meet the acceptable interior noise levels.

The Proposed Actions would enhance the urban design and character of the neighborhood by redeveloping an underutilized lot and surface parking with pedestrian-oriented buildings constructed close to the lot line and oriented along a coherent grid that would surround a proposed central quad. These elements, together with new publicly accessible open spaces and anchor uses including the Christian Cultural Center (CCC) and the Performing Arts Center (PAC), would contribute to improved orientation and legibility in the area as compared to the No-Action condition. In addition, proposed street-fronting retail and commercial space, residential lobbies and maisonettes, and community facility space would serve to activate the Development Site and provide needed facilities and services to the surrounding community.

Overall, the Proposed Project would contribute to a more vibrant future for the neighborhood, contributing to the goals of increasing the city's affordable housing stock and introducing development that is well-integrated with the urban fabric through expanded community facilities, open space, and an internal street network.

Overall, the Proposed Project would not result in a significant change to the defining features of neighborhood character.

Methodology

As indicated above, a neighborhood character assessment is generally needed, per the *CEQR Technical Manual*, when a proposed project has the potential to result in significant adverse impacts in certain technical areas (land use, zoning, and public policy; socioeconomic conditions; community facilities and services; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; or noise) or when the project may have moderate effects on several of the elements that define a neighborhood's character. A "moderate" effect is generally defined as an effect considered reasonably close to the significant adverse impact threshold for a particular technical analysis area.

In the absence of an impact on any of the relevant technical areas, a combination of moderate effects to the neighborhood could result in an impact to neighborhood character. A significant impact identified in one of the technical areas that contribute to a neighborhood's character is not necessarily equivalent to a significant impact on neighborhood character. Therefore, an assessment of neighborhood character is generally appropriate if a proposed project has the potential to result in any significant adverse impacts in the technical areas listed above. Examples of possible changes in those technical areas that could result in an adverse effect on neighborhood character, should those technical areas be defining features of the neighborhood, are as follows:

- **Land Use, Zoning, and Public Policy:** If development resulting from a proposed action would conflict with surrounding uses, conflict with land use policy or other public plans for the area, or change land use character, neighborhood character could be affected.
- **Socioeconomic Conditions:** If a proposed action results in direct or indirect displacement or addition of population, employment, or businesses; or substantial differences in population or employment density, neighborhood character could be affected.
- **Community Facilities and Services:** If a proposed action would displace or alter a community facility or increased demand on community facilities, neighborhood character could be affected.
- **Open Space:** If an action would result in a reduction or displacement of an open space or result in additional population that would place a substantial demand on open space, neighborhood character could be affected.
- **Historic and Cultural Resources:** If a proposed action would result in substantial direct changes to a historic resource or substantial changes to public views of a historic resource, neighborhood character could be affected.
- **Urban Design and Visual Resources:** If a proposed action would result in substantially different building form, size, scale, or arrangement; block form, street pattern, or street hierarchy; streetscape elements; or substantial direct changes to a visual feature, such as unique and important public view corridors and vistas, or to public visual access to such a feature, neighborhood character could be affected.
- **Shadows:** If a proposed project would cast an incremental shadow on sun-sensitive resources, neighborhood character could be affected.

- **Transportation:** If a proposed project would result in a change in traffic patterns or would substantially increase traffic volumes on residential streets, neighborhood character could be affected.
- **Noise:** If a proposed action would substantially increase noise levels in an area, neighborhood character could be affected.

A preliminary assessment of neighborhood character determines whether changes expected in other technical analysis areas may affect a defining feature of neighborhood character. As part of a neighborhood character analysis, the defining features of the neighborhood are identified and then a determination is made as to whether a project has the potential to adversely affect these defining features, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas. A neighborhood that has a more varied context is typically able to tolerate greater change without experiencing significant adverse impacts. If the assessment concludes that a proposed project has the potential to adversely affect defining features of a neighborhood, a detailed analysis is undertaken to determine whether the project would result in a significant adverse impact on neighborhood character.

The neighborhood character analysis draws from the technical assessments listed above. As recommended in the *CEQR Technical Manual*, the study area for the neighborhood character analysis is consistent with the study areas in the relevant technical areas assessed under CEQR that contribute to the defining elements of the neighborhood. As such, the study area for neighborhood character is consistent with the quarter-mile study area used for the analysis of land use, zoning, and public policy.

As detailed in the relevant chapters of this EIS, the Proposed Actions would not result in significant adverse impacts in the technical areas of land use, zoning and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; or noise. The Proposed Actions would result in significant adverse impacts in community facilities and services and transportation. Therefore, a preliminary assessment of neighborhood character impacts is provided below. The analysis begins with the identification of the defining features of the neighborhood and then assesses whether the Proposed Actions would adversely affect those defining features within the framework of the above technical areas.

Preliminary Assessment

Defining Features of the Neighborhood-Existing Conditions

"Tower in the Park" Developments

The study area is characterized by the presence of housing developments that exhibit a "tower in the park" building typology, where buildings are set back from the street and surrounded by large open spaces. In most cases, these developments are constructed on superblocks with interior walkways or roadways providing residents with pedestrian and vehicular access. Given the number and size of developments that exhibit this built condition, as detailed below, this is a defining feature of the study area.

There are three New York City Housing Authority (NYCHA) developments in the study area. Breukelen Houses, located in the west side of study area, is a low-rise housing development comprising three-story brick buildings surrounded by trees and lawns. The NYCHA Vandalia Avenue complex is a senior housing complex located just south of the Project Area. It includes two 10-story brick towers connected by a small one-story lobby. The NYCHA Linden Houses are located in the northeast side of the study area. The Linden Houses include a series of rectangular eight-story and 15-story buildings, occupying several super blocks between Stanley Avenue to the north, Vermont Street to the west, Cozine Avenue to the south, and Van Siclen Avenue to the east.

In addition to the three NYCHA developments, there are two privately owned complexes that were also constructed in a "tower in the park" typology. The Council Towers, a three-building complex of privately owned senior housing, are located immediately southeast of the Project Area and are surrounded by landscaped lawns, trees, walkways, and surface parking.

In addition, the southwest portion of the study area is developed with the Spring Creek Towers/Starrett City complex, a large private residential development located between Flatlands Avenue to the north, Louisiana Avenue to the west, the Belt Parkway to the south, and Van Siclen Avenue to the east. Pennsylvania Avenue runs down the center of the development from north to south. Starrett City is composed of a series of 20-story brick apartment towers surrounded by large areas of grassy lawns and parking. The residential buildings do not contain ground floor retail and are set back significantly from the street network. Private security booths are located throughout the development.

Wide Thoroughfares

The study area is intersected by two major thoroughfares, Pennsylvania Avenue and Flatlands Avenue, around which the major land uses, and area traffic patterns are organized. Pennsylvania Avenue runs north-south through the east side of the study area, while Flatlands Avenue generally runs east-west, meeting at the northeast corner of the Project Area. Both streets are wide, between 110 and 125 feet within the study area, and have between two and four traffic lanes in each direction. These roadways divide the study area into distinct sections, including the largely industrial area north of Flatlands Avenue and west of Pennsylvania Avenue, and the large residential developments detailed above concentrated to the south of Flatlands Avenue and at the northeast corner of the study area. These roadways also serve as a buffer for pedestrians between these different sections, and in combination with several major superblocks, contribute to a more vehicle-centric character. Therefore, these wide streets are considered a defining feature of the neighborhood.

Large Footprint Industrial Buildings

Blocks to the north of the Project Area in the area bounded by Wortman Avenue to the north, Louisiana Avenue to the west, Flatlands Avenue to the south, and Pennsylvania Avenue to the east, are occupied by a variety of manufacturing and industrial uses, and consequently this portion of the study area is largely defined by an industrial building character distinct from the southern portion of the Project Area. Two full blocks are occupied by a one-story brick warehouse for Rainbow Clothing stores, with several curb cuts and loading bays along Cozine Avenue. There are two public facilities located on the blocks

between Alabama Avenue and Georgia Avenue, including the NYC Department of Sanitation Brooklyn Community District 16 Garage and the MTA Cozine Iron Workshop South. These buildings exhibit a similar character to the surrounding industrial buildings. Along Flatlands Avenue are several automobile related businesses including a scrapyard between Alabama Avenue and Georgia Avenue and a used car dealership between Alabama Avenue and Louisiana Avenue. Given the large land area occupied by these uses within the study area and distinct building type, this industrial area heavily influences the character of the area and therefore is a defining feature.

No-Action Condition

Project Area

As described in **Chapter 1, Project Description**, in the future without the Proposed Actions (No-Action condition), the Project Area is assumed to remain unchanged from existing conditions, with only the CCC operational on the site, surrounded by surface parking lots and vacant land serving as overflow parking.

Study Area

In the future No-Action condition, there are no new developments anticipated within the quarter-mile study area under the future No-Action condition. Therefore, there are no anticipated changes to the defining features of the neighborhood in the No-Action condition.

With-Action Condition

Potential to Affect the Contributing Elements of Neighborhood Character

The sections below discuss potential changes resulting from the Proposed Project in the following technical areas that are considered in a neighborhood character assessment under CEQR: land use, zoning, and public policy; socioeconomic conditions; community facilities; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise. The assessment uses the findings from the respective chapters of this EIS to identify whether the Proposed Actions would result in any significant adverse impacts or moderate adverse effects in these technical areas, and whether any such changes would have the potential to affect the defining features of neighborhood character. As described below, defining features of the study area would not be affected either through the potential of any significant adverse impact or combination of moderate effects in these technical areas.

Land Use, Zoning, Public Policy

The defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Action on land use, zoning, and public policy, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

As described in **Chapter 2, Land Use, Zoning, and Public Policy**, the Proposed Project would not result in significant adverse impacts on land use, zoning, or public policy in the Project Area or the quarter-mile study area in the 2031 build year. Through the introduction of residential, commercial, community facility, and open space uses, the Proposed Actions would be consistent with surrounding land uses and underlying zoning and would activate an underutilized property within the Project Area. This infill development would provide functional resources for the neighborhood by increasing the affordable housing stock, introducing local retail and publicly accessible open space, and expanding community assets with the inclusion of the trade school and Performing Arts Center. Therefore, the Proposed Actions would be consistent with existing policies and frameworks that aim to increase housing and needed services to the community, including Housing New York 2.0 and OneNYC, as well as the New York City Waterfront Revitalization Program (WRP). The Proposed Actions would also facilitate development that is well-integrated with current conditions in the study area by providing an extension of the existing commercial uses along Flatlands Avenue, additional public open space, and large-scale residential development in line with the surrounding housing complexes that are a defining feature of the neighborhood. As such, the Proposed Actions would not result in significant adverse impacts on neighborhood character due to changes in land use, zoning, or public policy.

Socioeconomic Conditions

As discussed in **Chapter 3, Socioeconomic Conditions**, the Proposed Actions would have no significant impacts on socioeconomic conditions of the study area. Because the Project Area does not currently contain any residential uses, no direct or indirect residential displacement would occur under the With-Action condition. As the Proposed Project would introduce a new population that exceeds CEQR thresholds, an indirect residential displacement analysis was conducted, pursuant to the *CEQR Technical Manual* standards. Of the 2,050 new housing units, approximately 1,950 units, or 95 percent, would be affordable rental units, and no less than 100 residential units would be maisonettes under affordable home ownership or affordable condominiums, providing a path for area low-income renters looking to own their home. Overall, the analysis found that the Proposed Project would not result in a significant adverse impact due to indirect residential displacement.

Community Facilities and Services

As discussed in **Chapter 4, Community Facilities and Services**, the Proposed Actions would have significant impacts on early childhood programs and libraries. Early childhood programs would be over capacity with a shortfall of 665 slots in the With-Action condition resulting in a significant adverse impact, while the projected population change of 6.9 percent for the library catchment study area would be over the threshold outlined in the *CEQR Technical Manual*. As discussed in **Chapter 20, Mitigation**, the increased demand on early childhood programs and libraries could be mitigated. The Applicant intends to provide an approximate 12,~~230~~320-gsf childcare facility, including 6,350 sf that would be designated for publicly funded early childhood programming, to address the impacts on early childhood programs. The implementation of this facility would occur in consultation with the New York City DOE. Furthermore, the Applicant ~~proposes to offer free internet for residents in the common areas of the proposed residential buildings and computer labs within the Proposed Project.~~would provide project residents with free internet access within lounge spaces and computer lab areas within all proposed residential buildings, space within the PAC for use by

BPL for programming, and additional outdoor space within the Central Quad that would be made available for BPL programming. The full range of mitigation measures ultimately implemented would rely upon input from BPL, which would undertake ongoing monitoring to determine the appropriate mitigation measures as the Proposed Project is occupied. The implementation of these mitigation measures would offset the projected impacts to early childhood programs and libraries. Therefore, the effects of the Proposed Project on community facilities would not result in a significant adverse impact on neighborhood character.

Open Space

Defining features of neighborhood character would not be adversely affected due to potential open space-related effects of the Proposed Actions, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

As described in **Chapter 5, Open Space**, a residential analysis of indirect effects on residential open space ratios was conducted for a half-mile study area due to the expected increase in residential population from the Proposed Actions.

Under the With-Action condition, the Proposed Actions would not result in the physical loss or direct displacement of open space. While the total, active, and passive open space ratios in the study area would decrease due to indirect effects from population increases, the potential increase in utilization would be alleviated by a variety of factors, including the introduction of both public and private open space as part of the Proposed Project and the availability of existing open space resources in the study area at Spring Creek Towers/Starrett City and NYCHA Breukelen and Linden Houses. The proposed public open space within the Project Area would complement the existing open spaces within the study area.

As described in **Chapter 5, Open Space**, there would be a temporary indirect active open space impact during construction related to the phasing of the project as new demand for open space resources would materialize from residents prior to the completion of all of the planned on-site open spaces. Therefore, a discussion of mitigation is warranted, see **Chapter 20, Mitigation**. This temporary impact would be eliminated upon full build-out of the project when all proposed open spaces are constructed.

Therefore, since the impact would be temporary in nature, the added population would not result in a significant adverse impact to neighborhood character related to open space or contribute to a combination of moderate effects with the potential to affect defining features of the neighborhood. The introduction of new publicly accessible open space in the Project Area would add to the variety of public open space option in the study area, thereby enhancing the character of the neighborhood.

Historic and Cultural Resources

As discussed in **Chapter 7, Historic and Cultural Resources**, there are no historic resources within the 400-foot study area. The New York City Landmarks Preservation Commission (LPC) determined that the Development Site has no archaeological significance, and no buildings or structures on the Development Site hold architectural significance. Therefore, the

Proposed Actions would not result in significant adverse impacts on historic and cultural resources, and the defining features of the neighborhood would not be adversely affected.

Urban Design and Visual Resources

Defining features of the neighborhood would not be adversely affected due to potential impacts of the Proposed Actions on urban design or visual resources, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

As discussed in **Chapter 8, Urban Design and Visual Resources**, overall, the Proposed Actions would improve the urban design of the Project Area by providing infill development on vacant and underutilized lots, introducing private streets, pedestrian walkways, and publicly accessible open space that would promote an inviting urban fabric and activate the Project Area. Additionally, the built forms and building types resulting from the Proposed Actions would be similar in height and bulk to the low- to mid-density residential buildings that currently exist within the study area. The introduction of street-fronting retail; residential lobbies and maisonettes; and the trade school, PAC, and childcare facility would activate the street frontages at the perimeter of the site and within the site. The introduction of the proposed buildings around a coherent grid and central quad would contribute to orientation and legibility, facilitating an overall improvement in pedestrian conditions and the urban design features of the Development Site compared with existing conditions. In terms of visual resources, there are no views from the Project Area to Fresh Creek Nature Preserve and Fresh Creek Basin. As such, the Proposed Actions would not result in significant adverse impacts on the urban design and visual resources of the Project Area.

Shadows

Defining features of neighborhood character would not be adversely affected due to potential shadows-related effects of the Proposed Action, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

As discussed in **Chapter 6, Shadows**, the Proposed Actions would result in new development that would cast incremental shadows within the vicinity of the study area. The shadows analysis determined that Breukelen Ballfields and the Fresh Creek Nature Preserve would receive short-duration shading that would not affect the vegetation or public use of the spaces. Thus, the sunlight-sensitive resources would not experience significant adverse impacts due to shadows and therefore shadows effects would not result in a significant adverse impact on neighborhood character.

Transportation

The Proposed Actions would have significant impacts on traffic, pedestrian, and transit in the vicinity of the Project Area.

Of the ~~16~~13 intersections analyzed ~~(including new site access driveway intersections with the street network),~~ the Proposed Project would result in significant adverse traffic impacts at nine intersections during the weekday AM peak hour, seven intersections during the weekday midday peak hour, nine intersections during the weekday PM peak hour, and seven intersections during the Saturday peak hour. For the Sunday peak hour, at the ~~10~~7

intersections analyzed (including new site access driveway intersections with the street network), the Proposed Project would result in significant adverse traffic impacts at four intersections; potential mitigation measures are discussed in **Chapter 20, Mitigation**. The majority of the impacted movements are left and right turns from the key roadways in the area (e.g., Pennsylvania Avenue and Flatlands Avenue) or along the minor street approach along these key roadways and would not affect the majority of motorists traveling through the key roadways.

Of the 36 pedestrian elements analyzed, the Proposed Project would result in significant impacts at one pedestrian element (one crosswalk) during the weekday AM and midday peak hours, two pedestrian elements (two crosswalks) during the weekday PM peak hour, and four pedestrian elements (three crosswalks and one sidewalk) during the Saturday peak hour. The Proposed Project also analyzed 14 pedestrian elements during the Sunday peak hour and due to the confluence of pedestrian activities from the Proposed Project and church services, the Proposed Project would result in significant adverse pedestrian impacts at 12 of these elements (three sidewalks, five crosswalks, and four corner analysis locations). Potential mitigation measures are discussed in **Chapter 20, Mitigation.**

The Rockaway Parkway L subway station would have an impact to Glenwood Road fare control during the AM peak hour. As part of the recent station renovations, there is no fence or other barrier behind the Glenwood Road fare control and the majority of subway riders were observed to not use the fare control and instead walk directly into the station without paying the fare. The analysis of this fare control area assumes that all subway riders would use the fare control and not evade the fare, and the fare control would be significantly impacted as a result of the Proposed Project. Potential mitigation measures are discussed in **Chapter 20, Mitigation.**

The Proposed Project would result in a capacity shortfall for the bus routes listed below; these bus routes would be significantly impacted.

- The B82 bus route in the westbound direction during the AM peak hour;
- The B82 SBS bus route in the westbound direction during the AM peak hour, and in the eastbound direction during the PM peak hour; and
- The B83 bus route in both directions during both the AM and PM peak hours

Overall, the significant adverse traffic impacts would primarily occur along the minor street approach or left and right turns from the key roadways in the area (e.g., Pennsylvania Avenue and Flatlands Avenue), and would not affect the majority of motorists traveling through the key roadways. Significant adverse pedestrian impacts during the Sunday peak hour would overlap with busy church service conditions and would not be out of character with existing conditions, while during the other peak hours the Proposed Project would change an area with relatively low foot traffic to a vibrant residential neighborhood. The increase in traffic would also be consistent with the level of activity in an area marked by wide thoroughfares. Therefore, these impacts would not constitute a significant adverse impact on neighborhood character.

Noise

Defining features of neighborhood character would not be adversely affected due to potential effects of the Proposed Action on noise, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

As discussed in **Chapter 16, Noise**, analysis indicated that some of the proposed buildings would require a minimum composite window/wall sound attenuation that would be implemented through an (E) designation (E-679). With these commitments, the Proposed Project would not result in any significant adverse noise impacts to new noise receptors.

The increase in noise due to mobile sources with the No-Action and With-Action conditions have been determined with proportional noise modeling at 13 intersections and ~~6~~8 monitoring locations throughout the study area. Mobile source noise levels would increase by up to 1.2 dBA for the With-Action condition compared to No-Action condition due to traffic generated by the Proposed Actions. Mobile source noise levels would increase up to 1.8 dBA for the With-Action condition compared to existing conditions due to background traffic growth and traffic generated by the Proposed Actions.

The closest existing noise-sensitive building is a ~~New York City Housing Authority (~~NYCHA~~)~~ property at 1 Vandalia Avenue southeast of the Project Area. The building includes a 10-story portion approximately 108 feet from the Project Site and the proposed rooftop basketball court. No-Action noise levels at this receptor would range from 56.5 dBA to 66.7 dBA (Leq). With-Action noise levels at this receptor including stationary and mobile sources would range from 58.0 to 67.6 dBA (Leq). The Proposed Actions would result in an increase up to 1.6 dBA (Leq) in noise. Since noise levels would not increase by 3 dBA or more at these receptors, there would be no significant adverse impacts due to mobile and stationary sources.

The residential building at 1180 Pennsylvania Avenue is approximately 80 feet from the Project Site and proposed daycare recreational area. No-Action noise levels at this receptor would range from 52.8 to 66.5 dBA (Leq). With-Action noise levels at this receptor including stationary and mobile sources would range from 59.4 to 67.7 dBA (Leq). The Proposed Actions would result in an increase up to 6.5 dBA (Leq) in noise. While the detailed noise analysis concluded that the Proposed Actions could result in noise levels exceeding noise increase impact criteria for greater than 5 dBA, primarily resulting from the proposed childcare facility playground at Building 4, there would be significant adverse noise impacts at 1180 Pennsylvania Avenue due to the Proposed Actions. ~~The introduction of a solid~~ However, the existing window and through-wall ~~along the southern perimeter of the daycare playground facility~~air conditioners would ~~be expected to~~ provide ~~5 dBA of~~enough attenuation to maintain an interior noise ~~reduction, thereby mitigating~~level of 45 dBA or below. Therefore, interior noise ~~to~~would be at an acceptable level and would result in a finding of no unavoidable significant adverse noise impacts at this location.

~~With the inclusion of the wall along the perimeter of Proposed Building 4, the~~The Proposed Project would not result in a significant adverse impact on neighborhood character due to effects on noise conditions.

Potential to Affect the Defining Features of the Neighborhood

Overall, the Proposed Actions would not adversely affect the defining features of the neighborhood.

The Proposed Actions are consistent with New York City policies that aim to increase the city's housing stock and encourage growth into future development projects. The Proposed Actions would accomplish this by encouraging high-density mixed-use development in the form of multi-family residential development with ground-floor retail and facilities in the form of a PAC, a trade school, and open spaces. Furthermore, the Proposed Actions would reduce the prevalence of vacant land across the Project Area, converting it into functional resources for the neighborhood. As such, the Proposed Actions would not result in significant adverse impacts on neighborhood character due to changes in land use, zoning, or public policy.

The Proposed Actions would also provide significant new housing opportunities, including an additional 2,050 affordable dwelling units of which up to 200 units would be exclusively for seniors in the study area, which has experienced a trend toward increasing market rents. As such, the Proposed Actions would not result in significant adverse impacts on neighborhood character due to changes in socioeconomic conditions.

The Proposed Actions would result in increased capacity on early childhood programs and libraries. However, as discussed in **Chapter 20, Mitigation**, the Applicant intends to provide an approximate 12,~~230~~320-gsf childcare facility to address the impacts on early childhood programs. Furthermore, the Applicant is proposing to provide project residents with free internet access within lounge spaces in each building and computer labs within the Proposed Project. The implementation of these mitigation measures would offset the impacts observed on early childhood programs and libraries. Therefore, community facilities effects would not result in a significant adverse impact on neighborhood character.

Although the Proposed Actions would decrease the total, active, and passive open space ratios in the study area from population increases, the potential increase in utilization would be alleviated by a variety of factors, including the introduction of public and private active open space as part of the Proposed Project and the existing open space resources available in the study area at Spring Creek Towers/Starrett City and NYCHA Breukelen and Linden Houses. This change does not constitute an adverse impact on neighborhood character. Further, these key open space resources that constitute defining features of neighborhood character were not included in the quantitative open space analysis and would not be impacted by the Proposed Actions. The open space elements introduced by the Proposed Project contain design features such as landscaping interspersed among high-density residential development, which is characteristic of tower in the park developments. However, the integration of the entry plaza, central quad and internal street network would be designed as a neighborhood amenity for use by area residents.

Defining features of neighborhood character would not be adversely impacted due to potential effects of the Proposed Actions on shadows, historical and cultural resources, or noise.

In terms of urban design and visual resources, the Proposed Actions would improve the overall design of the neighborhood by redeveloping an underutilized lot with pedestrian-oriented buildings constructed close to the lot line and oriented along a coherent grid that would surround a proposed central quad. These elements, together with anchor uses

including the CCC and the PAC, would contribute to better orientation and legibility in the area. In addition, proposed street-fronting retail and commercial space, residential lobbies and maisonettes, and community facility space would serve to activate the Development Site and provide needed facilities and services to the surrounding community.

As mentioned above, the significant traffic impacts would primarily occur along the minor street approach or left and right turns from the key roadways in the area (e.g., Pennsylvania Avenue and Flatlands Avenue), and would not affect the majority of motorists traveling through the key roadways. Significant adverse pedestrian impacts during the Sunday peak hour would overlap with busy church service conditions and would not be out of character with existing conditions, while during the other peak hours the Proposed Project would change an area with relatively low foot traffic to a vibrant residential neighborhood. The increase in traffic would also be consistent with the level of activity in an area marked by wide thoroughfares. Therefore, these impacts would not constitute a significant adverse impact on neighborhood character.

With the Proposed Actions, the portion of the East New York neighborhood located within the study area would not lose any of its defining characteristics. The neighborhood would retain its residential character south of Flatlands Avenue while integrating the existing street network through the site and creating public access and amenities both along the periphery of the site and within the site. Therefore, the Proposed Actions would not result in significant adverse impacts to neighborhood character through a combination of moderate effects and identified impacts in the technical areas that contribute to neighborhood character.

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Construction

Construction activities, although temporary in nature, can sometimes result in significant adverse impacts. A project's construction activities may affect a number of technical areas analyzed for the operational period, such as air quality, noise, and traffic. This chapter assesses the potential for the Proposed Project to result in significant adverse impacts during construction.

Introduction

This chapter provides an assessment of the potential for construction of the Proposed Project to result in significant adverse impacts during the construction period. The Proposed Project would consist of ten new buildings on the Development Site, including eight predominantly residential buildings[1] ranging in height from 12 to 15 stories. The Proposed Project would be constructed in five phases over a 96-month period. The CCC building would remain as the dominant feature of the Development Site and be part of a multi-faceted community facility core that includes the PAC, a trade school, a day care facility, a senior center, and a central green space. Ground floor retail and a grocery store providing opportunities for local businesses would be introduced along the public and private street frontages, creating economic opportunity and responding to the dearth of walkable local retail in the neighborhood. A seven-story parking garage, accommodating approximately 500 parking spots for these uses, would be located near Louisiana Avenue and would serve

[1] The ten buildings include eight residential buildings, the above grade parking garage, and the PAC. Residential buildings 7 and 8 are connected as one building and Buildings 9 and 10 are connected as one building, though they would have separate residential lobbies.

as a replacement for the surface parking that exists today. In total, the Proposed Project would result in approximately 2,200,538 gsf of development.

Principal Conclusions

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility. Construction at the Development Site would be subject to government regulations and oversight described below in Construction Regulations and General Practices and would employ the general construction practices described below. The Proposed Project would also comply with the requirements of the New York City Noise Control Code.

Transportation

Traffic

The projected construction activities would yield less total traffic than the amount of traffic projected for the Proposed Project. However, significant traffic impacts could still occur at some of the study area locations during construction, similar to impacts identified in **Chapter 13, Transportation**. Construction activities would generate 184 construction worker auto trips and six construction truck trips during the AM construction peak hour, and 184 construction worker auto trips and two construction truck trips during the PM construction peak hour. Construction trucks would be required to use the New York City Department of Transportation (NYC DOT)-designated truck routes to get to the project area and would then use local streets to access the construction sites.

In addition to construction-related trips, trips generated by components of the Proposed Project that would be expected to be completed by the 2030 construction peak year. These operational trips were also incorporated into the construction traffic analysis.

Construction traffic impacts were identified at two of the seven intersections analyzed during the AM construction peak hour, and nine of the twelve intersections analyzed during the PM construction peak hour. Where impacts during construction may occur, measures similar to the ones recommended in **Chapter 20, Mitigation** could be implemented early to aid in alleviating congested traffic conditions. The two intersections that would be impacted during the AM peak hour could be fully mitigated with typical traffic improvement measures (i.e., signal timing modification and changing parking regulations to provide an additional travel lane). Significant impacts at the intersections of Pennsylvania Avenue with Flatlands Avenue, Stanley Avenue and Linden Boulevard, and Flatlands Avenue with Louisiana Avenue, East 108th Street, and Rockaway Parkway could not be fully mitigated during the PM peak hour. The PM construction peak hour findings are similar to operational With-Action conditions except for the intersections of Pennsylvania Avenue with Stanley Avenue, and the intersection of Flatlands Avenue and East 108th Street which could be mitigated under the operational With-Action conditions.

Parking

Construction workers would generate an estimated maximum daily parking demand of 285 spaces during the Q4 2025 peak construction quarter. This parking demand could be

accommodated by the approximately 385 on-site surface spaces used by the church (these spaces are used by the CCC Tuesday evenings and Sundays during the morning/midday period) and would be mostly vacant during construction. The on-site surface spaces would be replaced with a 500-space above ground parking garage after it is completed in the third quarter of 2026; construction workers would park in this garage after it is completed. Therefore, construction for the Proposed Project would not result in a parking shortfall.

Transit and Pedestrians

Based on census data for the construction industry, it is anticipated that approximately 35 percent of construction workers would commute to the Development Site by public transportation. During the Q4 2025 quarter when construction worker volumes would be highest, construction would be expected to generate 442 daily construction workers (154 workers would be expected to use public transportation). It is expected that the majority of construction workers (80 percent) would arrive during the AM construction peak hour and depart during the PM construction peak hour, and they would generate approximately 123 construction worker trips by public transportation during the AM and PM construction peak hours. The worker pedestrian trips would be below the 200 pedestrian CEQR thresholds for detailed analysis, therefore construction activities are not expected to result in transit or pedestrian impacts.

Air Quality

As described below, Phase 1B was determined to be the peak period for construction air quality emissions. Based on the results of the emissions intensity and quantitative construction air quality analysis for on-site emissions (construction equipment, trucks and fugitive dust from construction of foundations for building 3 and 4 (in phase 1B) and truck idling and moving on paved and unpaved roads) and based on a comparison to the operational mobile source impact analysis for off-site construction traffic, the Proposed Project would not result in significant adverse impacts on air quality during construction. The results of the quantitative on-site construction analysis indicate that the Proposed Project would not exceed NO_2 1-hour, PM_{10} 24-hour, and CO 1-hour and 8-hour NAAQS. In addition, the maximum predicted 8-hour CO concentration would be well below and incremental concentrations of $PM_{2.5}$ would not exceed the City's *de minimis* criteria. Finally, the emissions intensity analysis that compares conditions under construction conditions with operational conditions demonstrated no potential for significant adverse CO and $PM_{2.5}$ impacts from construction-related traffic.

Noise

Construction of the phased development would involve standard construction activities and practices for buildings in New York City. Foundation installation and superstructure phases of construction are typically when the noisiest activities occur. The exterior and interior fit-out phases of construction typically involve minimal exterior equipment and substantially quieter noise conditions. The Development Site is near existing residential, community facility, and commercial land uses, and the introduction of new residences would occur throughout construction of the phased development. Based on the proximity of these noise-

sensitive land uses, there is the potential for construction to cause significant adverse noise impacts.

Construction noise from mobile sources has been evaluated from 6:00 AM to 7:00 AM, when construction traffic would be greatest since this is the period that most worker vehicles and trucks arrive at the Development Site. This is a period prior to construction activities and noise from stationary construction equipment would occur. Construction noise from mobile sources would not increase by 3 dBA or more and there would be no significant adverse noise impact due to construction mobile sources.

Construction noise from stationary sources has been evaluated for 16 different phases of construction. For each phase of the Proposed Development (i.e., Phase 1A, Phase 1B, Phase 2A, Phase 2B, and Phase 2C) there would be foundation, superstructure, elevators, exterior construction, and interior fit-out phases of construction of the proposed buildings (i.e., Buildings 1, 2, 3, 4, 5, 6, 7/8, 9/10 and the PAC). See *Construction Schedule* and *Construction Noise Assessment Methodology* sections for further details on the period and duration of the different phases of construction.

The potential for significant adverse construction noise impact depends on the intensity and duration of construction activities. As it relates to the Public Health, construction noise would be a significant adverse noise impact if noise levels exceed 85 dBA for a prolonged period of time. If construction noise levels would occur continuously for 24 months or more, a detailed construction noise analysis is warranted and there is a potential for significant adverse noise impact. Construction noise occurring for shorter durations would not typically result in significant adverse noise impact unless there is a higher intensity of noise. For example, construction may cause significant adverse impact if exterior noise levels would increase by 15 dBA or more for 12 months or more or 20 dBA or more for a period of 3 months or more. These criteria apply to residential, community facility, and commercial office spaces, but do not apply to retail spaces. ~~When looking at identified~~Between Draft and Final EIS, consideration of interior noise level within or above the acceptable limits has been included as part of determination of significant adverse construction noise ~~impacts~~impact. Therefore, the chapter also investigates interior L_{10} noise levels to compare with the CEQR interior noise guideline of 45 dBA (L_{10}) ~~or~~for residential and community facility uses and interior noise guideline of 50 dBA (L_{10}) for commercial office uses in order to determine if a receptor would experience significant adverse construction noise impact and if potential mitigation at the receptor is needed.

In total, exterior and interior construction noise levels would exceed the ~~exterior increase~~ thresholds at ~~seven~~ six buildings throughout the Development Site, including three existing buildings and ~~four~~three buildings that would be introduced by the Proposed Actions during the phased development. The following summarizes the results of the construction noise assessment at the closest receptors surrounding the Proposed Project.

- There would be a total of six buildings where construction noise levels would increase by 20 dBA or more over existing conditions for three months or longer and where this level of noise increase would cause interior noise levels to exceed the acceptable threshold for at least three consecutive months including:
  - Proposed Building 2
  - Proposed Building 3

- Proposed Building 4
- 1180 Pennsylvania Avenue
- 1170 Pennsylvania Avenue
- 1 Vandalia Avenue

› There would be a total of ~~six~~ five buildings where construction noise levels would increase between 15-20 dBA over existing conditions for 12 months or longer and where this level of noise increase would cause interior noise levels to exceed the acceptable threshold for at least 12 consecutive months including:

  - ~~Proposed Building 1~~
  - Proposed Building 2
  - Proposed Building 3
  - Proposed Building 4
  - 1180 Pennsylvania Avenue
  - 1170 Pennsylvania Avenue

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot construction noise barrier, construction noise would be reduced but would still exceed the thresholds for significant construction noise impact prior to mitigation.

Vibration

Construction activities have the potential to generate ground-borne vibration that can potentially cause structural or architectural damage or annoy people in nearby vibration-sensitive spaces, such as residences. The most substantial sources of construction vibration are equipment associated with the excavation and foundation phase, such as pile drivers, drill rigs, bulldozers, and jack hammers.

There are no buildings within the Project Area listed by the New York City Landmarks Preservation Commission (LPC) or the State and/or National Register of Historic Places (S/NR) which would require special protections from potential damage due to vibration. There is the potential for construction vibration from some construction equipment, such as pile drivers, to cause annoyance in nearby residences. However, these construction activities would only occur for limited periods of time at any particular location and there would be no significant adverse impact as a result of construction vibration.

Other Technical Areas

Land Use and Neighborhood Character

While construction of the new buildings under the Proposed Actions would cause temporary disruption, particularly related to noise, it is expected that such effects in any given area would be relatively short in duration, even under the worst-case construction sequencing and, therefore, would not create a neighborhood character impact. Therefore, no significant adverse construction impacts to land use and neighborhood character are expected.

Socioeconomic Conditions

Construction could, in some instances, temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the Development Site. Long-term lane and/or sidewalk closures are not expected during construction and therefore, would not restrict access to any existing or planned retail businesses. Utility service would also be maintained to all businesses, although there may be very short-term interruptions. Overall, construction resulting from the Proposed Actions is not expected to result in any significant adverse impacts on surrounding businesses.

Community Facilities

The construction site would be surrounded by construction fencing and barriers that would limit the potential for impacts of construction on nearby community facilities. Construction of the proposed buildings would not block or restrict access to any facilities in the area and would not affect emergency response times of the New York City Police Department (NYPD) and New York City Fire Department (FDNY) given the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, no construction impacts would be expected to community facilities as a result of the Proposed Actions.

Open Space

As described in **Chapter 5, Open Space** there are no existing publicly accessible open spaces on the Development Site. While Breukelen Ballfields is located near the site at the northwest corner of Flatlands Avenue and Louisiana Avenue, no access to this publicly accessible open space would be impeded during construction. In addition, measures would be implemented to control air emissions, dust, noise, and vibration on the construction site.

Historic and Cultural Resources

A request for an environmental review letter was sent to NYC Landmarks Preservation Commission (LPC) to determine if there were any architectural or archaeological resources on the Development Site or within an approximate 400-foot radius of the Project Area (coterminous with the rezoning area boundary). According to the response letter issued by LPC and dated September 6, 2019, the Development Site has no archeological significance and does not contain buildings or structures with architectural significance. In addition, no buildings or structures with architectural significance were identified within 400 feet of the Project Area. (Santucci September 6, 2019, **Appendix B**).

Hazardous Materials

As discussed in greater detail in **Chapter 10, Hazardous Materials**, the potential for significant adverse impacts related to hazardous materials resulting from the Proposed Actions would be precluded through the placement of institutional controls such as an (E) designation on the Development Site.

Methodology

This construction assessment follows the guidelines set forth in the *CEQR Technical Manual* and the Final Scope of Work. As discussed in **Chapter 1, Project Description** and above, the

Applicant would construct ten new buildings on the Development Site over five primary phases. Construction resulting from the Proposed Actions is projected to last up to 96 months and the new development would be fully operational by the beginning of 2031, the build year. Therefore, because construction activities would cumulatively exceed a two-year period and would involve the simultaneous construction of multiple buildings, an assessment of the potential for construction activities to result in adverse environmental effects was warranted to examine the potential construction effects in the areas of hazardous materials, transportation, air quality, and noise.

Construction Regulations and General Practices

Construction Oversight

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility, as follows.

- The New York City Department of Buildings (DOB) has primary oversight of construction. DOB oversees compliance with the New York City Building Code to ensure that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both workers and the general public during construction. Areas of oversight include installation and operation of equipment such as cranes and lifts, sidewalk sheds, safety netting, and scaffolding.
- The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code, reviews and approves any needed Remedial Action Plans (RAPs) and associated Construction Health and Safety Plans (CHASPs) as well as the removal of fuel tanks and abatement of hazardous materials. DEP also regulates water disposal into the sewer system and reviews and approves any rerouting of wastewater flow.
- The New York City Fire Department (FDNY) has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials.
- The New York City Department of Transportation Office of Construction Mitigation and Coordination (DOT OCMC) reviews and approves any traffic lane and sidewalk closures.
- New York City Transit (NYCT) is responsible for bus stop relocations and subsurface construction within 200 feet of a subway, if needed.
- The New York City Landmarks Preservation Commission approves studies and testing to prevent loss of archaeological resources and to prevent damage to architectural resources.
- The New York State Department of Environmental Conservation (NYSDEC) regulates disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. NYSDEC also regulates discharge of water into rivers and streams.
- The New York State Department of Labor (DOL) licenses asbestos workers.
- The New York State Department of Transportation (NYSDOT) reviews and approves any traffic lane closures on its roadways, should any be necessary.

- The U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, however, much of its responsibility is delegated to the state level.
- The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

Construction Hours

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate: (1) emergency conditions; (2) public safety; (3) construction projects by or on behalf of City agencies; (4) construction activities with minimal noise impacts; and (5) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. The DOB issues these work permits, and for new building construction, like the proposed development, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work would typically end at 4:00 PM, with some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours.

Construction Practices

Access, Deliveries and Staging Area

Access to construction sites would be controlled. Work areas would be fenced off, and limited access points for workers and construction-related trucks would be provided. Typically, worker vehicles would not be allowed into the construction area, and workers or trucks without a need to be on the site would not be allowed entry. After work hours, the gates would be closed and locked. Security guards may patrol the construction site after work hours and over weekends to prevent unauthorized access.

Material deliveries to the site would be controlled and scheduled. To aid in adhering to the delivery schedules, as is normal for building construction in New York City, flaggers would be employed at each of the construction site's access points. Flaggers are typically supplied by either the subcontractor on-site at the time or by the construction manager. The flaggers control trucks entering and exiting the project site so that they would not interfere with one another. In addition, they provide an additional traffic aid as trucks enter and exit the on-street traffic streams.

Lane and Walkway Closures

Temporary curb-lane and sidewalk closures are typical for construction projects in New York City. To manage such closures, a Maintenance and Protection of Traffic (MPT) plan is developed consistent with DOT requirements. DOT OCMC reviews and approves MPT plans,

and the implementation of the closures would also be coordinated with DOT OCMC. In general, construction managers for major projects on adjacent sites also coordinate their activities to avoid delays and inefficiencies.

Public Safety

A variety of measures are employed to ensure public safety during construction at sites within New York City. Examples include the use of sidewalk bridges to provide overhead protection for pedestrians passing by the construction site and the employment of flaggers to control trucks entering and exiting the construction site, to provide guidance to pedestrians, and/or to alert or slow down the traffic. Other safety measures include following DOB requirements during the installation and operation of tower cranes to ensure safe operation of the equipment and the installation of safety nettings on the sides of the project as the superstructure advances upward to prevent debris from falling to the ground. These safety measures are required as part of a Site Safety Plan reviewed and approved by DOB.

Rodent Control

Construction projects in New York City typically include provisions for a rodent (i.e., mouse and rat) control program with provisions for this formalized in construction contracts for the development. Rodent control programs are typically carried out throughout construction, beginning with surveying and baiting appropriate areas prior to construction and providing for proper site sanitation and maintenance during construction. Signage is posted, and coordination is conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides are permitted, and the contractor is required to implement the rodent control program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

Air Emissions Reduction Measures

In addition to the measures described above, the evaluation performed in this section assumes a combination of emission reduction measures that are mandated by law and are common practice in large-scale New York City construction projects, and follow the requirements included in NYC Law 77 and the NYC Air Pollution Control Code. These measures are listed below in the Air Quality section.

Noise Reduction Measures

Noise from construction activities and some construction equipment is regulated by the NYCDEP Noise Control Code. The NYCDEP Noise Code (Section 24-228) limits noise from non-impulsive construction equipment to a maximum of 85 dBA as measured 50 feet from the source. The code also limits noise from paving breakers, such as jackhammers, to 95 dBA at a distance of one (1) meter and requires that a pneumatic discharge muffler be used that provides an insertion loss of 5 dBA.

In addition, the NYCDEP Noise Control Code limits construction activities to weekdays between the hours of 7:00 AM and 6:00 PM and requires that a Construction Noise Mitigation Plan be implemented. For construction on weekends or weekdays between 6:00 PM and 7:00 AM, NYCDEP Noise Code requires after hours work authorization. In accordance with the NYCDEP Noise Code §24-223, the afterhours work must be conducted

in compliance with the Construction Noise Mitigation Plan, shall not exceed 7 dBA above ambient sound levels within a residential receptor, and must involve activities with minimal noise impact. Project-specific noise control measures are described in the Construction Noise Mitigation Plan and can include a variety of source and path controls, such as the following:

- The contractor would self-certify that all construction tools and equipment have been maintained to not generate excessive or unnecessary noise and that the noise emissions would not exceed the levels specified in Subchapter 5 of the NYC Noise Control Code and Table 22-1 of the *2021 CEQR Technical Manual*. Table 19-~~3~~ 12 shows the noise levels for typical construction equipment.
- All construction equipment would be equipped with necessary noise reduction equipment, including mufflers. All equipment with internal combustion engines would be operated with the doors closed, including noise-insulating materials, and at the lowest engine speed allowable.
- Where feasible, practical, and safe, the use of back-up alarms would be minimized and/or quieter back-up alarms would be installed in accordance with OSHA standards.
- Vehicles would not be allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163.
- The contractor shall utilize a training program to inform workers on methods that can minimize construction noise.
- For impact equipment, such as pile drivers and jackhammers, the quietest equipment shall be selected taking into consideration the structural and geotechnical conditions.
- In general, the quietest equipment and methods shall be used for excavators, dump trucks, cranes, auger drills, and concrete saws to the extent feasible and practical.

The following path noise controls would be implemented to the extent feasible, practical and safe as required by the New York City Noise Code:

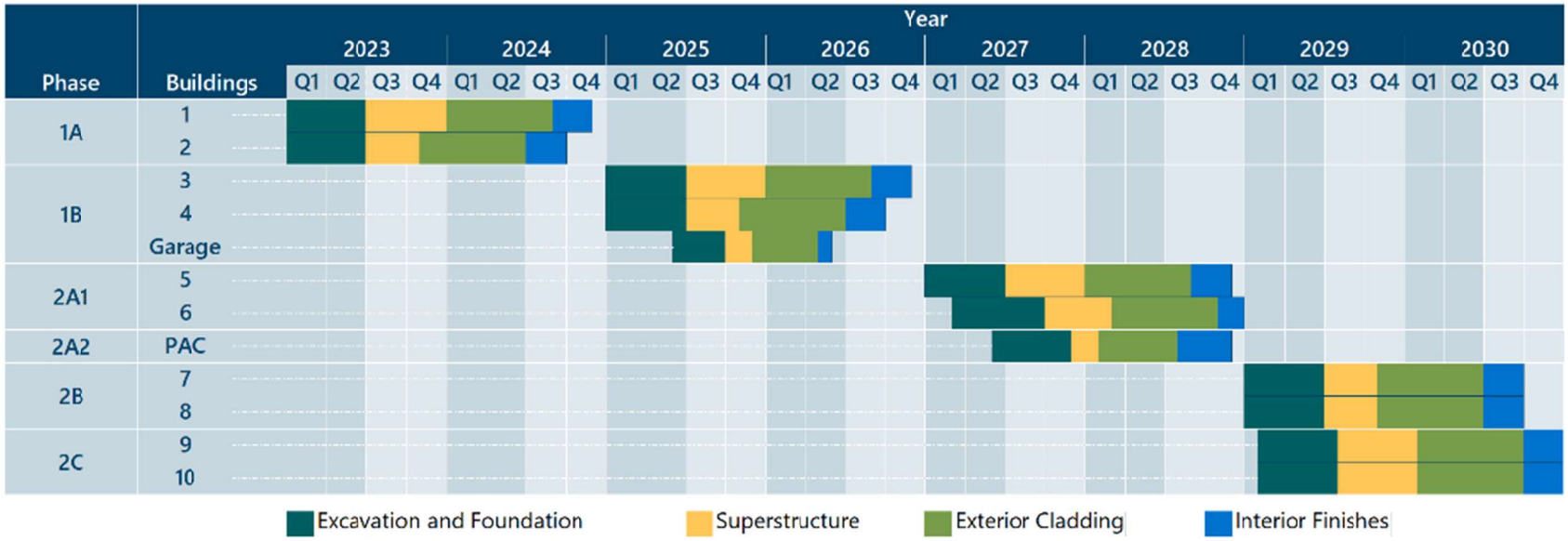
- The DOB regulations require a perimeter barrier or "construction noise barrier" at a height of at least 8-feet when the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid perimeter noise barrier made of wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.
- Should noise complaints occur during construction, the contractor shall use path noise control measures such as temporary noise barriers and jersey barriers.
- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.

Construction Description

Construction Schedule

Figure 19-1 shows the anticipated construction schedule for the Proposed Project as well as the sequencing of construction stages as currently anticipated. The details of the construction schedule are described further below.

Figure 19-1 Anticipated Construction Schedule



No-Action Condition

Absent the Proposed Project, the Development Site would remain in its existing condition, with only the existing CCC operational on the site. No construction would occur under the No-Action Condition.

With-Action Condition

As discussed above and in **Chapter 1, Project Description**, in the future With-Action condition, the Applicant proposes to redevelop the Development Site with approximately 2.2 million gsf of development (4.29 FAR) of residential, commercial, and community facility space as well as parking uses and public and private open space.

As shown in **Figure 19-1**, construction of the Proposed Project under the With-Action condition is anticipated to begin in early 2023 (Q1 2023) and is expected to be completed in January 2031 (Q1 2031) with a 96-month total construction period. Construction would begin with Phase 1A which includes buildings 1 and 2 from Q1 2023 to Q4 2024. Phase 1B would start in Q1 2025 and continue through Q4 2026 and include buildings 3 and 4 as well as the public parking garage. Phase 2A1 would begin in Q1 2027 and end in Q1 2029 and include buildings 5 and 6. Phase 2A2 would begin in Q2 2027 and end in Q4 2028 and include the PAC. Phase 2B would begin in Q1 2029 and end in Q4 2030 and include buildings 7 and 8. Phase 2C would begin in Q1 2029 and end in Q1 2031 and include buildings 9 and 10.

Construction would begin in each of the phases with building foundations, which would take about six months for each building. Then, each building would enter the superstructure phase, which would be completed in approximately two to seven months after the foundation phase depending on the building. There is a small amount of overlap between the foundations and superstructure phases. Exterior construction would start between one to three months into the superstructure phase and end five to eight months after the superstructure phase depending on the building. Interior fit out would also begin one to three months after the start of exterior construction and be completed one to three months after the exterior construction is finished, depending on the building.

Construction Activities

For conservative analysis purposes it is assumed that no construction is proposed on-site in absence of the Proposed Actions. Construction of the Proposed Project would be subject to government regulations and oversight detailed above and would employ the general construction practices described above. No building demolition is required for the Proposed Project due to the location within a parking lot.

Excavation and Foundation

Excavation and Foundation is the first phase of construction to prepare the site for construction work. Regarding excavation activities, where necessary, sheeting is installed to stabilize soil around the excavation area and excavators are then used to excavate soil. The soil is loaded onto dump trucks with front-end loaders for transport to a licensed disposal facility or for reuse on any portion of the development site that needs fill.

Water from rain and snow collected in the excavation area during construction would be removed as necessary using a dewatering pump. If dewatering is required, testing would be performed to ensure compliance with DEP sewer discharge permit/approval requirements and, if necessary, pretreatment would be conducted prior to discharge to the sewer.

Alongside excavation, construction of the new building's foundation and below-grade elements begins. Foundation work for the larger Projected Development Sites would include pile driving and columns and concrete walls would be built to the grade level. As part of the foundation construction, concrete would be poured starting in select areas. Delivery trucks would enter the site from Pennsylvania Avenue, Flatlands Avenue, or Louisiana Avenue depending on the construction phase.

Superstructure and Exterior Construction (Core and Shell)

Construction of the core and shell involves construction of the building's framework, core, and exterior. The superstructure is the building's framework (beams and columns) and floor decks. Construction of the core, or interior structure, includes construction of the building's elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; and restroom areas. Construction of the exterior involves the installation of the façade (exterior walls, windows, and cladding and the roof).

During this stage concrete plank and block would be installed or all concrete would be poured for the core and the superstructure. The podium for each building would be cast in place or steel. An electric hoist would be installed and operated to facilitate these activities, including the delivery of various materials to the site. A sidewalk shed also would be installed along the curb edge around the site.

Equipment used during this stage typically includes air compressors, generators, delivery and concrete trucks, concrete pumps, concrete trowels, welding equipment, and a variety of handheld tools. Space for concrete and spray fireproofing operations and other deliveries would be provided within the site with access from Pennsylvania Avenue, Flatlands Avenue, or Louisiana Avenue depending on the construction phase. Mobile Cranes would also be brought into the site, and temporary construction elevators (hoists) would also be constructed for the delivery of materials and vertical movement of workers when necessary. Superstructure activities would also require the use of mobile cranes, welders, and a variety of trucks. Two to three mobile cranes are needed in each construction phase for superstructure activities.

Interiors and Finishing

Interior fit-out activities include the construction of interior partitions, installation of lighting fixtures and interior finishes (i.e., flooring, painting, etc.); mechanical and electrical work; and lobby finishes. In addition, final cleanup and touchup of the proposed building and final building systems (i.e., electrical system, fire alarm, plumbing, etc.) testing and inspections are part of this stage of construction.

Equipment used during interior construction typically includes exterior hoists, compressors, delivery trucks, and a variety of small hand-held tools. This stage of construction is typically the quietest and does not generate fugitive dust since this work occurs within the building with the façades substantially complete.

This stage of construction is also when the construction protection measures (fencing, sidewalk enclosures, bridges, temporary sidewalks, remaining scaffolding, etc.) around the construction site would be removed. This stage of construction would also include punch list completion activities, which are typically small tasks that were not completely finished, and project commissioning to ensure compliance with contract requirements.

Number of Construction Workers and Material Deliveries

Construction is labor intensive, and the number of workers varies with the general construction task and/or building size. Likewise, material deliveries and removals generate truck trips, and the number also varies depending on the task and/or the building size. **Table 19-1** shows the estimated number of daily workers and trucks to the Development Site per quarter (i.e., three-month period) of each calendar year for the duration of construction activities. These represent the average number of daily workers and trucks within each quarter. During construction, the average number of workers would be approximately 197 workers per day, with a peak of 442 workers per day occurring in the fourth quarter of 2025. An average of 13 trucks per day is anticipated, and a maximum of 27 trucks per day are anticipated during the third quarter of 2025.

Table 19-1 Average Number of Daily Construction Workers and Trucks by Quarter

Year	2023				2024				2025				2026			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	50	153	242	350	308	245	180	11	61	192	316	442	381	280	136	10
Trucks	15	17	18	16	11	11	10	2	18	22	27	23	16	14	8	2
Year	2027				2028				2029				2030			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	24	86	157	292	374	295	201	49	37	113	197	327	356	260	146	44
Trucks	7	12	15	14	9	8	8	5	12	16	18	16	12	11	9	3

Source: Monadnock Construction

Assessment of Project Construction

In accordance with the *CEQR Technical Manual* guidelines, this preliminary assessment evaluates the effects associated with the Proposed Projects' construction related activities—including historic and cultural resources, transportation, air quality, noise, and vibration—on sensitive receptors located near the area of construction, as well as the construction related effects on the Project Site's existing nearby historic architectural resources.

Transportation

Construction activity would extend from 2023 through 2030 and would generate construction worker and truck traffic. Because of the lengthy duration of these activities, an evaluation of construction sequencing and worker and truck projections were completed in order to identify potential construction traffic impacts. Although the construction-related activities would generate less traffic than the Proposed Project, the combination of construction-generated traffic and operational traffic generated by components of the

Proposed Project that would have been completed could result in significant traffic impacts. Therefore, construction trip projections were developed and assigned through the study area through key access route to the Development Site, and a detailed traffic analysis was performed for seven key intersections for the AM construction peak hour and twelve key intersections for the PM construction peak hour within the traffic study area. The analysis also incorporates operational trips generated by components of the Proposed Project that would be completed by this peak quarter of construction. The conclusions of this analysis are presented below.

Construction Worker Modal Splits

The number of projected construction vehicles per day were developed for the construction quarters based on the 2000 Census reverse journey to work data for the construction industry (for Brooklyn census tracts 982, 1018, 1058, 11100, and 1102). Based on this information, it is anticipated that construction workers would primarily drive to the Development Site (approximately 65 percent with an average auto occupancy of 1.01), with a smaller percentage of construction workers traveling via bus or subway (approximately 35 percent).

Construction Peak Quarter and Peak Hour of Construction

Based on the above mode share and vehicle occupancy assumptions, the peak quarter for construction activities was identified. As shown in **Table 19-2**, the peak quarter of construction activity would occur during the fourth quarter of 2025 and construction activities would generate approximately 616 daily vehicle trips (662 daily PCE trips[2]). However, during this quarter only two of the twelve buildings would be completed and the increment of construction plus operational trips, which would be used to assess construction traffic impacts, could be higher in other quarters. The construction schedule was reviewed to determine if another peak quarter could result in a greater level of combined construction plus operational trips and a second peak quarter was identified – the first quarter of 2030. Although construction activities during the first quarter of 2030 is lower (484 daily vehicle trips, 508 daily PCE trips) than during the fourth quarter of 2025 (616 daily vehicle trips, 662 daily PCE trips), eight buildings would be completed and would generate more operational trips than during the fourth quarter of 2025. A comparison of peak hour volumes between these two peak quarter conditions is presented below in **Table 19-2**.

[2] Since larger vehicles such as trucks typically make up a significant portion of construction traffic, a passenger car equivalent factor is applied to these vehicles to account for their size difference. It is assumed that truck trips would be comprised of trucks with three axles which per the *CEQR Technical Manual* is equivalent to two passenger cars.

Table 19-2 Average Number of Daily Number of Construction PCE Trips by Quarter

Year	2023				2024				2025				2026			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Auto Trips	64	198	312	452	398	316	232	14	78	248	408	570	492	362	176	12
Truck Trips	30	34	36	32	22	22	20	4	36	44	54	46	32	28	16	4
Vehicle Trips	94	232	348	484	420	338	252	18	114	292	462	616	524	390	192	16
PCE Trips	124	266	384	516	442	360	272	22	150	336	516	662	556	418	208	20
Year	2027				2028				2029				2030			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Auto Trips	30	112	202	376	482	380	260	64	48	146	254	422	460	336	188	56
Truck Trips	14	24	30	28	18	16	16	10	24	32	36	32	24	22	18	6
Vehicle Trips	44	136	232	404	500	396	276	74	72	178	290	454	484	358	206	62
PCE Trips	58	160	262	432	518	412	292	84	96	210	326	486	508	380	224	68

Traffic Analysis

Peak Hour Construction Worker Vehicle and Truck Trips

Construction activities would be expected to occur on weekdays beginning at 7 AM and ending at 4 PM. Auto trips by with construction workers would typically occur during the hours before and after the daily work shift. Construction truck trips would typically be distributed throughout the day depending upon the specific types of construction activities taking place; most trucks would remain in the area for short durations. Each worker vehicle would arrive in the morning and depart in the evening, and each truck delivery was assumed to result in one "in" trip and one "out" trip during the same hour.

The estimated daily vehicle trips for the peak quarter of construction traffic were distributed throughout the workday based on projected arrival/departure patterns of construction workers, and the projected pattern of truck deliveries based on the types of construction activities that would occur during the peak quarters for the Proposed Project. For construction workers, typical arrival patterns show that most arrivals (approximately 80 percent) occur during the 6 AM to 7 AM hour (the hour before the beginning of a regular day shift) and the same percentage of departure trips occurs during the end of the shift (the 4 PM to 5 PM hour). For trucks, deliveries are usually spread throughout the day but the peak activity (approximately 25 percent) is anticipated to occur during the 6 AM to 7 AM hour.

Construction Peak Quarter Selection

These assumptions were applied to the two potential construction peak quarters to determine the intensity of construction vehicle trips during the construction peak hours. The combination of peak hour construction vehicle trips plus operational vehicle trips from the partial project buildout were used to determine the peak quarter for traffic analysis.

The estimated number of vehicle trips generated by construction activities during the Q4 2025 peak quarter would be 238 vehicle trips (248 PCEs) during the AM peak hour (6 AM to 7 AM) and 230 vehicle trips (232 PCEs) during the PM peak hour (4 PM to 5 PM). The peak construction hourly trip projections for this peak quarter are summarized in **Table 19-3**.

Table 19-3 Construction Vehicle Trips by Hour (Q4 2025)

	Auto Trips		Truck Trips		Total Vehicle Trips			Total PCE Trips		
Hour	In	Out	In	Out	In	Out	Total	In	Out	Total
6 AM – 7 AM	228	0	5	5	233	5	238	238	10	248
7 AM – 8 AM	57	0	2	2	59	2	61	61	4	65
8 AM – 9 AM	0	0	2	2	2	2	4	4	4	8
9 AM – 10 AM	0	0	2	2	2	2	4	4	4	8
10 AM – 11 AM	0	0	2	2	2	2	4	4	4	8
11 AM – 12 PM	0	0	2	2	2	2	4	4	4	8
12 PM – 1 PM	0	0	2	2	2	2	4	4	4	8
1 PM – 2 PM	0	0	0	0	0	0	0	0	0	0
2 PM – 3 PM	0	0	1	1	1	1	2	2	2	4
3 PM – 4 PM	0	15	1	1	1	16	17	2	17	19
4 PM – 5 PM	0	228	1	1	1	229	230	2	230	232
5 PM – 6 PM	0	42	0	0	0	42	42	0	42	42

For the Q1 2030 peak quarter, construction activities would generate 190 vehicle trips (196 PCEs) during the AM peak hour and 186 vehicle trips (188 PCEs) during the PM peak hour. The peak construction hourly trip projections for this peak quarter are summarized in **Table 19-4Table 19-3**.

Table 19-4 Construction Vehicle Trips by Hour (Q1 2030)

	Auto Trips		Truck Trips		Total Vehicle Trips			Total PCE Trips		
Hour	In	Out	In	Out	In	Out	Total	In	Out	Total
6 AM – 7 AM	184	0	3	3	187	3	190	190	6	196
7 AM – 8 AM	46	0	1	1	47	1	48	48	2	50
8 AM – 9 AM	0	0	1	1	1	1	2	2	2	4
9 AM – 10 AM	0	0	1	1	1	1	2	2	2	4
10 AM – 11 AM	0	0	1	1	1	1	2	2	2	4
11 AM – 12 PM	0	0	1	1	1	1	2	2	2	4
12 PM – 1 PM	0	0	1	1	1	1	2	2	2	4
1 PM – 2 PM	0	0	0	0	0	0	0	0	0	0
2 PM – 3 PM	0	0	1	1	1	1	2	2	2	4
3 PM – 4 PM	0	12	1	1	1	13	14	2	14	16
4 PM – 5 PM	0	184	1	1	1	185	186	2	186	188
5 PM – 6 PM	0	34	0	0	0	34	34	0	34	34

The estimated number of vehicle trips generated by construction activities and buildings completed during the Q4 2025 peak quarter would be 277 vehicle trips (292 PCEs) during the 6 AM to 7 AM peak hour and 303 vehicle trips (323 PCEs) during the Q1 2030 6 AM to 7 AM peak hour. The increments for both peak quarters would be significantly lower than the 668 operational vehicle trips (695 PCEs) that would be generated by the Proposed Project during the AM peak hour.

For the 4 PM to 5 PM peak hour, the combined construction and operational trips generated during the Q4 2025 PM peak hour would be 423 vehicle trips (427 PCEs) and 755 vehicle trips (763 PCEs) for Q1 2030. The Proposed Project would generate 722 operational vehicle trips (730 PCEs) during its PM peak hour, which is higher than the trips generated during Q4 2025 but lower than Q1 2030. Based on this comparison, the peak quarter for construction traffic analysis was determined to be Q1 2030. **Table 19-5** shows the comparison of vehicle trips during the construction peak quarters and the Proposed Project.

Table 19-5 Vehicle Trips Comparison – Construction Peak Quarters vs. Proposed Project

	Q4 2025 Construction Quarter			Q1 2030 Construction Quarter			Proposed Project
	Construction Trips	Operational Trips	Total Trips	Construction Trips	Operational Trips	Total Trips	Total Trips
	6 AM – 7 AM			6 AM – 7 AM			7:30 AM – 8:30 AM
Autos	228	33	261	184	97	281	608
Taxis	0	0	0	0	0	0	22
Shuttles	0	2	2	0	4	4	22
Trucks	10	4	14	6	12	18	16
Total Vehicle Trips	**238**	**39**	**277**	**190**	**113**	**303**	**668**
PCE Trips	**248**	**44**	**292**	**196**	**127**	**323**	**695**
	4 PM – 5 PM			4 PM – 5 PM			4 PM – 5 PM
Autos	228	177	405	184	529	713	670
Taxis	0	12	12	0	28	28	36
Shuttles	0	4	4	0	12	12	16
Trucks	2	0	2	2	0	2	0
Total Vehicle Trips	**230**	**193**	**423**	**186**	**569**	**755**	**722**
PCE Trips	**232**	**195**	**427**	**188**	**575**	**763**	**730**

Construction Traffic Volumes and Levels of Service

As noted above and as shown in **Table 19-4**, the construction peak hours are 6 AM to 7 AM, and 4 PM to 5 PM. The existing AM background volumes for the Proposed Project (7:30 AM to 8:30 AM) are higher than the earlier construction peak hour. ATR volumes in the study area were reviewed and it was determined that traffic volumes during the earlier construction peak hour are about 23 percent lower than those during the Proposed Project's operational peak hour. Since the background volumes are lower and the combination of construction and operational trips during the construction peak quarter are lower than when the Proposed Project is completed, there would likely be fewer significant traffic impacts during the AM peak construction hour. The 4 PM to 5 PM construction peak hour is the same as the Proposed Project's operational PM peak hour, therefore the PM construction peak hour baseline volumes will be the same as the operational analysis.

An assessment of traffic operations at the Proposed Project's 13 operational traffic analysis locations was conducted to confirm that roadway capacities during the AM construction peak hour would be consistent with the Proposed Project's operational peak hours. At signalized intersections, signal timings were confirmed to be consistent between the 6 AM to 7 AM and 7:30 AM to 8:30 AM peak hours. The number of travel lanes would also remain unchanged between the construction and operational peak hours during the construction period. During the peak quarter of construction, sidewalk and curbside parking lane closures are expected along the east side of Louisiana Avenue along the Development Site frontage south of Flatlands Avenue and will

require DOT's OCMC's review and approval. The closure could potentially reduce the length of the northbound Louisiana Avenue through-right lane at Flatlands Avenue from approximately 240 feet to 95 feet. Pedestrians who would typically use this sidewalk segment would need to cross Louisiana Avenue at the crosswalks at Flatlands Avenue or at Vandalia Avenue and use the west sidewalk instead during this period of construction. The CCC's main entrance at the southeastern corner of Flatlands Avenue and Louisiana Avenue would remain open during construction. During the peak construction quarter, pedestrian access would be provided off of the Development Site's Flatlands Avenue frontage, where the vast majority of church trips arrive from, through the project's internal roadway network and pedestrian pathways.

Construction activities (construction-related trips plus operational trips from completed buildings) however would be slightly higher in the PM peak hour (763 construction PCEs compared to 730 operational PCEs, i.e., just four to five percent difference overall). Therefore, a screening assessment was conducted to determine whether construction-related vehicle trips would exceed the *CEQR Technical Manual* 50 PCE thresholds for an analysis intersection, and whether the combined construction and operational vehicles trips would be greater than the Proposed Project's operational trips. Additional locations where traffic impacts were identified in the operational condition were reviewed in order to determine whether impacts could still potentially occur during construction. Based on this assessment and in coordination with the Department of City Planning (DCP) and NYC DOT, the following intersections were identified for analysis during the AM (seven intersections) and PM (twelve intersections) construction peak hours:

- Pennsylvania Avenue and Seaview Avenue (AM and PM peak hours)
- Pennsylvania Avenue and Twin Pines Drive (PM peak hour)
- Pennsylvania Avenue and Vandalia Avenue (AM and PM peak hours)
- Pennsylvania Avenue and Flatlands Avenue (AM and PM peak hours)
- Pennsylvania Avenue and Cozine Avenue (AM and PM peak hours)
- Pennsylvania Avenue and Wortman Avenue (PM peak hour)
- Pennsylvania Avenue and Stanley Avenue (AM and PM peak hours)
- Pennsylvania Avenue and Linden Boulevard (AM and PM peak hours)
- Louisiana Avenue and Flatlands Avenue (AM and PM peak hours)
- Flatlands Avenue and East 108th Street (PM peak hour)
- Flatlands Avenue and Rockaway Parkway (PM peak hour)
- Flatlands Avenue and Georgia Avenue (PM peak hour)

Existing Conditions

Each of the seven intersections identified for analysis in the AM construction peak hour were evaluated and were found to operate at an overall acceptable level of service. Eleven of the twelve intersections analyzed during the PM construction peak hour operate at overall acceptable level of service; the intersection of Pennsylvania Avenue and Linden Boulevard operates at LOS E during this peak hour. Of the approximately 61 movements analyzed during the AM construction peak hour, five movements operate at unacceptable levels of service (i.e., LOS E or F). Of the 92 movements analyzed during the PM construction peak hour, 17 movements operate at unacceptable levels of service. Detailed traffic levels of service are provided in **Table 19-6**.

Table 19-6 Year 2020 Existing Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
SIGNALIZED INTERSECTIONS									
Pennsylvania Avenue and Seaview Avenue									
Seaview Avenue	EB	LT	0.18	34.9	C	LT	0.22	36.0	D
		R	0.50	40.9	D	R	0.84	57.7	E
	WB	LTR	0.43	34.5	C	LTR	0.50	36.2	D
Pennsylvania Avenue	NB	L	0.47	57.7	E	L	0.29	55.6	E
		T	0.61	26.1	C	T	0.41	21.4	C
	SB	L	0.21	74.0	E	L	0.20	50.2	D
		TR	0.45	25.9	C	TR	0.70	12.2	B
Shore Parkway Westbound Off-Ramp	NB	TR	0.50	22.5	C	TR	0.37	20.3	C
Overall Intersection[2]		-	-	**28.1**	**C**	-	-	**24.7**	**C**
Pennsylvania Avenue and Twin Pines Drive									
Twin Pines Drive	EB					LR	0.68	41.4	D
Pennsylvania Avenue	NB					L	0.59	42.1	D
						T	0.38	28.8	C
	SB					T	0.49	8.5	A
						R	0.26	6.2	A
Overall Intersection[2]						-	-	**21.7**	**C**
Pennsylvania Avenue and Vandalia Avenue									
Vandalia Avenue	EB	LTR	0.22	31.6	C	LTR	0.39	42.5	D
	WB	LTR	0.52	39.4	D	LTR	0.77	54.9	D
Pennsylvania Avenue	NB	L	0.31	46.9	D	L	0.44	36.4	D
		T	0.67	5.5	A	T	0.53	13.8	B
		R	0.14	2.9	A	R	0.19	10.9	B
	SB	L	0.19	32.9	C	L	0.52	39.6	D
		T	0.33	21.8	C	T	0.57	18.7	B
		R	0.07	15.5	B	R	0.06	13.4	B
Overall Intersection[2]		-	-	**15.2**	**B**	-	-	**22.6**	**C**

Table 19-6 Year 2020 Existing Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Pennsylvania Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.36	32.7	C	L	0.50	44.8	D
		T	0.31	34.0	C	T	0.73	43.3	D
		R	0.08	23.8	C	R	0.34	28.0	C
	WB	L	0.16	28.6	C	L	0.43	47.1	D
		T	0.34	34.5	C	T	0.59	39.2	D
		R	0.20	25.6	C	R	0.25	26.4	C
Pennsylvania Avenue	NB	L	0.58	29.4	C	L	0.72	36.0	D
		T	0.73	19.4	B	T	0.53	24.5	C
		R	0.15	8.6	A	R	0.33	23.7	C
	SB	L	0.45	42.9	D	L	0.58	23.4	C
		T	0.45	38.4	D	T	0.69	14.6	B
		R	0.28	39.4	D	R	0.50	13.9	B
Overall Intersection[2]		-	-	**29.0**	**C**	-	-	**28.9**	**C**
Pennsylvania Avenue and Cozine Avenue									
Cozine Avenue	EB	LTR	0.60	36.9	D	LTR	0.90	58.3	E
	WB	LTR	0.37	30.4	C	LTR	0.61	36.8	D
Pennsylvania Avenue	NB	L	0.26	6.6	A	L	0.27	11.6	B
		TR	0.60	10.8	B	TR	0.52	10.3	B
	SB	L	0.17	8.1	A	L	0.29	8.7	A
		TR	0.46	7.5	A	TR	0.66	16.2	B
Overall Intersection[2]		-	-	**14.5**	**B**	-	-	**23.1**	**C**
Pennsylvania Avenue and Wortman Avenue									
Wortman Avenue	EB					LTR	0.84	56.8	E
	WB					LTR	0.60	41.4	D
Pennsylvania Avenue	NB					L	0.55	57.3	E
						TR	0.61	28.7	C
	SB					L	0.53	72.1	E
						TR	0.70	13.2	B
Overall Intersection[2]						-	-	**29.1**	**C**

Table 19-6 Year 2020 Existing Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Pennsylvania Avenue and Stanley Avenue									
Stanley Avenue	EB	LTR	0.58	48.4	D	LTR	0.71	52.3	D
	WB	LTR	0.58	47.6	D	LTR	0.83	65.0	E
Pennsylvania Avenue	NB	L	0.62	74.7	E	L	0.55	56.4	E
		TR	0.60	4.6	A	TR	0.52	11.4	B
	SB	L	0.18	31.1	C	L	0.48	59.6	E
		TR	0.46	36.9	D	TR	0.64	15.9	B
Overall Intersection[2]		-	-	**25.9**	**C**	-	-	**24.8**	**C**
Pennsylvania Avenue and Linden Boulevard									
Linden Boulevard Main Line	EB	L	0.51	65.3	E	L	0.73	79.4	E
		T	0.42	34.7	C	T	0.97	59.9	E
	WB	L	0.64	76.4	E	L	0.83	95.4	F
		T	0.71	39.0	D	T	0.56	37.0	D
Pennsylvania Avenue	NB	L	0.67	22.8	C	L	0.98	96.6	F
		T	0.82	41.1	D	T	0.67	48.2	D
		R	0.17	37.4	D	R	0.32	42.6	D
	SB	L	0.51	47.3	D	L	0.66	50.5	D
		TR	0.61	38.3	D	TR	0.79	44.4	D
Linden Boulevard Eastbound Service Rd	EB	T	0.42	36.5	D	T	0.76	48.4	D
		R	0.28	26.2	C	R	0.48	30.1	C
Linden Boulevard Westbound Service Rd	WB	TR	0.71	47.2	D	T	1.05	93.6	F
						R	0.17	31.9	C
Overall Intersection[2]		-	-	**39.0**	**D**	-	-	**56.1**	**E**

Table 19-6 Year 2020 Existing Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Louisiana Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.03	17.7	B	L	0.29	30.4	C
		T	0.33	21.5	C	T	0.63	27.1	C
		R	0.27	21.3	C	R	0.35	22.7	C
	WB	L	0.17	18.5	B	L	0.36	31.2	C
		TR	0.38	22.1	C	TR	0.58	25.7	C
Louisiana Avenue	NB	L	0.47	37.2	D	L	0.87	70.0	E
		TR	0.20	35.9	D	TR	0.34	38.2	D
	SB	L	0.02	28.3	C	L	0.08	31.3	C
		TR	0.10	34.5	C	TR	0.62	46.4	D
Overall Intersection[2]		-	-	**24.7**	**C**	-	-	**33.0**	**C**
Flatlands Avenue and East 108th Street									
Flatlands Avenue	EB					L	0.18	16.1	B
						TR	0.59	19.1	B
	WB					L	0.71	39.9	D
						TR	0.51	17.4	B
East 108th Street	NB					LTR	0.84	63.9	E
	SB					LTR	0.81	61.6	E
Overall Intersection[2]						-	-	**29.5**	**C**
Flatlands Avenue and Rockaway Parkway									
Flatlands Avenue	EB					L	0.30	42.6	D
						TR	0.85	45.5	D
	WB					L	0.14	38.2	D
						TR	0.79	41.5	D
Rockaway Parkway	NB					L	0.48	28.4	C
						TR	0.42	26.0	C
	SB					LT	0.69	43.3	D
						R	0.35	34.8	C
Overall Intersection[2]						-	-	**40.2**	**D**

Table 19-6 Year 2020 Existing Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM Peak Hour V/C	AM Peak Hour Ctrl Delay[1]	AM Peak Hour LOS	PM Peak Hour Mvt	PM Peak Hour V/C	PM Peak Hour Ctrl Delay[1]	PM Peak Hour LOS
UNSIGNALIZED INTERSECTIONS									
Flatlands Avenue and Georgia Avenue									
Flatlands Avenue	EB					LTR	-	1.6	A
	WB					L	-	0.0	A
						TR	-	0.0	A
Overall Intersection[2]						**-**	**-**	**0.4**	**A**

[1] Control delay is measured in seconds per vehicle.
[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

No-Action without Construction Conditions

An annual growth rate of 0.50 percent per year was assumed for the first five years (years 2020 to 2025) and a growth rate of 0.25 percent per year was assumed for the subsequent five years (years 2025 to 2030) as per the *CEQR Technical Manual* in order to estimate the background volumes for the 2030 No-Action without Construction condition. Vehicle trips for No-Action background development sites discussed in **Chapter 9, Transportation,** expected to be developed in the area and completed by the year 2030, were assigned to the roadway network. It is expected that roadway improvements projects identified in **Chapter 9, Transportation**, would also be completed by the year 2030.

Under future No-Action conditions in year 2030, one intersection (Pennsylvania Avenue and Linden Boulevard) would operate at ~~an~~ unacceptable overall levels of service (LOS E) during the PM construction peak hour, the same as in the existing conditions. The seven intersections analyzed for the AM construction peak hour would operate at acceptable levels of service. Of the 61 movements analyzed during the AM construction peak hour, five movements would operate at unacceptable levels of service, the same as in existing conditions. Of the 92 movements analyzed during the PM construction peak hour, 23 movements would operate at unacceptable levels of service, compared to 17 movements in existing conditions. Detailed traffic levels of service are provided in **Table 19-7**.

Table 19-7 Year 2030 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
SIGNALIZED INTERSECTIONS									
Pennsylvania Avenue and Seaview Avenue									
Seaview Avenue	EB	LT	0.19	35.4	D	LT	0.23	36.2	D
		R	0.52	41.8	D	R	0.87	60.4	E
	WB	LTR	0.45	35.1	D	LTR	0.52	36.8	D
Pennsylvania Avenue	NB	L	0.49	58.0	E	L	0.31	55.8	E
		T	0.63	26.8	C	T	0.42	21.7	C
	SB	L	0.22	74.4	E	L	0.21	50.3	D
		TR	0.47	22.9	C	TR	0.72	14.2	B
Shore Parkway Westbound Off-Ramp	NB	TR	0.52	22.9	C	TR	0.38	20.5	C
Overall Intersection[2]		-	-	**27.7**	**C**	-	-	**26.0**	**C**
Pennsylvania Avenue and Twin Pines Drive									
Twin Pines Drive	EB					LR	0.84	57.7	E
Pennsylvania Avenue	NB					L	0.49	28.7	C
						T	0.39	25.2	C
	SB					T	0.56	10.0	A
						R	0.30	7.6	A
Overall Intersection[2]						-	-	**23.0**	**C**
Pennsylvania Avenue and Vandalia Avenue									
Vandalia Avenue	EB	LTR	0.24	31.9	C	LTR	0.40	42.9	D
	WB	LTR	0.54	40.2	D	LTR	0.81	58.6	E
Pennsylvania Avenue	NB	L	0.32	46.7	D	L	0.45	46.9	D
		T	0.67	5.3	A	T	0.53	6.0	A
		R	0.14	3.1	A	R	0.20	5.3	A
	SB	L	0.20	32.7	C	L	0.53	41.4	D
		T	0.34	23.1	C	T	0.59	18.1	B
		R	0.07	17.1	B	R	0.06	12.8	B
Overall Intersection[2]		-	-	**15.5**	**B**	-	-	**20.1**	**C**

Table 19-7 Year 2030 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Pennsylvania Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.39	34.7	C	L	0.54	49.1	D
		T	0.40	37.5	D	T	0.94	61.0	E
		R	0.08	25.9	C	R	0.37	29.9	C
	WB	L	0.17	30.1	C	L	0.49	53.3	D
		T	0.43	38.3	D	T	0.71	44.1	D
		R	0.25	28.4	C	R	0.31	28.7	C
Pennsylvania Avenue	NB	L	0.62	31.4	C	L	0.78	39.0	D
		T	0.76	19.9	B	T	0.54	13.2	B
		R	0.15	8.6	A	R	0.35	13.0	B
	SB	L	0.50	42.0	D	L	0.74	28.1	C
		T	0.46	38.4	D	T	0.72	14.9	B
		R	0.29	38.3	D	R	0.52	14.3	B
Overall Intersection[2]		-	-	**30.4**	**C**	-	-	**32.1**	**C**
Pennsylvania Avenue and Cozine Avenue									
Cozine Avenue	EB	LTR	0.73	45.7	D	LTR	1.09	110.5	F
	WB	LTR	0.43	34.5	C	LTR	0.72	45.4	D
Pennsylvania Avenue	NB	L	0.30	8.6	A	L	0.36	17.1	B
		TR	0.68	13.7	B	TR	0.57	12.9	B
	SB	L	0.23	10.9	B	L	0.35	9.9	A
		TR	0.51	9.0	A	TR	0.74	16.8	B
Overall Intersection[2]		-	-	**17.7**	**B**	-	-	**33.2**	**C**
Pennsylvania Avenue and Wortman Avenue									
Wortman Avenue	EB					LTR	0.88	62.1	E
	WB					LTR	0.63	42.6	D
Pennsylvania Avenue	NB					L	0.57	60.8	E
						TR	0.64	27.2	C
	SB					L	0.55	73.4	E
						TR	0.75	13.5	B
Overall Intersection[2]						-	-	**29.4**	**C**

Table 19-7 Year 2030 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Pennsylvania Avenue and Stanley Avenue									
Stanley Avenue	EB	LTR	0.61	49.6	D	LTR	0.75	54.8	D
	WB	LTR	0.60	48.7	D	LTR	0.88	71.9	E
Pennsylvania Avenue	NB	L	0.63	76.1	E	L	0.57	57.5	E
		TR	0.64	5.0	A	TR	0.54	12.2	B
	SB	L	0.18	33.9	D	L	0.50	62.7	E
		TR	0.48	36.7	D	TR	0.68	13.7	B
Overall Intersection[2]		-	-	**26.1**	**C**	-	-	**25.0**	**C**
Pennsylvania Avenue and Linden Boulevard									
Linden Boulevard Main Line	EB	L	0.53	66.1	E	L	0.75	82.3	F
		T	0.44	34.9	C	T	1.02	70.2	E
	WB	L	0.66	78.0	E	L	0.87	101.6	F
		T	0.74	39.8	D	T	0.58	37.4	D
Pennsylvania Avenue	NB	L	0.74	27.1	C	L	1.12	137.9	F
		T	0.86	45.6	D	T	0.70	48.8	D
		R	0.18	39.4	D	R	0.33	41.8	D
	SB	L	0.55	49.4	D	L	0.72	55.2	E
		TR	0.63	39.0	D	TR	0.84	47.0	D
Linden Boulevard Eastbound Service Rd	EB	T	0.44	36.8	D	T	0.79	50.4	D
		R	0.30	26.4	C	R	0.54	31.5	C
Linden Boulevard Westbound Service Rd	WB	TR	0.74	49.2	D	T	1.09	106.5	F
						R	0.18	32.0	C
Overall Intersection[2]		-	-	**40.6**	**D**	-	-	**62.8**	**E**

Table 19-7 Year 2030 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Louisiana Avenue and Flatlands Avenue									
Flatlands Avenue	EB	L	0.03	18.6	B	L	0.33	34.1	C
		T	0.36	21.9	C	T	0.71	29.4	C
		R	0.28	21.4	C	R	0.36	22.9	C
	WB	L	0.18	19.6	B	L	0.45	38.8	D
		TR	0.42	22.7	C	TR	0.64	26.9	C
Louisiana Avenue	NB	L	0.49	37.8	D	L	0.92	80.2	F
		TR	0.21	36.1	D	TR	0.35	38.5	D
	SB	L	0.02	28.3	C	L	0.08	31.6	C
		TR	0.10	34.5	C	TR	0.65	47.7	D
Overall Intersection[2]		-	-	**25.0**	**C**	-	-	**35.2**	**D**
Flatlands Avenue and East 108th Street									
Flatlands Avenue	EB					L	0.20	17.8	B
						TR	0.68	21.3	C
	WB					L	0.85	56.8	E
						TR	0.55	18.2	B
East 108th Street	NB					LTR	0.87	68.2	E
	SB					LTR	0.88	70.5	E
Overall Intersection[2]						-	-	**32.8**	**C**
Flatlands Avenue and Rockaway Parkway									
Flatlands Avenue	EB					L	0.35	46.9	D
						TR	1.00	69.1	E
	WB					L	0.18	44.2	D
						TR	0.87	46.9	D
Rockaway Parkway	NB					L	0.51	29.8	C
						TR	0.44	26.4	C
	SB					LT	0.72	44.9	D
						R	0.37	35.4	D
Overall Intersection[2]						-	-	**50.6**	**D**

Table 19-7 Year 2030 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM Peak Hour V/C	AM Peak Hour Ctrl Delay[1]	AM Peak Hour LOS	PM Peak Hour Mvt	PM Peak Hour V/C	PM Peak Hour Ctrl Delay[1]	PM Peak Hour LOS
UNSIGNALIZED INTERSECTIONS									
Flatlands Avenue and Georgia Avenue									
Flatlands Avenue	EB					LTR	-	1.8	A
	WB					L	-	0.0	A
						TR	-	0.0	A
Overall Intersection[2]						-	-	**0.5**	**A**

[1] Control delay is measured in seconds per vehicle.
[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

With-Action with Construction Condition

Construction activities would generate 184 construction worker auto trips and six construction truck trips during the AM construction peak hour, and 184 construction worker auto trips and two construction truck trips during the PM construction peak hour. Construction trucks would be required to use NYC DOT-designated truck routes to get to the project area and would then use local streets to access the construction site. In addition to construction-related trips, trips generated by the eight buildings expected to be completed as shown in **Table 19-5** were included in the With-Action with Construction condition analysis.

As indicated in **Table 19-8** and **Table 19-9** two of the seven analysis intersections would be significantly impacted during the AM construction peak hour, and nine of the twelve analysis intersections would be significantly impacted during the PM construction peak hour. The following intersections would be significantly impacted:

- The intersection of Pennsylvania Avenue and Flatlands Avenue would be significantly impacted during the AM and PM construction peak hours. Impacts during the AM construction peak hour could be fully mitigated with signal timing modifications but could only be partially mitigated during the PM construction peak hour.
- Significant impacts at the intersections of Pennsylvania Avenue with Vandalia Avenue, Cozine Avenue, and Wortman Avenue would be impacted during PM construction peak hour and could be fully mitigated with signal timing modifications.
- The intersection of Pennsylvania Avenue and Linden Boulevard would be significantly impacted during the AM and PM construction peak hours. Impacts during the AM construction peak hour could be fully mitigated with signal timing modifications but could not be mitigated during the PM construction peak hour.
- The intersection of Flatlands Avenue and East 108th Street would be significantly impacted during the PM construction peak hour and could be partially mitigated with parking regulation changes to gain an additional travel lane along the northbound East 108th Street approach.

› Significant impacts at the intersections of Pennsylvania Avenue with Stanley Avenue, and Flatlands Avenue with Louisiana Avenue and with Rockaway Parkway during the PM construction peak hour could not be fully mitigated.

Implementation of traffic improvements measures are subjected to NYC DOT's review and approval. Implementation of the traffic signal at the intersection of Flatlands Avenue and Georgia Avenue would be needed in the year 2026 after Buildings 1 and 2, the 500-space above ground parking garage, and internal roadway network would be expected to be completed. Implementation of the parking regulation changes to gain an additional travel lane along the northbound East 108th Street approach at Flatlands Avenue is anticipated to be needed at the end of year 2026 after Buildings 3 and 4 are completed. Implementation of signal timing improvements would be determined by NYC DOT based on future field conditions.

Detailed descriptions of the Construction traffic levels of service and traffic mitigation measures are presented in **Table 19-8** and **Table 19-9**.

Table 19-8 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – AM Construction Peak Hour

Intersection & Approach		2030 No-Action				2030 With-Action				2030 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
SIGNALIZED INTERSECTIONS														
Pennsylvania Avenue and Seaview Avenue														
Seaview Avenue	EB	LT	0.19	35.4	D	LT	0.19	36.5	D	LT	0.19	36.5	D	-Mitigation not required.
		R	0.52	41.8	D	R	0.52	43.0	D	R	0.52	43.0	D	
	WB	LTR	0.45	35.1	D	LTR	0.45	35.1	D	LTR	0.45	35.1	D	
Pennsylvania Avenue	NB	L	0.49	58.0	E	L	0.49	58.0	E	L	0.49	58.0	E	
		T	0.63	26.8	C	T	0.63	26.8	C	T	0.63	26.8	C	
	SB	L	0.22	74.4	E	L	0.22	69.3	E	L	0.22	69.3	E	
		TR	0.47	22.9	C	TR	0.48	18.5	B	TR	0.48	18.5	B	
Shore Parkway Westbound Off-Ramp	NB	TR	0.52	22.9	C	TR	0.58	24.2	C	TR	0.58	24.2	C	
Overall Intersection[2]		-	-	**27.7**	**C**	-	-	**26.8**	**C**	-	-	**26.8**	**C**	
Pennsylvania Avenue and Vandalia Avenue														
Vandalia Avenue	EB	LTR	0.24	31.9	C	LTR	0.24	33.6	C	LTR	0.24	33.6	C	-Mitigation not required
	WB	LTR	0.54	40.2	D	LTR	0.54	40.2	D	LTR	0.54	40.2	D	
Pennsylvania Avenue	NB	L	0.32	46.7	D	L	0.37	47.8	D	L	0.37	47.8	D	
		T	0.67	5.3	A	T	0.72	5.9	A	T	0.72	5.9	A	
		R	0.14	3.1	A	R	0.14	2.9	A	R	0.14	2.9	A	
	SB	L	0.20	32.7	C	L	0.20	54.5	D	L	0.20	54.5	D	
		T	0.34	23.1	C	T	0.36	18.5	B	T	0.36	18.5	B	
		R	0.07	17.1	B	R	0.07	15.4	B	R	0.07	15.4	B	
Overall Intersection[2]		-	-	**15.5**	**B**	-	-	**14.7**	**B**	-	-	**14.7**	**B**	
Pennsylvania Avenue and Flatlands Avenue														

Table 19-8 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – AM Construction Peak Hour

		2030 No-Action				2030 With-Action				2030 Mitigation				Mitigation Measures
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatlands Avenue	EB	L	0.39	34.7	C	L	0.48	37.6	D	L	0.50	40.1	D	-Modify signal timing: Shift 2 sec of green time from EB/WB phase to NBL/SBL phase. [EB/WB green time shifts from 32 sec to 30 sec. NBL/SBL green time shifts from 11 sec to 13 sec.]
		T	0.40	37.5	D	T	0.40	37.6	D	T	0.43	39.5	D	
		R	0.08	25.9	C	R	0.13	26.5	C	R	0.13	26.5	C	
	WB	L	0.17	30.1	C	L	0.21	31.1	C	L	0.23	32.9	C	
		T	0.43	38.3	D	T	0.43	38.3	D	T	0.46	40.3	D	
		R	0.25	28.4	C	R	0.25	28.4	C	R	0.25	28.4	C	
Pennsylvania Avenue	NB	L	0.62	31.4	C	L	0.91	65.9	E	L	0.84	54.4	D	
		T	0.76	19.9	B	T	0.76	36.9	D	T	0.76	36.9	D	
		R	0.15	8.6	A	R	0.15	25.6	C	R	0.15	25.6	C	
	SB	L	0.55	42.0	D	L	0.50	43.0	D	L	0.45	36.9	D	
		T	0.46	38.4	D	T	0.52	39.7	D	T	0.52	39.6	D	
		R	0.29	38.3	D	R	0.30	38.3	D	R	0.30	38.2	D	
Overall Intersection[2]		-	-	**30.4**	**C**	-	-	**39.8**	**D**	-	-	**39.0**	**D**	
Pennsylvania Avenue and Cozine Avenue														
Cozine Avenue	EB	LTR	0.72	45.7	D	LTR	0.72	46.0	D	LTR	0.72	46.0	D	-Mitigation not required [Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	LTR	0.42	34.5	C	LTR	0.42	34.5	C	LTR	0.42	34.5	C	
Pennsylvania Avenue	NB	L	0.30	8.6	A	L	0.33	10.2	B	L	0.33	10.1	B	
		TR	0.66	13.7	B	TR	0.67	15.0	B	TR	0.67	15.1	B	
	SB	L	0.21	10.9	B	L	0.23	13.0	B	L	0.23	13.0	B	
		TR	0.50	9.0	A	TR	0.55	10.6	B	TR	0.55	10.6	B	
Overall Intersection[2]		-	-	**17.7**	**B**	-	-	**18.6**	**B**	-	-	**18.7**	**B**	

Table 19-8 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – AM Construction Peak Hour

Intersection & Approach		2030 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Pennsylvania Avenue and Stanley Avenue														
Stanley Avenue	EB	LTR	0.61	49.6	D	LTR	0.62	50.2	D	LTR	0.62	50.2	D	-Mitigation not required [Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	LTR	0.60	48.7	D	LTR	0.60	48.7	D	LTR	0.60	48.7	D	
Pennsylvania Avenue	NB	L	0.63	76.1	E	L	0.63	77.1	E	L	0.63	77.1	E	
		TR	0.64	5.0	A	TR	0.66	5.2	A	TR	0.66	5.2	A	
	SB	L	0.18	33.9	C	L	0.18	34.1	C	L	0.18	34.2	D	
		TR	0.48	36.7	D	TR	0.53	37.6	D	TR	0.53	37.3	D	
Overall Intersection[2]		-	-	**26.1**	**C**	-	-	**26.7**	**C**	-	-	**26.6**	**C**	
Pennsylvania Avenue and Linden Boulevard														
Linden Boulevard Main Line	EB	L	0.53	66.1	E	L	0.53	66.1	E	L	0.48	62.1	E	-Modify signal timing: Shift 1 sec of green time from EB/WB phase to EBL/WBL phase. [EB/WB green time shifts from 38 sec to 37 sec. EBL/WBL green time shifts from 12 sec to 13 sec.]
		T	0.44	34.9	C	T	0.44	34.9	C	T	0.45	35.8	D	
	WB	L	0.66	78.0	E	L	0.71	83.3	F	L	0.65	74.6	E	
		T	0.74	39.8	D	T	0.74	39.8	D	T	0.76	41.2	D	
Pennsylvania Avenue	NB	L	0.74	27.1	C	L	0.80	33.3	C	L	0.80	33.3	C	
		T	0.86	45.6	D	T	0.89	50.3	D	T	0.89	50.5	D	
		R	0.18	39.4	D	R	0.20	41.9	D	R	0.20	41.9	D	
	SB	L	0.55	49.4	D	L	0.56	50.6	D	L	0.56	50.6	D	
		TR	0.63	39.0	D	TR	0.71	41.4	D	TR	0.71	41.4	D	
Linden Boulevard Eastbound Service Rd	EB	T	0.44	36.8	D	T	0.44	36.8	D	T	0.45	37.9	D	
		R	0.30	26.4	C	R	0.30	26.4	C	R	0.30	27.2	C	
Linden Boulevard Westbound Service Rd	WB	TR	0.74	49.2	D	TR	0.74	49.2	D	TR	0.76	51.6	D	
Overall Intersection[2]		-	-	**40.6**	**D**	-	-	**42.3**	**D**	-	-	**42.8**	**D**	

Table 19-8 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – AM Construction Peak Hour

Intersection & Approach		2030 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Louisiana Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.03	18.6	B	L	0.03	18.9	B	L	0.03	18.9	B	-Mitigation not required
		T	0.36	21.9	C	T	0.38	22.2	C	T	0.38	22.2	C	
		R	0.28	21.4	C	R	0.28	21.5	C	R	0.28	21.5	C	
	WB	L	0.18	19.6	B	L	0.19	20.3	C	L	0.19	20.3	C	
		TR	0.42	22.7	C	TR	0.43	23.0	C	TR	0.43	23.0	C	
Louisiana Avenue	NB	L	0.49	37.8	D	L	0.50	37.8	D	L	0.50	37.8	D	
		TR	0.21	36.1	D	TR	0.24	36.7	D	TR	0.24	36.7	D	
	SB	L	0.02	28.3	C	L	0.18	31.1	C	L	0.18	31.1	C	
		TR	0.10	34.5	C	TR	0.10	34.5	C	TR	0.10	34.5	C	
Overall Intersection[2]		-	-	**25.0**	**C**	-	-	**25.5**	**C**	-	-	**25.5**	**C**	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Denotes a significantly impacted movement

Table 19-9 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – PM Construction Peak Hour

Intersection & Approach		2030 No-Action				2030 With-Action				2030 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
SIGNALIZED INTERSECTIONS														
Pennsylvania Avenue and Seaview Avenue														
Seaview Avenue	EB	LT	0.23	36.2	D	LT	0.23	34.7	C	LT	0.23	34.6	C	-Mitigation not required
		R	0.87	60.4	E	R	0.87	58.0	E	R	0.87	57.8	E	[Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	LTR	0.52	36.8	D	LTR	0.52	36.8	D	LTR	0.52	36.8	D	
Pennsylvania Avenue	NB	L	0.31	55.8	E	L	0.31	55.8	E	L	0.31	55.8	E	
		T	0.42	21.7	C	T	0.42	21.7	C	T	0.42	21.7	C	
	SB	L	0.21	50.3	D	L	0.21	50.7	D	L	0.21	47.6	D	
		TR	0.72	14.2	B	TR	0.80	18.6	B	TR	0.80	16.0	B	
Shore Parkway Westbound Off-Ramp	NB	TR	0.38	20.5	C	TR	0.43	21.1	C	TR	0.43	21.1	C	
Overall Intersection[2]		-	-	**26.0**	**C**	-	-	**27.0**	**C**	-	-	**25.9**	**C**	
Pennsylvania Avenue and Twin Pines Drive														
Twin Pines Drive	EB	LR	0.84	57.7	E	LR	0.84	57.7	E	LR	0.84	57.7	E	- Mitigation not required
Pennsylvania Avenue	NB	L	0.49	28.7	C	L	0.64	35.6	D	L	0.64	35.7	D	[Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	0.39	25.2	C	T	0.41	22.0	C	T	0.41	22.0	C	
	SB	T	0.56	10.0	A	T	0.63	8.4	A	T	0.63	7.0	A	
		R	0.30	7.6	A	R	0.30	6.3	A	R	0.30	5.4	A	
Overall Intersection[2]		-	-	**23.0**	**C**	-	-	**21.2**	**C**	-	-	**20.6**	**C**	

Table 19-9 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – PM Construction Peak Hour

Intersection & Approach		2030 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Pennsylvania Avenue and Vandalia Avenue														
Vandalia Avenue	EB	LTR	0.40	42.9	D	LTR	0.46	43.4	D	LTR	0.41	36.5	D	-Modify signal timing: Shift 4 sec of green time from NB/SB phase to NBL/SBL phase. Shift 3 sec of green time from NB/SB to EB/WB. [NB/SB green time shifts from 60 sec to 53 sec. NBL/SBL green time shifts from 9 sec to 13 sec. EB/WB green time shifts from 36 sec to 39 sec.].
	WB	LTR	0.81	58.6	E	LTR	0.93	80.7	F	LTR	0.84	61.7	E	
Pennsylvania Avenue	NB	L	0.45	46.9	D	L	0.82	77.1	E	L	0.64	53.9	D	
		T	0.53	6.0	A	T	0.54	7.1	A	T	0.59	9.1	A	
		R	0.20	5.3	A	R	0.23	6.5	A	R	0.27	8.1	A	
	SB	L	0.53	41.4	D	L	0.48	56.3	E	L	0.38	52.6	D	
		T	0.59	18.1	B	T	0.67	24.8	C	T	0.74	30.1	C	
		R	0.06	12.8	B	R	0.14	17.0	B	R	0.17	20.5	C	
Overall Intersection[2]		-	-	**20.1**	**C**	-	-	**27.2**	**C**	-	-	**27.0**	**C**	
Pennsylvania Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.54	49.1	D	L	0.98	95.4	F	L	0.91	76.9	E	**-Partially mitigated.** -Modify signal timing: Shift 2 sec of green time from NB/SB phase to NBL/SBL phase. Shift 1 sec of green time from NB/SB phase to EB/WB phase. Shift 1 sec of green time from NB/SB phase to EBL/WBL phase. [NB/SB green time shifts from 45 sec to 41 sec. NBL/SBL green time shifts from 11 sec to 13 sec. EB/WB green time shifts from 33 sec to 34 sec. EBL/WBL green time shifts from 11 sec to 12 sec.]
		T	0.94	61.0	E	T	0.98	69.5	E	T	0.95	62.6	E	
		R	0.37	29.9	C	R	0.79	47.7	D	R	0.74	41.8	D	
	WB	L	0.49	53.3	D	L	0.64	60.5	E	L	0.60	56.4	E	
		T	0.71	44.1	D	T	0.71	44.1	D	T	0.69	42.7	D	
		R	0.31	28.7	C	R	0.33	29.0	C	R	0.31	26.7	C	
Pennsylvania Avenue	NB	L	0.78	39.0	D	L	0.86	73.8	E	L	0.85	73.6	E	
		T	0.54	13.2	B	T	0.54	31.1	C	T	0.60	35.0	C	
		R	0.35	13.0	B	R	0.38	30.0	C	R	0.43	34.1	C	
	SB	L	0.74	28.1	C	L	0.75	26.0	C	L	0.75	26.8	C	
		T	0.72	14.9	B	T	0.79	17.5	B	T	0.87	24.6	C	
		R	0.52	14.3	B	R	0.59	16.8	B	R	0.66	23.3	C	
Overall Intersection[2]		-	-	**32.1**	**C**	-	-	**42.9**	**D**	-	-	**42.4**	**D**	

Table 19-9 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – PM Construction Peak Hour

Intersection & Approach		2030 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Pennsylvania Avenue and Cozine Avenue														
Cozine Avenue	EB	LTR	1.09	110.5	F	LTR	1.14	126.9	F	LTR	1.09	111.0	F	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 64 sec to 63 sec. EB/WB green time shifts from 39 sec to 40 sec.]
	WB	LTR	0.72	45.4	D	LTR	0.75	47.2	D	LTR	0.73	44.8	D	
Pennsylvania Avenue	NB	L	0.36	17.1	B	L	0.43	17.9	B	L	0.45	18.9	B	
		TR	0.57	12.9	B	TR	0.64	11.4	B	TR	0.65	11.2	B	
	SB	L	0.35	9.9	A	L	0.42	11.0	B	L	0.43	11.5	B	
		TR	0.74	16.8	B	TR	0.79	16.6	B	TR	0.80	16.9	B	
Overall Intersection[2]		-	-	**33.2**	**C**	-	-	**34.3**	**C**	-	-	**31.8**	**C**	
Pennsylvania Avenue and Wortman Avenue														
Wortman Avenue	EB	LTR	0.88	62.1	E	LTR	0.92	69.1	E	LTR	0.89	62.9	E	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 56 sec to 55 sec. EB/WB green time shifts from 37 sec to 38 sec.]
	WB	LTR	0.63	42.6	D	LTR	0.66	44.5	D	LTR	0.64	42.5	D	
Pennsylvania Avenue	NB	L	0.57	60.8	E	L	0.57	63.1	E	L	0.57	62.5	E	
		TR	0.64	27.2	C	TR	0.72	25.0	C	TR	0.73	27.1	C	
	SB	L	0.55	73.4	E	L	0.55	74.8	E	L	0.55	74.4	E	
		TR	0.75	13.5	B	TR	0.80	15.1	B	TR	0.82	16.4	B	
Overall Intersection[2]		-	-	**29.4**	**C**	-	-	**29.9**	**C**	-	-	**30.2**	**C**	

Table 19-9 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – PM Construction Peak Hour

Intersection & Approach		2030 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Pennsylvania Avenue and Stanley Avenue														
Stanley Avenue	EB	LTR	0.75	54.8	D	LTR	0.84	64.2	E	LTR	0.84	64.2	E	**-Unmitigable** [Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	LTR	0.88	71.9	E	LTR	0.92	77.6	E	LTR	0.92	77.6	E	
Pennsylvania Avenue	NB	L	0.57	57.5	E	L	0.57	56.8	E	L	0.57	57.1	E	
		TR	0.54	12.2	B	TR	0.61	14.4	B	TR	0.61	14.1	B	
	SB	L	0.50	62.7	E	L	0.50	64.2	E	L	0.50	64.2	E	
		TR	0.68	13.7	B	TR	0.73	13.3	B	TR	0.73	13.3	B	
Overall Intersection[2]		-	-	**25.0**	**C**	-	-	**26.5**	**C**	-	-	**26.4**	**C**	
Pennsylvania Avenue and Linden Boulevard														
Linden Boulevard Main Line	EB	L	0.75	82.3	F	L	0.75	82.3	F	L	0.75	82.3	F	**-Unmitigable** [Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	1.02	70.2	E	T	1.02	70.2	E	T	1.02	70.2	E	
	WB	L	0.87	101.6	F	L	0.88	102.9	F	L	0.88	102.9	F	
		T	0.58	37.4	D	T	0.58	37.4	D	T	0.58	37.4	D	
Pennsylvania Avenue	NB	L	1.12	137.9	F	L	1.23	182.4	F	L	1.23	182.3	F	
		T	0.70	48.8	D	T	0.83	56.3	E	T	0.83	55.6	E	
		R	0.33	41.8	D	R	0.33	42.5	D	R	0.33	42.0	D	
	SB	L	0.72	55.2	E	L	0.83	71.0	E	L	0.83	71.0	E	
		TR	0.84	47.0	D	TR	0.91	54.3	D	TR	0.91	54.3	D	
Linden Boulevard Eastbound Service Rd	EB	T	0.79	50.4	D	T	0.79	50.4	D	T	0.79	50.4	D	
		R	0.54	31.5	C	R	0.54	31.5	C	R	0.54	31.5	C	
Linden Boulevard Westbound Service Rd	WB	T	1.09	106.5	F	T	1.09	106.5	F	T	1.09	106.5	F	
		R	0.18	32.0	C	R	0.18	32.0	C	R	0.18	32.0	C	
Overall Intersection[2]		-	-	**62.8**	**E**	-	-	**66.9**	**E**	-	-	**66.8**	**E**	

Table 19-9 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – PM Construction Peak Hour

Intersection & Approach		2030 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Louisiana Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.33	34.1	C	L	0.39	39.8	D	L	0.39	39.8	D	**-Unmitigable**
		T	0.71	29.4	C	T	0.78	32.0	C	T	0.78	32.0	C	
		R	0.36	22.9	C	R	0.89	68.5	E	R	0.89	68.5	E	
	WB	L	0.45	38.8	D	L	0.52	46.0	D	L	0.52	46.0	D	
		TR	0.64	26.9	C	TR	0.71	29.1	C	TR	0.71	29.1	C	
Louisiana Avenue	NB	L	0.92	80.2	F	L	1.00	97.9	F	L	1.00	97.9	F	
		TR	0.35	38.5	D	TR	0.72	52.6	D	TR	0.72	52.6	D	
	SB	L	0.08	31.6	C	L	0.34	41.8	D	L	0.34	41.8	D	
		TR	0.65	47.7	D	TR	0.67	49.3	D	TR	0.67	49.3	D	
Overall Intersection[2]		-	-	**35.2**	**D**	-	-	**42.1**	**D**	-	-	**42.1**	**D**	
Flatlands Avenue and East 108th Street														
Flatlands Avenue	EB	L	0.20	17.8	B	L	0.22	20.1	C	L	0.22	20.1	C	**-Partially mitigated**
		TR	0.68	21.3	C	TR	0.74	23.0	C	TR	0.74	23.0	C	-Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane.
	WB	L	0.85	56.8	E	L	0.98	84.5	F	L	0.98	84.5	F	
		TR	0.55	18.2	B	TR	0.61	19.4	B	TR	0.61	19.4	B	
East 108th Street	NB	LTR	0.87	68.2	E	LTR	0.90	73.0	E	LT	0.33	40.1	D	-Restripe the NB approach from one 20-foot-wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane.
		-	-	-	-	-	-	-	-	R	0.65	50.9	D	
	SB	LTR	0.88	70.5	E	LTR	0.91	77.3	E	LTR	0.71	51.9	D	
Overall Intersection[2]		-	-	**32.8**	**C**	-	-	**36.8**	**D**	-	-	**31.9**	**C**	

Table 19-9 Year 2030 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – PM Construction Peak Hour

Intersection & Approach		2030 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2030 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Flatlands Avenue and Rockaway Parkway														
Flatlands Avenue	EB	L	0.35	46.9	D	L	0.37	49.4	D	L	0.37	49.4	D	- **Unmitigable**
		TR	1.00	69.1	E	TR	1.05	81.1	F	TR	1.05	81.1	F	
	WB	L	0.18	44.2	D	L	0.18	45.7	D	L	0.18	45.7	D	
		TR	0.87	46.9	D	TR	0.95	55.6	E	TR	0.95	55.6	E	
Rockaway Parkway	NB	L	0.51	29.8	C	L	0.55	31.7	C	L	0.55	31.7	C	
		TR	0.44	26.4	C	TR	0.44	26.4	C	TR	0.44	26.4	C	
	SB	LT	0.72	44.9	D	LT	0.83	54.5	D	LT	0.83	54.5	D	
		R	0.37	35.4	D	R	0.37	35.4	D	R	0.37	35.4	D	
Overall Intersection[2]		-	-	**50.6**	**D**	-	-	**59.0**	**E**	-	-	**59.0**	**E**	
UNSIGNALIZED INTERSECTIONS														
Flatlands Avenue and Georgia Avenue						(SIGNALIZED)				(SIGNALIZED)				
Flatlands Avenue	EB	LTR	-	1.8	A	L	0.19	12.5	B	L	0.19	12.5	B	-Mitigation not required
		-	-	-	-	TR	0.76	20.1	C	TR	0.76	20.1	C	
	WB	L	-	0.0	A	L	0.01	9.3	A	L	0.01	9.3	A	
		TR	-	0.0	A	TR	0.55	14.9	B	TR	0.55	14.9	B	
Georgia Access	NB	-	-	-	-	LTR	0.78	50.8	D	LTR	0.78	50.8	D	
Overall Intersection[2]		-	-	**0.5**	**A**	-	-	**22.0**	**C**	-	-	**22.0**	**C**	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Denotes a significantly impacted movement

Deliveries

Construction trucks would be required to use NYCDOT-designated truck routes, including Pennsylvania Avenue and Flatlands Avenue and service the construction site at the designated loading zones. The location of the loading zones is dependent on location of the buildings under construction, and loading could potentially occur within the site or along the sections of the three street frontages closest to where construction activities would be happening.

Curb Lane Closures and Staging

During construction, parking lane closures may be required. In the case where a travel lane closure is necessary, the closure would not be in effect for the entire block length. Lane closures would be delineated such that there would be enough space for a travel lane at the intersection approach to maintain the roadway capacity. It is anticipated that sidewalk closures may be required to the extent practicable. Short-term roadway closures and temporary sidewalk narrowing could occur along the sides at Development Site during specific periods of construction. Sidewalk and lane closures will be finalized as the MPT plans are developed and reviewed with NYC DOT. All lane and sidewalk closures during construction will require DOT's OCMC's review and approval.

Parking

Construction workers would generate an estimated maximum daily parking demand for 285 spaces during the Q4 2025 peak quarter. This parking demand could be accommodated by the approximately 385 on-site surface spaces used by the church (these spaces are used by the CCC Tuesday evenings and Sundays during the morning/midday period and do not overlap with construction activities) and would be mostly vacant during the construction work shift. The on-site surface spaces will be replaced with a 500-space above ground parking garage after it is completed in the third quarter of 2026; construction workers would park in this garage after it is completed. Therefore, construction for the Proposed Project would not result in a parking shortfall.

Transit and Pedestrians

Based on census data for the construction industry, it is anticipated that approximately 35 percent of construction workers would commute to the Development Site by public transportation. During the fourth quarter of 2025 when construction worker volumes would be highest, construction would be expected to generate 442 daily construction workers (154 workers would be expected to use public transportation). It is expected that the majority of construction workers (80 percent) would arrive during the AM construction peak hour and depart during the PM construction peak hour, and they would generate approximately 123 construction worker trips by public transportation during the AM and PM construction peak hours. The worker pedestrian trips would be below the 200 pedestrian CEQR thresholds for detailed analysis, therefore construction activities are not expected to result in transit or pedestrian impacts.

Air Quality

Introduction

Construction impacts on air quality levels may occur because of particulate matter (fugitive dust) created by excavation, demolition, transfer of debris into trucks, emissions from on-site diesel equipment, and emissions from increased truck traffic to and from the construction site on local roadways. As discussed in the *2021 CEQR Technical Manual,* the determination of whether it is sufficient to conduct a qualitative analysis of these emissions or whether a quantitative analysis is required should take into account factors such as duration of construction activities, location of the project site in relation to existing residential uses and residential land uses created by the project or other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate emission control measures.

The most intense construction activities in terms of emissions are typically from demolition, excavation, and foundation stages, since it is during these stages that the largest number of large, non-road diesel engines are employed, which combined with the fugitive dust from debris moving operations result in the highest levels of air emissions. The other stages of construction, including superstructure, exterior façades, interior finishes and site work, typically result in lower air emissions since they require fewer pieces of heavy-duty diesel equipment. Equipment used in the latter stages of construction generally involves use of small engines, with use of electric tools dispersed vertically throughout the building, resulting in very low concentration increments in adjacent areas. Additionally, the latter stages of construction do not involve soil disturbance activities and therefore result in significantly lower fugitive dust emissions. Construction activities associated with interior finishes are shielded from nearby sensitive receptors by the proposed structures themselves.

For the Proposed Project, the overall construction period would exceed two years. Given that multiple buildings would be constructed in each phase and the construction would occur within close proximity to sensitive receptors, a detailed quantitative analysis of construction air quality impacts was undertaken.

Air Quality Analysis Methodologies

On-Site and Off-Site Construction Impacts

Based on a conceptual construction schedule developed for each phase of the project, the peak cumulative short-term and annual $PM_{2.5}$ emissions were evaluated for the full construction process (foundations, superstructure, exterior construction through interior fit-out and site work) for each phase of construction. The phase with the highest $PM_{2.5}$ emissions was selected as the period with the highest potential $PM_{2.5}$ effects. This analysis, called the intensity assessment, was used to identify the peak construction phase and year for the dispersion impact modeling analysis.

A dispersion analysis—which considers the PM_{10}, $PM_{2.5}$, NO_x, and CO emissions from on-site sources (construction equipment, fugitive dust and trucks idling, loading and unloading and entering the site)—was performed to determine potential air quality effects during the peak emission construction phase.

The effects of the trucks approaching and departing the site on public or internal roadways for each construction phase were also included in the emission calculations for the emission intensity analysis. For the dispersion analysis, roadway access for the selected phase was included as line sources, representing the approach and departure from the site. Additionally, impacts of construction traffic emissions at intersections and streets elsewhere in the City were considered separately using *2021 CEQR Technical Manual* screening methodologies (see the **Off-Site Construction Impacts** subsection).

The following sections provide additional details relevant to the construction air quality analysis methodology. For a review of the applicable regulations, standards and criteria, and benchmarks for stationary and mobile source air quality analyses, refer to **Chapter 10, Air Quality**.

The analysis was performed following EPA and *2021 CEQR Technical Manual* procedures and analytical tools, as well as New York City Department of City Planning (DCP) recommendations to determine source emission rates. The estimated emission rates were then used as an input to the air quality dispersion model to determine potential impacts.

Emission Estimation Process

The construction analyses used an emission estimation method and a modeling approach previously developed for evaluating air quality impacts of construction projects in New York City in consultation with DCP. Because the level and types of construction activities would vary from month to month, the approach includes a determination of the worst-case emission period based on an estimated monthly construction work schedule, the number of on-site construction equipment types and rated horsepower of each unit, quantities of materials to be excavated, and number of trucks arriving, working, and leaving the site.

The worst-case short-term emissions (e.g., maximum daily emissions) and the maximum annual emissions (based on a 12-month rolling average) were determined based on the construction schedule activities and equipment projected to be required for the construction period. This information was provided by the overall project's construction manager. The assessment considered several main phases of construction: excavation/foundation, superstructure, exterior construction, interior fit-out, elevators and site work.

The specific construction information used to calculate emissions generated from the construction process included, but is not limited to, the following:

- The number of units and fuel-type of construction equipment to be used;
- Rated horsepower and load factors for each piece of equipment;
- Utilization rates for equipment;
- Hours of operation on-site; and
- Average distance to approach the site, on-site, and idling time by trucks.

Emissions Reduction Measures Considered

As discussed above, construction activities could affect air quality because of engine emissions from on-site construction equipment and dust-generating activities. In general, much of the heavy equipment used in construction has diesel-powered engines, which produce relatively high levels of nitrogen oxides and particulate matter. Gasoline engines

produce relatively high levels of carbon monoxide. Construction activities also generate fugitive dust emissions. As a result, the air pollutants analyzed for construction activities include nitrogen dioxide (NO_2), particulate matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}), particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), and carbon monoxide (CO).

Since ultra-low-sulfur diesel (ULSD) will be used for all diesel engines related to construction activities due to federal and state mandates, sulfur dioxides (SO_2) emitted from those construction activities would be negligible, and an analysis of SO_2 emissions is not warranted. For more details on a description of air pollutants and standards, see **Chapter 10, Air Quality**.

As stated above, construction activity in general, and large-scale construction in particular, has the potential to adversely affect air quality as a result of diesel emissions. The main component of diesel exhaust that has been identified as having an adverse effect on human health is fine particulates. To ensure that the construction of the Proposed Project results in the lowest feasible diesel particulate matter (DPM) emissions, a series of emissions reduction strategies required by DEP and state mandates would be implemented.

The evaluation performed in this section therefore assumes a combination of emission reduction measures that are mandated by law and are common practice in large-scale NYC construction projects, and follow the requirements included in NYC Law 77 and the NYC Air Pollution Control Code. These include the following:

- Fugitive Dust Control Plans. In compliance with the NYC Air Pollution Control Code provisions regarding control of fugitive dust, contractors would be required to ensure that all trucks carrying loose material use water as a dust suppression measure, that trucks hauling loose material be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the site, that streets adjacent to the site be cleaned as frequently as needed by the construction contractor, and that water sprays be used for transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air. These measures would be expected to reduce dust generation by more than 50 percent.
- Clean Fuel. Ultra-low sulfur diesel (ULSD) would be used exclusively for diesel engines related to construction activities for the Proposed Project. This is a federal requirement since 2010 that enables the use of tailpipe reduction technologies that reduce diesel particulate matter and SO_2 emissions.
- Diesel Equipment Reduction. Hoists and small equipment, such as lifts, compressors, welders, and pumps would use electric engines that operate on grid power instead of diesel power engines, to the extent practical. This is a common practice that has been achieving wider use as technology improves.
- Restrictions on Vehicle Idling. This would be required in compliance with local law to restrict unnecessary idling. On-site vehicle idle time would be restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.
- Given the construction timeframe for the Proposed Project (2023-2030), equipment meeting Tier 4 standards for diesel engines (model years 2011/12 and beyond) would be

expected to be in wide use and comprise the majority of contractors' fleets. If contractors choose to use older diesel equipment, the use of diesel particulate filters (DPF) in Tier 3 emission standard for diesel engines (model years 2006-2011 for engine sizes between 100 and 600 hp)[3] would be implemented. Tier 3 with DPF achieves the same $PM_{2.5}$ emission reductions as a newer Tier 4 emission standard for diesel engines. The combination of Tier 4 and Tier 3 engines with DPF would achieve DPM reductions of approximately 90 percent when compared to older uncontrolled engines.

› Source Location and Shielding. To reduce concentration increments at sensitive receptors, large emissions sources and activities such as concrete trucks, generators, and large compressors can be located away from the sensitive receptors to the extent practical.

Overall, these emission control measures would be expected to significantly reduce DPM emissions. In addition, as per *CEQR Technical Manual* recommendations, all necessary measures would be implemented to ensure that the NYC Air Pollution Control Code provisions regulating construction-related dust emissions are followed.

Engine Exhaust Emissions Estimation Process

Emission factors for NO_x, PM_{10}, $PM_{2.5}$, and CO from the combustion of fuel for on-site construction equipment were developed using the EPA MOVES3-NONROAD Emission Model.

The MOVES3-NONROAD model can generate unitary emission factors, in grams per horsepower/hour (g-hp/hr) by engine size (hp), equipment type, engine technology type, fuel type, and year of analysis. The model estimates emissions as the average emission factor by year for the county fleet sorted by the above-mentioned parameters. As an example, if New York County and the year 2022 were selected for diesel engines, the output generates emissions (g-hp/hr) for each type of equipment from 3 hp to 3,000 hp rating for each one of the model years of the County fleet going back up to 40 years. The model calculates how many pieces of equipment for each engine technology group and model year are present in the County fleet and produces the yearly average emission factor. Because the model years of the actual construction equipment to be used for the Proposed Development are unknown, emission factors for the different equipment types were estimated by using the weighted average (emission factor and activity level) of the model years 2008 to 2023 to account for the use of tier 4 engines (for model years 2012 to 2023) and tier 3 engines retrofitted with DPF to achieve a 90-percent removal rate of DPM (for model years 2008 to 2011).

Emission rates from combustion of fuel for on-site dump trucks, pickup trucks, and other heavy trucks, such as tractor-trailers, were developed using the EPA MOVES3 Emission Model. NYC restrictions placed on idling times were applied for heavy trucks, with the exception of concrete trucks where one hour of idling was assumed. Short-term and annual emission rates were adjusted from the peak-hour emissions by applying usage factors for each equipment unit.

[3] See Table 2-1 of the USEPA's Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b document

Fugitive Sources Emission Estimation Process

The western portion of Development Site surrounding the church is currently a paved parking lot. As such, construction vehicles will travel on paved roads except when going down into the foundation pit. Road dust (PM_{10} and $PM_{2.5}$) emissions from trucks moving (approach and departure from the construction site) were calculated using equations from EPA's AP-42, Section 13.2.1 for paved roads. For dump trucks traveling down the ramps into foundation areas, unpaved road dust emissions were calculated using EPA's AP-42 Section 13.2.2 equations. It was assumed that dump trucks travel part of the way on a paved surface and part on an unpaved surface. Average vehicle weights (i.e., unloaded going in and loaded going out) were used in the analysis and reasonably conservative travel distances was estimated for on-site travel on paved and unpaved roads. Fugitive emissions from removal of the excavated material were estimated using EPA's AP-42 Section 13.2.4 equations. Dust control measures (described above) would provide at least a 50-percent reduction in PM_{10} and $PM_{2.5}$ emissions.

Construction Activity Emissions Intensity Assessment

To determine which construction phase constitutes the worst-case period for the pollutants of concern, construction-related emissions were calculated throughout the duration of construction on a monthly basis using peak daily emissions for short term $PM_{2.5}$, and the rolling average for annual $PM_{2.5}$.

To determine the worst short-term emission and the worst annual emission, an emission intensity assessment (emission profiles) was conducted for each phase of construction. Based on the resulting multiyear profiles for a combination of all phases of construction by month, the worst-case short-term impact period was identified as August 2025 (month 32) in phase 1B (see **Figure 19-2**). The highest annual emission period was estimated for months 25 to 36 (January 2025 to December 2025), which is also in phase 1B (see **Figure 19-3**). Phase 1B includes construction of Buildings 3, 4 and the CCC garage.

Figure 19-2 Projected Peak Daily $PM_{2.5}$ Construction Emissions Profile

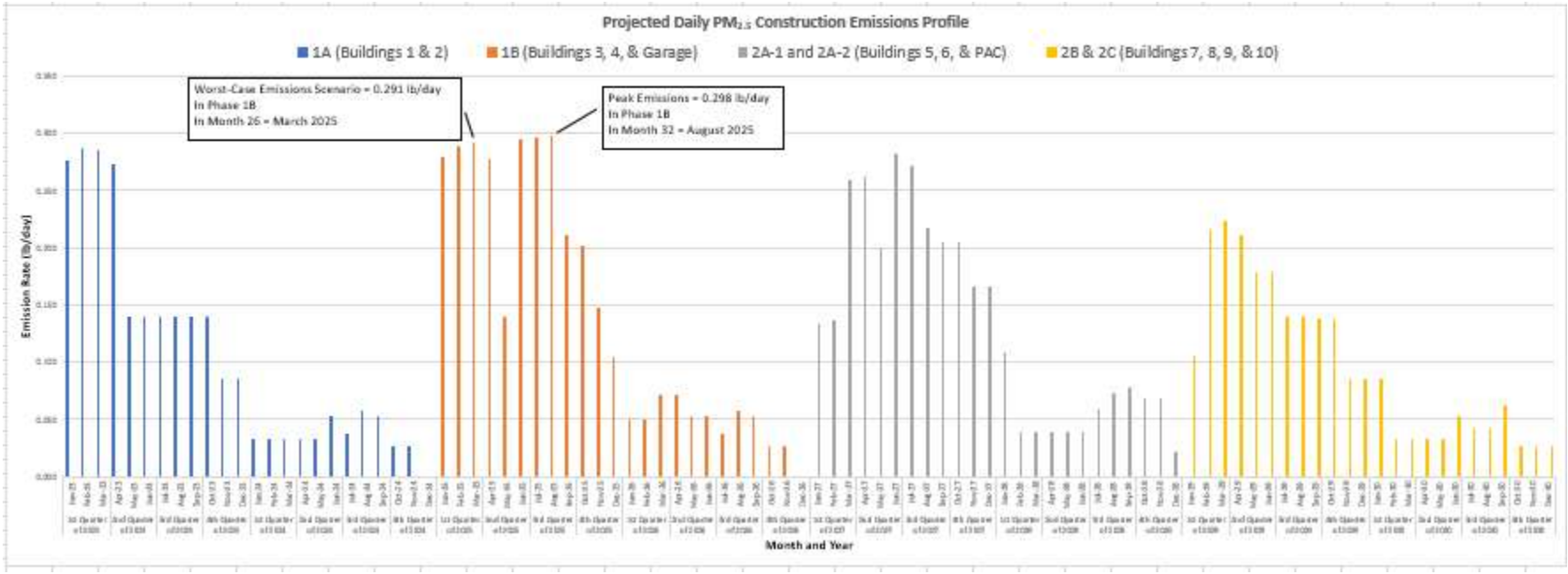
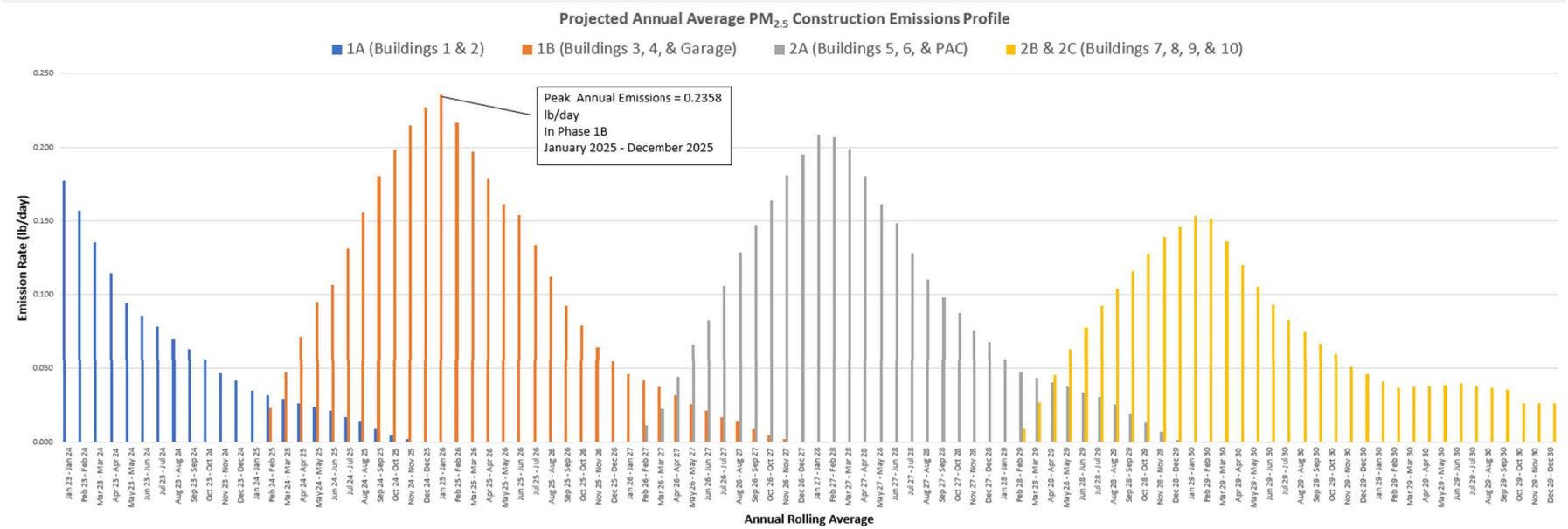


Figure 19-3 Projected Annual Average Daily $PM_{2.5}$ Construction Emissions Profile



Note: The overlap in emissions in phases do not constitute high emissions in any one location as each curve represents activities that will occur at separate areas of the overall site

Impact Assessment

Off-Site Construction Impacts

Construction activities would result in a number of generated truck and worker trips at the project-affected intersections. The total highest number of generated trips during construction was added to the operational trips from already occupied buildings and the total generated trips during construction would be similar to the number of generated trips under operations.

The highest number of construction trucks would be generated at the intersection of Louisiana Avenue and Flatlands Avenue in the 6 to 7 AM period. Six construction trucks would be generated during this hour at this intersection in addition to 55 worker trips and 2 truck, 3 shuttle bus and 34 auto trips from the buildings that would be constructed and occupied during this phase of construction. Conservatively assuming that worker vehicles are classified as LDGT1 and construction trucks as HDDV8B, CEQR $PM_{2.5}$ screening analysis fails for the northern leg of the intersection of Louisiana Avenue at Flatlands Avenue. This portion of Louisiana Avenue (north of Flatlands Avenue) is assigned a paved road functional class under NYSDOT functional classification. In the PM peak hour, only two construction trucks would be generated at the same intersection; these truck trips would be combined with 310 combined worker and operational trips. Using the same assumptions as for the AM hour, CEQR $PM_{2.5}$ screening also fails for the PM hour. Considering that the intersection at Louisiana Avenue and Flatland Avenue consists of arterial (Flatland Avenue), major collector (the south leg of Louisiana Avenue), and local paved road (the north leg of Louisiana), if the PM screening analysis takes into account the three roadway types, the HDDV equivalent of the AM peak hour and the PM peak hour of construction stage traffic would be lower than that of the operational stage for the AM and PM periods respectively. In addition, outside of the AM and PM peak hours for construction, which are generally earlier than those for operations, the construction generated traffic would be much lower than that of the operational stage. Therefore, the mobile source intersection impact analysis for the operational stage represents higher HDDV equivalent increase and higher potential air quality impact.

Since the CO and PM analyses conducted for this intersection under operations demonstrated no significant air quality impacts, it is assumed that there would not be any significant air quality impacts from this intersection during construction. Emissions from construction trucks travelling in the immediate vicinity of the site were included into the dispersion model to account for the cumulative effects of their emissions and emissions from construction activities on-site.

On-Site Construction Impacts

The effects of construction emissions on the surrounding environment for the relevant air pollutants were quantified using the latest version (21112) of the EPA's AERMOD dispersion model.

The emission intensity analysis indicated that the highest $PM_{2.5}$ emissions would result from construction activities between months 25 through 36. This is the most critical construction period because of the simultaneous construction of the two largest buildings, including

Building 4, and the CCC garage. This phase is expected to yield the highest levels of non-road equipment emissions and fugitive dust emissions from transfer operations and paved road dust.

The highest emissions month (August 2025) was estimated when emissions from the foundation of the CCC garage emissions overlap with emissions from equipment of the superstructure stage of construction for Buildings 3 and 4. However, emissions in the highest month would be dispersed between the ground level foundation work at the CCC garage structure and elevated superstructure construction at Buildings 3 and 4. Further, the proposed public parking garage would be located approximately 110 feet away from Buildings 3 and 4. In contrast, during foundation work for Buildings 3 and 4 during month 27, all equipment would be concentrated in one place horizontally and at ground level. This combination has the potential for the highest impact on the first floors of the existing nearby buildings.

As month 27 emissions would be approximately 2 percent lower than emissions in month 32 (which is anticipated to be the highest month) and would have emissions concentrated at the ground level in one location (not spread across the site as would be the case during month 32), the worst-case impacts were determined to be from month 27. Therefore, month 27 was selected for modeling to evaluate short-term air quality impact. The average $PM_{2.5}$ emissions and equipment usage from months 25 to 36 (January of 2025 to December of 2025) were used as the worst-case modeling scenario to evaluate annual air quality impact.

Dispersion Modeling – Source Simulation

Potential impacts from on-site construction equipment and off-site truck emissions were evaluated using the EPA's most current version of the AERMOD dispersion model (version 21112). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatment of the boundary layer theory, understanding of turbulence and dispersion; it also includes handling of terrain interaction. The AERMOD model calculates pollutant concentrations from one or more points (e.g., exhaust stacks) based on hourly meteorological data, and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by the source building itself or by nearby structures. When plume gets entrapped in a wake, it could potentially result in excessive concentrations, especially close to the source. AERMOD can be run with and without building downwash (the downwash option accounts for the effects on plume dispersion created by the wake).

During construction, various types of construction equipment would be used throughout the site. Some of the equipment is mobile and would operate throughout the site, while some would remain stationary on-site at distinct locations during short-term periods (i.e., daily and hourly). Stationary emission sources include (but are not limited to) air compressors, generators, and concrete pumps. Equipment such as excavators and dump trucks would operate throughout the site.

The foundation and excavation emissions at ground level for the peak period were simulated as an area source for the purposes of dispersion analysis. The moving and idling trucks (e.g., delivery, dump, concrete) and paved road dust along the western edge of the site were

modeled as an elongated area source, while moving trucks to the north, on Flatlands Avenue were modeled as a line source.

Both the on-site source and sources adjacent to the site to the west and north were combined and modeled using one AERMOD model to account for cumulative effects. The on-site source represented more than 80 percent of the total sources for the most critical pollutants.

Receptor Locations

AERMOD was used to predict maximum pollutant concentrations at nearby residential, community use and commercial locations of likely public exposure ("sensitive receptors") such as operable windows and air intakes. Discrete receptors were placed along nearby sensitive receptor locations, such as the existing Pennsylvania Avenue buildings to the south and east, the CCC building and the newly constructed Buildings 1 and 2. Additional receptors are placed on facades of commercial buildings where appropriate and a hotel across Flatlands Avenue.

Meteorological Data

All analyses were conducted using five consecutive years of meteorological data (2016 to 2020). Surface data were obtained from JFK Airport and upper air data were obtained from Brookhaven station, New York.

Background Concentrations

Where needed to determine potential air quality impacts from the construction of the project, background ambient air quality data for criteria pollutants (See **Chapter 14, Air Quality, Table 14-2**) were added to the predicted site concentrations. The background data represent the latest available three years of data and were obtained from a nearby NYSDEC monitoring station that best represents the area surrounding the site. The latest three-year period (2018 to 2020) data were used for the 24-hour PM_{10} and years 2017-2019 for annual average NO_2 background concentration to account for pre-COVID conditions.

The 24-hour average $PM_{2.5}$ background concentration of 18.7 $\mu g/m^3$ from the latest three-year period (2018 to 2020) was used to establish the *de minimis* value, consistent with the guidance provided in the *2021 CEQR Technical Manual*. The annual average $PM_{2.5}$ impacts were assessed on an incremental basis and compared with the $PM_{2.5}$ *de minimis* criteria threshold, without considering the annual background.

Potential Impacts from Proposed Project Construction

This section provides a summary of the construction air quality results from the construction activities of the Proposed Project. The peak emissions for all pollutants were predicted to occur during foundation stage of phase 1B in 2025.

Table 19-10 presents the highest predicted total concentration (including background for appropriate pollutants) due to construction activities of the Proposed Project, including the on-site sources (construction equipment, unpaved dust, and activities) and sources adjacent to the site (construction trucks and fugitive dust on paved road).

As indicated in **Table 19-10**, the highest predicted total concentrations of 1-hour CO, 8-hour CO, annual NO_2, and 24-hour PM_{10} would not result in any concentrations that exceed the NAAQS. The highest predicted 8-hour CO concentration is well below the City's *de minimis* criteria. The highest predicted 24-hour and annual $PM_{2.5}$ incremental concentration (for a discrete receptor locations) would not exceed the City's *de minimis* criteria of 8.2 µg/m^3 and 0.3 µg/m^3 respectively.

Table 19-10 Highest Predicted Total Concentrations for Construction Activities

Pollutant	Averaging Period	Highest Modeled Concentration	Background Concentration	Total Concentration	NAAQS/De Minimis
CO	1-Hour[1]	0.40 ppm	2.1 ppm	2.5 ppm	35 ppm
	8-Hour[1]	0.22 ppm	1.6 ppm	1.8 ppm	9 ppm/3.7 ppm
NO_2	Annual[1]	0.8 ppb	14.6 ppb	15.5 ppb	53 ppb
PM_{10}	24-Hour	1.2 µg/m^3	34.3 µg/m^3	35.5 µg/m^3	150 µg/m^3
$PM_{2.5}$	24-Hour[2]	0.95 µg/m^3	---	0.95 µg/m^3	8.2 µg/m^3
	Annual[3]	0.07 µg/m^3	---	0.07 µg/m^3	0.3 µg/m^3

Notes:

[1] CO and NO_2 concentrations can be converted from ppm/ppb to µg/m^3 based on 1 ppm = 1145 µg/m^3 for CO and 1 ppb=1.88 µg/m^3 for NO_2.

[2] The 24-hour $PM_{2.5}$ background concentration is used to develop the *de minimis* criteria.

[3] Annual $PM_{2.5}$ impacts with discrete receptors modeling are compared with the $PM_{2.5}$ *de minimis* criteria of 0.3 µg/m^3, without considering the annual background.

The results of this quantitative analysis indicate that the Proposed Project would not result in any concentrations of NO_2, PM_{10}, and CO that exceed the NAAQS. In addition, the maximum predicted incremental concentrations of $PM_{2.5}$ would not exceed the City's *de minimis* criteria. No significant adverse air quality impacts are anticipated from the off-site mobile source emissions. Therefore, no significant adverse air quality impacts are expected from the construction-related sources.

Noise

Construction activities have the potential to affect the noise conditions of receptors near the Proposed Development. Construction noise can vary widely depending on the phase of construction (e.g., demolition, excavation, foundation, steel, and concrete erection, mechanical and interior fit out) and the specific equipment and methods being used. The most significant construction noise sources at a construction site are generally back-up alarms, and equipment such as excavators, drill rigs, and cranes. The noisiest phase of construction is typically during demolition, excavation, and foundation work. The superstructure phase of construction can also have higher noise levels associated with concrete trucks and cranes. Similar to air emissions, interior fit out typically results in lower noise emissions, since it requires fewer pieces of heavy-duty diesel equipment.

As discussed in the *2021 CEQR Technical Manual,* the need to conduct a qualitative analysis of construction noise emissions or a quantitative analysis is considered based on factors

such as the location of the Development Site in relation to existing residential uses or other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate noise control measures.

Construction Noise Code

As described in Construction Regulations and General Practices, the project will follow guidelines set forth by the NYCDEP Noise Code (Section 24-228). The DOB regulations require a perimeter barrier or "construction noise barrier" and when the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid perimeter noise barrier made from wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.

For the Proposed Project, a perimeter noise barrier 8 feet in height has been included surrounding each phase of construction as each of the phases are constructed. During construction of Phase 1A (Buildings 1 and 2), an 8-foot-tall plywood perimeter wall would be located along Flatland Avenue and Pennsylvania Avenue as well as along the interior perimeter of the site. During construction of Phase 1B (Buildings 3, 4, and the Garage), an 8-foot-tall plywood perimeter wall would be located along Flatland Avenue and surrounding the site of Buildings 3 and 4. A perimeter wall would also be included surrounding the CCC garage during construction activities. During construction of Phase 2A (Buildings 5 and 6), an 8-foot-tall plywood perimeter wall would be located along Flatland Avenue and Louisiana Avenue as well as the interior of the site. A perimeter wall would also be included around the PAC during construction. During construction of Phase 2B/2C (Buildings 7/8 and 9/10), an 8-foot-tall plywood perimeter wall would be located along Louisiana Avenue as well as the interior of the site.

Construction Noise Criteria

The potential for construction noise impact depends on the intensity and duration of construction activities. As it relates to the Public Health, construction noise would be a significant adverse noise impact if noise levels exceed 85 dBA for a prolonged period of time, as indicated in the Public Health chapter of the *2021 CEQR Technical Manual*.

If construction noise would occur continuously for 24 months or more, a detailed construction noise analysis is warranted and there is a potential for significant adverse noise impact. Construction noise occurring for shorter durations would not typically result in significant impact unless there is a higher intensity of noise. For example, construction noise from mobile and stationary sources may cause significant adverse impact if exterior noise levels would increase by 15 dBA or more for 12 months or more or 20 dBA or more for a period of 3 months or more. These criteria apply to residential, community facility, and commercial office spaces, but do not apply to retail spaces. The potential effects of construction noise are also evaluated according to interior noise criteria which are 45 dBA (L_{10}) for residential spaces and 50 dBA (L_{10}) for commercial office spaces.

The detailed construction noise analysis evaluates the specific activities, types of equipment, duration of activities, and locations of nearby sensitive receptors.

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 a 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. However, as is the case with the Proposed Project, if construction would result in exceedances of these noise impact criteria, then further consideration of the intensity and duration of construction noise is warranted at that receptor to determine significant adverse construction noise impact. For the Proposed Project, there would be significant adverse construction noise impact according to the following criteria:

- Future noise levels exceed 85 dBA (L_{eq}) for a prolonged period of time, as indicated in the *CEQR Technical Manual* Public Health Chapter.
- Noise levels (L_{eq}) would increase by 15 dBA or more for 12 consecutive months or more or 20 dBA or more for three consecutive months or more.
- Interior noise levels (L_{10}) would exceed 45 dBA for residential and community facility spaces and 50 dBA for commercial spaces as a result of above significant noise increases (15 dBA and 20 dBA or above) for a prolonged period of time, thus considered significant.

Noise Reduction Measures

Noise from construction activities and some construction equipment is regulated by the New York City Noise Control Code and by the EPA. The New York City Noise Control Code limits construction activities to weekdays between the hours of 7:00 AM and 6:00 PM, sets noise limits for specific pieces of construction equipment, and requires the implementation of a Construction Noise Mitigation Plan. The Construction Noise Mitigation Plan outlines project-specific noise control measures and identifies applicable noise source and noise path controls. Source noise controls are designed to mitigate noises at their origin, while path noise controls focus on the available route(s) between a noise source and any receptors.

As noted above, the determination whether it is sufficient to conduct a qualitative analysis of construction-period noise should consider the extent to which the project incorporates commitments to appropriate noise control measures.

In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be mandated in accordance with the New York City Noise Code:

- The contractor would self-certify that all construction tools and equipment have been maintained to not generate excessive or unnecessary noise and that the noise emissions would not exceed the levels specified in Subchapter 5 of the NYC Noise Control Code and Table 22-1 of the *2021 CEQR Technical Manual.*
- All construction equipment would be equipped with necessary noise reduction equipment, including mufflers. All equipment with internal combustion engines would include noise-insulating materials and would be operated with the doors closed and at the lowest engine speed allowable.
- Where feasible, practical, and safe, the use of back-up alarms would be minimized and/or quieter back-up alarms would be installed in accordance with OSHA standards.

- Vehicles would not be allowed to idle more than three minutes, in accordance with New York City Administrative Code §24-163.
- The contractor would implement a training program to inform workers on methods that can minimize construction noise.
- For certain types of equipment such as impact equipment (i.e., jackhammers) and earth-moving equipment, quieter makes and models would be selected, as feasible.
- In general, the quietest equipment and methods would be used for excavators, dump trucks, cranes, pile drivers etc., to the extent feasible and practical.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented:

- When the DOB regulations require a perimeter barrier or "construction fence" and the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires that a solid 8-foot-tall wall made of wood or other suitable material is installed where a new building is being constructed or a building is being demolished to grade.
- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.

Should noise complaints occur during construction, the contractor would use path noise control measures such as temporary noise barriers, jersey barriers and/or portable noise enclosures for small equipment. The details to construct portable noise barriers, enclosures, tents, etc. are shown in DEP's "Rules for Citywide Construction Noise Mitigation.

Construction Noise Assessment Methodology

The detailed construction noise analysis includes both mobile and stationary construction noise sources. Stationary sources are based on typical equipment used during all phases of construction including foundation, superstructure, elevator installation, exterior construction, and interior fit-out. There would be overlapping construction activities during foundation and superstructure activities as well as during superstructure, elevators, exterior construction, and interior fit-out activities.

Construction mobile sources include worker vehicles and trucks. Construction noise has been evaluated for the construction mobile source peak period from 6:00 AM to 7:00 AM. During this period, there would be no construction noise from stationary sources. Construction noise from stationary sources has been evaluated for 16 different phases of construction. For each phase of the Proposed Development (i.e., Phase 1A, Phase 1B, Phase 2A, Phase 2B, and Phase 2C) there would be foundation, superstructure, elevators, exterior construction, and interior fit-out phases of construction of the proposed buildings (i.e., Buildings 1, 2, 3, 4, 5, 6, 7/8, 9/10 and the PAC). Construction noise from stationary sources has been evaluated for the following phases:

- From Month 1 through 4, the Foundation phase for Buildings 1 and 2 (Phase 1A) would occur. Construction has been evaluated based on Month 2 as this period has the highest construction sound emissions.

- From Month 5 through 12, the Foundation, Superstructure, Elevator and Exterior construction, and Interior fit-out phases for Buildings 1 and 2 (Phase 1A) would occur. Construction has been evaluated based on Month 8 as this period has the highest construction sound emissions.
- From Month 13 through 17, the Elevator and Exterior construction and Interior fit-out phases for Buildings 1 and 2 (Phase 1A) would occur. Construction has been evaluated based on Month 16 as this period has the highest construction sound emissions.
- From Month 18 through 23, the Elevator and Exterior construction and Interior fit-out phases for Buildings 1 and 2 (Phase 1A) would occur. Construction has been evaluated based on Month 21 as this period has the highest construction sound emissions.
- During Month 24, no construction activities are scheduled to occur, therefore, this month has not been analyzed for construction noise.
- From Month 25 through 28, the Foundation phase for Buildings 3 and 4 (Phase 2A) would occur. Construction has been evaluated based on Month 26 as this period has the highest construction sound emissions.
- From Month 29 through 36, the Foundation, Superstructure, Elevator and Exterior construction, and Interior fit-out phases for Buildings 3 and 4 and the Foundation, Superstructure, Elevator and Exterior construction, and Interior fit-out phases for the CCC Garage (Phase 2A) would occur. Construction has been evaluated based on Month 32 as this period has the highest construction sound emissions.
- From Month 37 through 43, the Elevator and Exterior construction and Interior fit-out phases for Buildings 3, 4 and the CCC Garage (Phase 2A) would occur. Construction has been evaluated based on Month 40 as this period has the highest construction sound emissions.
- From Month 44 through 47, the Exterior construction and Interior fit-out phases for Buildings 3 and 4 (Phase 2A) would occur. Construction has been evaluated based on Month 45 as this period has the highest construction sound emissions.
- During Month 48, no construction activities are scheduled to occur, therefore, this month has not been analyzed for construction noise emissions.
- From Month 49 through 55, the Foundation and Superstructure phases for Buildings 5, 6 and the Performing Arts Center (PAC) (Phase 1B) would occur. Construction has been evaluated based on Month 51 as this period has the highest construction sound emissions.
- From Month 56 through 61, the Foundation, Superstructure, Elevator and Exterior construction, and Interior fit-out phases for Buildings 5, 6 and the PAC (Phase 1B) would occur. Construction has been evaluated based on Month 58 as this period has the highest construction sound emissions.
- From Month 62 through 66, the Superstructure, Elevator and Exterior construction, and Interior fit-out phases for Buildings 5, 6 and the PAC (Phase 1B) would occur. Construction has been evaluated based on Month 62 as this period has the highest construction sound emissions.

- From Month 67 through 72, the Elevator and Exterior construction, and Interior fit-out phases for Buildings 5, 6 and the PAC (Phase 1B) would occur. Construction has been evaluated based on Month 70 as this period has the highest construction sound emissions.
- From Month 73 through 78, the Foundation and Superstructure phases for Buildings 7 through 10 (Phase 2B/2C) would occur. Construction has been evaluated based on Month 74 as this period has the highest construction sound emissions.
- From Month 79 through 85, the Foundation, Superstructure, Elevator and Exterior construction, and Interior fit-out phases for Buildings 7 through 10 (Phase 2B/2C) would occur. Construction has been evaluated based on Month 81 as this period has the highest construction sound emissions.
- From Month 86 through 89, the Superstructure, Elevator and Exterior construction, and Interior fit-out phases for Buildings 7 through 10 (Phase 2B/2C) would occur. Construction has been evaluated based on Month 88 as this period has the highest construction sound emissions.
- From Month 90 through 96, the Elevator and Exterior construction, and Interior fit-out phases for Buildings 7 through 10 (Phase 2B/2C) would occur. Construction has been evaluated based on Month 93 as this period has the highest construction sound emissions.

Construction Mobile Source Noise Assessment

The construction mobile source noise assessment evaluated the 13 intersections listed in the **Noise** section during the 6:00 to 7:00 AM period. Automated traffic recorder (ATR) data was collected over 24-hours at 13 locations throughout the study area. Between 6:00 AM and 7:00 AM the total traffic volumes across all 13 ATRs was 75.5 percent of the traffic volumes between 7:30 and 8:30 AM when the morning peak period traffic conditions occur. Therefore, the existing traffic volumes without construction vehicles were assumed to be 75.5 percent of the peak morning PCE values.

The potential for construction mobile sources to increase ambient sound conditions has been determined based on proportional modeling of noise PCEs. If construction mobile sources would result in a doubling or more of PCEs, it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double during construction, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *2021 CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

- Each automobile or light truck: 1 noise PCE
- Each medium truck: 13 noise PCEs
- Each bus: 18 noise PCEs
- Each heavy truck: 47 noise PCEs

Increases in noise due to construction mobile sources are calculated using the following equation:

$$Sound\ Level\ Increase\ (Leq) = 10 * \log\left(\frac{Existing\ and\ Construction\ PCEs}{Existing\ PCEs}\right)$$

As described in the **Construction Traffic** section, the peak construction vehicle trips during the peak construction quarter (first quarter of 2030) would include 184 automobiles and 6 truck trips in the 6:00 AM to 7:00 AM period. These vehicle trips would be distributed throughout the study area.

As shown in **Table 19-11,** noise from construction mobile sources between 6:00 AM and 7:00 AM would typically increase an average of 0.4 dBA compared to the existing condition with a maximum of 0.7 dBA at three intersections: Flatlands Avenue and Georgia Avenue; Pennsylvania Avenue and Wortman Avenue; and Pennsylvania Avenue and Cozine Avenue. As the construction mobile source noise levels would not increase by 3 dBA or more, there would be no significant adverse noise impact.

Table 19-11 Construction Mobile Source Analysis

	Intersection	Existing PCEs (6:00 to 7:00 AM)	Existing with Construction PCEs	Construction Mobile Source Sound Increase (dBA)
1	Flatlands Avenue and Rockaway Parkway	4,509	4,737	0.2
2	Flatlands Avenue and East 108th Street	3,992	4,222	0.2
3	Louisiana Avenue and Flatlands Avenue	3,731	4,196	0.5
4	Flatlands Avenue and Georgia Avenue/Site Driveway	2,620	3,080	0.7
5	Pennsylvania Avenue and Flatlands Avenue	5,634	6,302	0.5
6	Pennsylvania Avenue and Linden Boulevard	10,105	10,933	0.3
7	Pennsylvania Avenue and Stanley Avenue	4,735	5,469	0.6
8	Pennsylvania Avenue and Wortman Avenue	4,324	5,057	0.7
9	Pennsylvania Avenue and Cozine Avenue	4,433	5,212	0.7
10	Pennsylvania Avenue and Vandalia Avenue	3,139	3,160	0.0
11	Pennsylvania Avenue and Twin Pines Drive	2,809	2,902	0.1
12	Pennsylvania Avenue and Seaview Avenue	3,571	3,664	0.1
13	Louisiana Avenue and Vandalia Avenue	806	813	0.0

Source: VHB, 2022

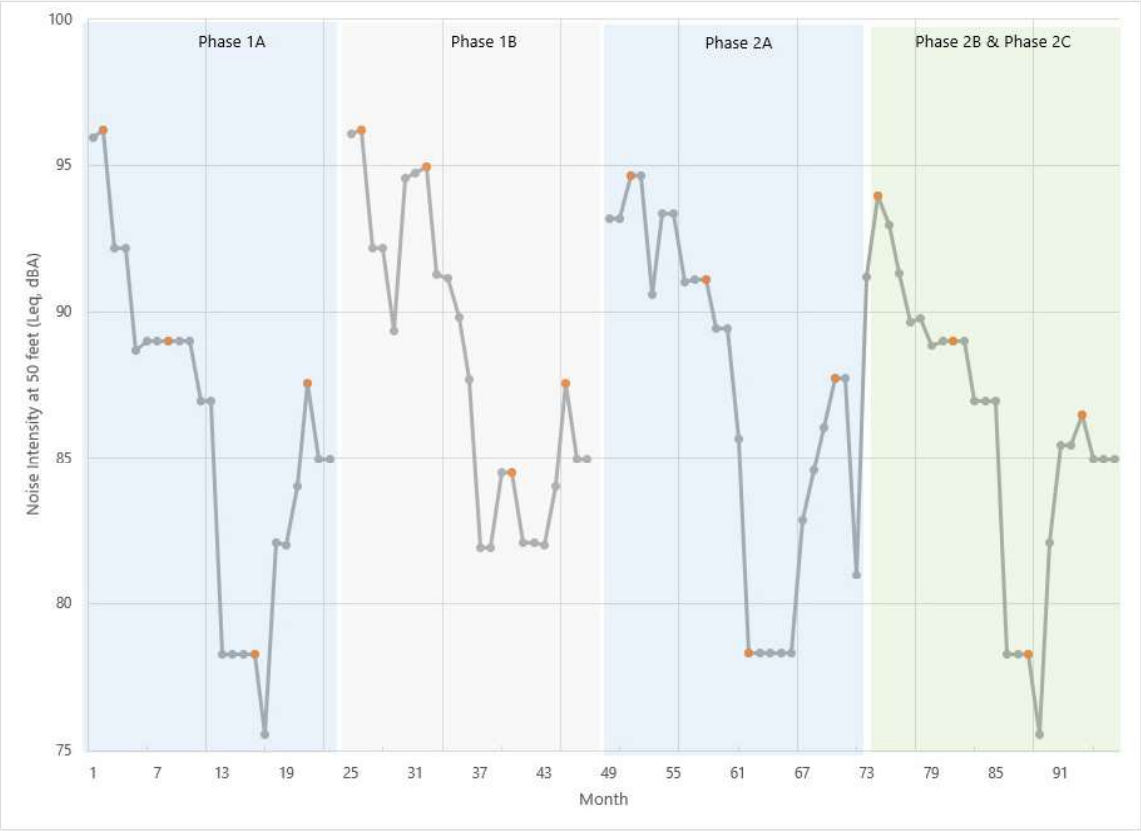
Construction Equipment Noise Emissions

Figure 19-4 presents the cumulative sound emissions from stationary construction equipment during each month for With-Action conditions. The cumulative sound emissions represent the total energy-average (L_{eq}) level of all equipment operating at a distance of 50 feet. This sound emission is not the actual sound level that would exist on the Development Site since actual equipment is distributed throughout the site, but the cumulative emissions level indicates which periods of construction are expected to be the loudest and which months are used for analysis. This figure shows that the foundation phases of construction

are generally the loudest and that the noise intensity levels typically range from the upper 70's to the mid 90's dBA. Based on this construction noise intensity analysis, noise has been evaluated during months:

- Phase 1A – Months 2, 8, 16, and 21.
- Phase 2A – Months 26, 32, 40, and 45.
- Phase 1B – Months 51, 58, 62, and 70.
- Phase 2B/2C – Months 74, 81, 88, and 93.

Figure 19-4 Cumulative Sound Emissions from Stationary Equipment during Each Month



Source: VHB, 2022.

Table 19-12 presents the type of equipment, the maximum sound level at 50 feet, the utilization factors (percentage of time the equipment is operating at full power), and the number of each piece of equipment that is used during each phase of construction based on the *2021 CEQR Technical Manual*. This table does not include trucks at the Development Site such as box trucks, pickup trucks, tractor trailers, packer trucks, container trucks, and dump trucks since they are not allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163. These tables show that there will be up to six concrete mixer trucks during various phases of construction. However, this is the total number of vehicles operating and not the total number of concrete mixer trucks that would be at the site at any given time. The number of concrete mixer trucks that have been

included in the analysis is based on those shown on the construction logistics plans and typically range from two to five on-site at any given time.

Table 19-12 Construction Equipment by Month of Analysis

Equipment	Maximum Sound Level at 50 feet (dBA, L_{max})	Utilization Factor (%)	Number of Construction Equipment Pieces by Analysis Month															
			2	8	16	21	26	32	40	45	51	58	62	70	74	81	88	93
Concrete Mixer Truck	85	40	2	4	0	2	2	5	0	2	2	4	0	1	1	4	0	1
Concrete Pump Truck	82	40	2	2	0	1	2	6	0	1	2	4	0	1	2	2	0	1
Excavator	85	40	6	0	0	2	6	3	1	2	6	2	0	3	4	0	0	2
Pile Rig/Drill	95	20	4	0	0	0	4	2	0	0	2	0	0	0	2	0	0	0
Compressor	80	40	4	0	0	0	4	2	0	0	4	1	0	0	4	0	0	0
Generator	82	50	4	0	0	0	4	2	0	0	4	1	0	0	4	0	0	0
Forklift	64	40	0	4	4	0	0	4	5	0	0	4	5	0	0	4	4	2
Mobile Crane	85	16	0	2	0	0	0	2	1	0	0	2	0	0	0	2	0	0
Hoists	75	50	0	4	4	0	0	6	6	0	0	4	4	0	0	4	4	0

Source: VHB, 2022.

Construction Noise Assessment

The Proposed Project is primarily near existing residential and commercial receptors. **Table 19-13** details all receptor locations and land use descriptions. As shown in **Figure 19-5**, construction noise has been evaluated at 69 existing columns of receptors with receptors on each floor of the building (if noise sensitive). As new buildings would be introduced with the phased development, additional columns of receptors have been included in the analysis for a total of 95 existing and new columns of receptors.

Figure 19-5 Construction Noise Receptor Locations

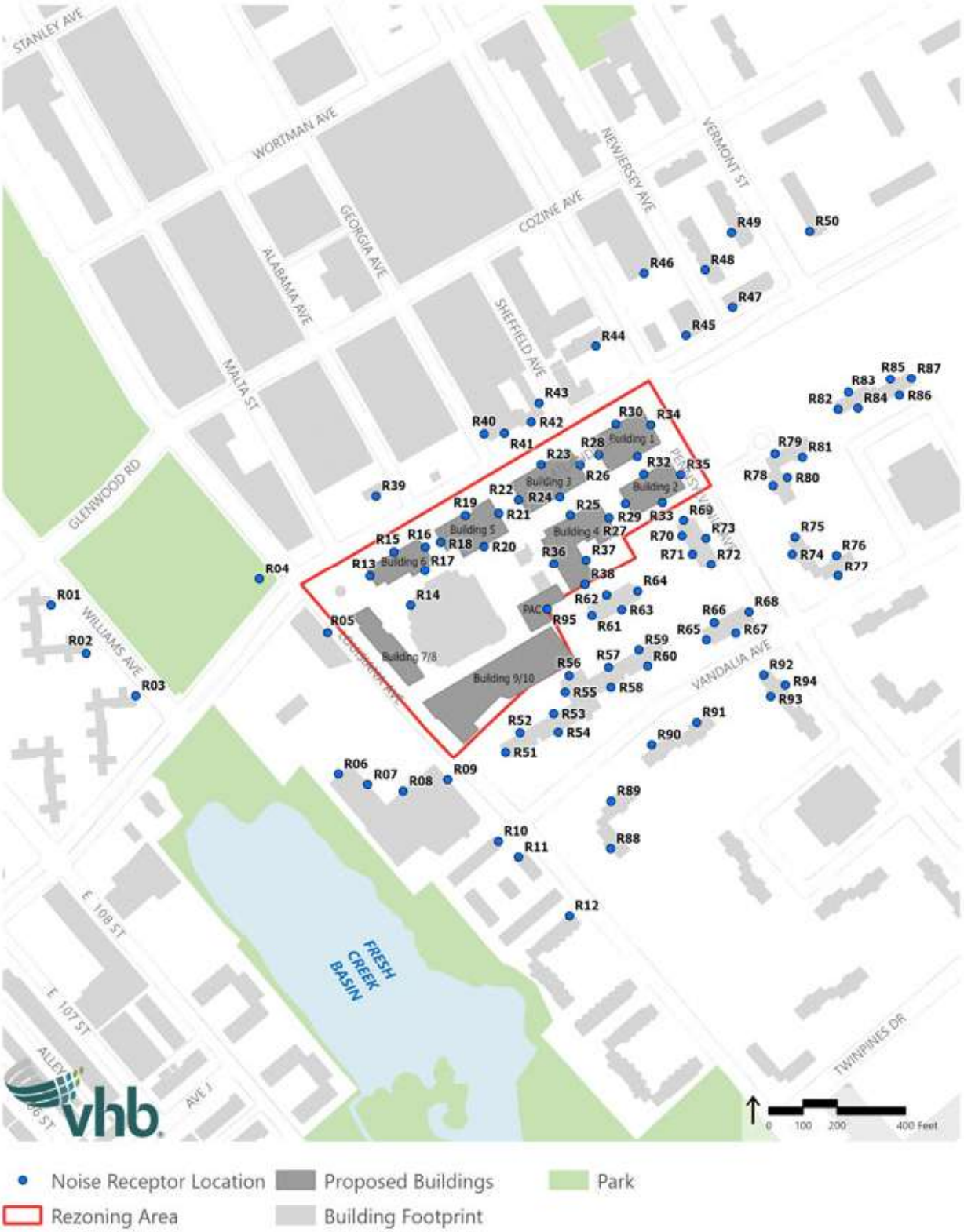


Table 19-13 Construction Noise Receptor Locations and Land Use Descriptions

Receptor	Location	Land Use Description
R01 - R03	10835 Flatlands Avenue	Residential
R04	Farragut Road	Outdoor Recreation
R05	11110 Flatlands Avenue	Commercial & Office Space
R06 - R09	730 Louisiana Avenue	Commercial & Office Space
R10	790 Louisiana Avenue	Residential
R11	508 Louisiana Avenue	Residential
R12	556 Louisiana Avenue	Residential
R14	12048 Flatlands Avenue	Community
R39	12041 Flatlands Avenue	Commercial & Office Space
R40, R41	12079 Flatlands Avenue	Commercial & Office Space
R42, R43	1036 Sheffield Avenue	Hotel
R44	1118 Pennsylvania Avenue	Commercial & Office Space
R45	1143 Flatlands Avenue	Community
R46	1111 Pennsylvania Avenue	Commercial & Office Space
R47 - R49	148 Cozine Avenue	Residential
R50	190 Cozine Avenue	Residential
R51 - R60	1 Vandalia Avenue	Residential
R61 - R64	1180 Pennsylvania Avenue	Residential
R65 - R68	99 Vandalia Avenue	Residential
R69 - R73	1170 Pennsylvania Avenue	Residential
R74 - R87	1155 Pennsylvania Avenue	Residential
R88 - R94	1260 Cronton Loop	Residential
R28, R30, R31, R34	Proposed Building 1	Residential & Retail
R29, R32, R33, R35	Proposed Building 2	Residential & Retail
R22 - R24, R26	Proposed Building 3	Residential & Retail
R25, R27, R36 - R38	Proposed Building 4	Residential & Community
R18 - R21	Proposed Building 5	Residential, Retail, & Community
R13, R15 - R17	Proposed Building 6	Residential & Retail
R95	Proposed PAC	Community

Source: VHB, 2022.

Existing Ambient Noise Levels

Existing ambient sound levels at all receptor locations have been determined based on measurements conducted in the study area and Cadna-A modeling of the traffic noise

conditions. Measurements include those conducted during the weekday morning (9:00 AM to 11:00 AM) throughout the Development Site (Sites 1 through 6) as shown in **Table 19-14**.

Table 19-14 Ambient Sound Level Measurements

Site	Monitoring Location	Time Period	Duration	L_{eq}	L_{10}	L_{50}	L_{90}
1	Midblock Louisiana Ave	Morning	20 min	66.3	69.1	62.9	57.7
2	CCC Gazebo	Morning	20 min	62.8	63.9	60.6	56.0
3	Midblock Flatlands Ave	Morning	20 min	64.6	68.2	61.4	55.2
4	Parking Lot Interior	Morning	20 min	52.5	54.1	51.5	50.4
5	Penn Ave - Flatlands Ave	Morning	20 min	72.2	74.6	69.8	64.4
6	School bus lot off Penn Ave	Morning	20 min	62.0	59.9	55.2	52.4

Source: Noise measurements conducted by VHB on June 2, 2021.

The ambient sound level at each receptor was determined based on the measured sound level, similarity of acoustic context, and an adjustment based on the difference in modeled sound levels at the corresponding measurement location and each specific receptor location. The minimum morning background sound level assumed for any receptor was 56.0 dBA, which is the average L_{90} at all sites for morning time periods. Based on this analysis, the existing daytime ambient sound levels range from 56.0 to 71.5 dBA (L_{eq}).

Existing traffic conditions are based on the results of **Chapter 13, Transportation** and review of the ATR data. The traffic volumes between 6:00 AM and 7:00 AM are based on 75.5 percent of the morning peak period volumes (7:30 AM to 8:30 AM).

Construction Noise Levels

The construction noise predictions include the equipment described in **Table 19-12**. The 8-foot perimeter walls have been included at all sites throughout the phased development as indicated on the logistics plans (September 28, 2021). Due to the phased nature of the project, as each site is constructed, the previously constructed sites would be directly adjacent to active construction sites. Fully constructed portions of the project would shield some receptors from construction equipment noise emissions.

Based on street-level field observations, existing residential buildings located near the Development Site appear to have insulated glass windows and window or through-wall air-conditioning, which would be expected to provide 25 dBA window/wall attenuation. Existing commercial buildings appear to have insulated glass windows and central air-conditioning, which would be expected to provide 30 dBA window/wall attenuation.

The minimum composite window/wall attenuation required for some of the new buildings presented in Chapter 16, Noise, was used to assess interior construction noise levels for new receptors to be constructed as part of the Proposed Development. As such, receptors on the north and east facing facades of Proposed Building 1 and the east façade of Building 2 require 35 dBA window/wall attenuation. For all new receptors within the footprint of the Proposed Development, 30 dBA window/wall attenuation is assumed as the newly constructed buildings would have insulated glass windows and central air-conditioning.

The *2021 CEQR Technical Manual* defines 45 dBA (L_{10}) as an acceptable interior noise level limit for residential, community facility, and hotel spaces, as discussed in **Chapter 16**, **Noise**. Interior noise level of 50 dBA (L_{10}) is typically considered to be an acceptable interior noise level limit for commercial office spaces. As mentioned earlier, these acceptable interior L_{10} noise level limits were used to determine significant adverse construction noise impact and if additional mitigation measures are needed at receptors identified with significant adverse construction noise impact. The L_{10} metric is calculated by adding a 3-dBA adjustment factor to the calculated L_{eq} according to FHWA's Roadway Construction Noise Model (RCNM) guidance.

The assessment results in **Table 19-15** through **Table 19-30** present the range of construction noise levels at each building façade, including the results at all floors.

Table 19-15 Phase 1A – Foundation Construction Noise Levels: Months 1 through 4

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	53.2 - 54.6	66.0 - 66.5	0.3	44.0 - 44.5
R02	10835 Flatlands Avenue	65.0 - 65.4	56.2 - 56.4	65.5 - 65.9	0.5	43.5 - 43.9
R03	10835 Flatlands Avenue	69.1 - 69.7	57.6 - 59.1	69.4 - 70.1	0.4	47.4 - 48.1
R04	Farragut Road Park	71.5 - 71.5	59.5 - 59.5	71.8 - 71.8	0.3	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	57.2 - 57.2	67.7 - 67.7	0.4	40.7 - 40.7
R06	730 Louisiana Avenue	59.3 - 59.3	48.8 - 48.8	59.7 - 59.7	0.4	32.7 - 32.7
R07	730 Louisiana Avenue	56.0 - 56.0	54.5 - 54.5	58.3 - 58.3	2.3	31.3 - 31.3
R08	730 Louisiana Avenue	58.2 - 58.2	56.3 - 56.3	60.4 - 60.4	2.2	33.4 - 33.4
R09	730 Louisiana Avenue	62.4 - 62.4	59.9 - 59.9	64.3 - 64.3	1.9	37.3 - 37.3
R10	790 Louisiana Avenue	61.3 - 63.1	43.2 - 43.2	61.4 - 63.1	0.1	39.4 - 41.1
R11	508 Louisiana Avenue	59.8 - 61.2	40.3 - 40.3	59.8 - 61.2	0.0	37.8 - 39.2
R12	556 Louisiana Avenue	56.0 - 58.4	42.1 - 42.3	56.2 - 58.5	0.2	34.2 - 36.5
R14	12048 Flatlands Avenue	65.3 - 68.8	44.1 - 44.1	65.3 - 68.8	0.0	43.3 - 46.8
R39	12041 Flatlands Avenue	58.3 - 58.3	61.9 - 61.9	63.5 - 63.5	5.2	36.5 - 36.5
R40	12079 Flatlands Avenue	56.0 - 56.0	52.9 - 52.9	57.7 - 57.7	1.7	30.7 - 30.7
R41	12079 Flatlands Avenue	59.5 - 59.5	68.3 - 68.3	68.8 - 68.8	9.3	41.8 - 41.8
R42	1036 Sheffield Avenue	60.5 - 61.7	71.2 - 74.9	71.6 - 75.1	13.4	44.6 - 48.1
R43	1036 Sheffield Avenue	56.0 - 59.2	71.1 - 74.9	71.2 - 75.0	16.4	44.2 - 48.0
R44	1118 Pennsylvania Avenue	64.3 - 64.3	68.4 - 68.4	69.8 - 69.8	5.5	42.8 - 42.8
R45	1143 Flatlands Avenue	63.4 - 63.4	65.7 - 65.7	67.7 - 67.7	4.3	40.7 - 40.7
R46	1111 Pennsylvania Avenue	56.6 - 56.6	59.5 - 59.5	61.3 - 61.3	4.7	34.3 - 34.3
R47	148 Cozine Avenue	64.3 - 65.1	64.3 - 65.1	67.3 - 68.1	3.0	45.3 - 46.1
R48	148 Cozine Avenue	57.7 - 60.5	58.6 - 62.3	61.2 - 64.5	4.0	39.2 - 42.5
R49	148 Cozine Avenue	56.0 - 56.0	51.9 - 55.7	57.4 - 58.9	2.9	35.4 - 36.9
R50	190 Cozine Avenue	59.0 - 67.2	56.7 - 64.4	61.7 - 68.8	2.7	39.7 - 46.8
R51	1 Vandalia Avenue	58.8 - 64.5	43.2 - 55.4	60.1 - 64.6	1.3	38.1 - 42.6
R52	1 Vandalia Avenue	59.7 - 64.9	60.1 - 65.8	63.0 - 68.4	4.1	41.0 - 46.4
R53	1 Vandalia Avenue	56.0 - 58.1	56.0 - 65.7	59.0 - 66.4	8.3	37.0 - 44.4
R54	1 Vandalia Avenue	56.0 - 61.8	44.9 - 46.2	56.3 - 61.9	0.3	34.3 - 39.9

Table 19-15 Phase 1A – Foundation Construction Noise Levels: Months 1 through 4

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R55	1 Vandalia Avenue	56.0 - 56.0	47.5 - 47.5	56.6 - 56.6	0.6	34.6 - 34.6
R56	1 Vandalia Avenue	56.0 - 56.0	61.2 - 61.2	62.3 - 62.3	6.3	40.3 - 40.3
R57	1 Vandalia Avenue	56.0 - 56.8	48.0 - 64.0	56.6 - 64.8	8.0	34.6 - 42.8
R58	1 Vandalia Avenue	56.0 - 56.0	45.8 - 59.6	56.4 - 61.2	5.2	34.4 - 39.2
R59	1 Vandalia Avenue	56.0 - 56.7	59.8 - 68.7	61.3 - 68.9	12.5	39.3 - 46.9
R60	1 Vandalia Avenue	56.0 - 56.0	46.6 - 49.2	56.5 - 56.8	0.8	34.5 - 34.8
R61	1180 Pennsylvania Avenue	56.0 - 57.4	58.3 - 63.2	60.6 - 64.0	7.8	38.6 - 42.0
R62	1180 Pennsylvania Avenue	56.0 - 58.9	69.8 - 74.9	70.1 - 75.0	16.8	48.1 - 53.0
R63	1180 Pennsylvania Avenue	56.0 - 56.0	62.1 - 67.0	63.1 - 67.3	11.3	41.1 - 45.3
R64	1180 Pennsylvania Avenue	56.0 - 57.3	69.2 - 75.3	69.5 - 75.4	18.8	47.5 - 53.4
R65	99 Vandalia Avenue	56.0 - 56.0	58.7 - 67.2	60.6 - 67.5	11.5	38.6 - 45.5
R66	99 Vandalia Avenue	56.0 - 56.0	64.4 - 71.2	65.0 - 71.3	15.3	43.0 - 49.3
R67	99 Vandalia Avenue	56.0 - 57.9	46.9 - 48.9	56.5 - 58.4	0.7	34.5 - 36.4
R68	99 Vandalia Avenue	56.7 - 62.2	60.0 - 67.7	61.7 - 68.8	6.7	39.7 - 46.8
R69	1170 Pennsylvania Avenue	56.2 - 60.4	73.1 - 80.9	73.2 - 80.9	22.4	51.2 - 58.9
R70	1170 Pennsylvania Avenue	56.0 - 56.0	69.3 - 77.7	69.5 - 77.7	21.7	47.5 - 55.7
R71	1170 Pennsylvania Avenue	56.0 - 56.0	67.5 - 75.4	67.8 - 75.4	19.4	45.8 - 53.4
R72	1170 Pennsylvania Avenue	56.0 - 57.3	59.5 - 65.2	61.1 - 65.9	8.6	39.1 - 43.9
R73	1170 Pennsylvania Avenue	59.5 - 62.1	60.6 - 72.9	63.1 - 73.2	11.7	41.1 - 51.2
R74	1155 Pennsylvania Avenue	56.0 - 61.9	67.4 - 74.0	67.7 - 74.2	13.0	45.7 - 52.2
R75	1155 Pennsylvania Avenue	56.0 - 58.8	65.3 - 72.2	65.8 - 72.4	14.8	43.8 - 50.4
R76	1155 Pennsylvania Avenue	56.0 - 56.0	57.2 - 65.8	59.7 - 66.2	10.2	37.7 - 44.2
R77	1155 Pennsylvania Avenue	56.0 - 58.5	45.7 - 49.5	56.4 - 59.0	0.5	34.4 - 37.0
R78	1155 Pennsylvania Avenue	56.0 - 59.1	66.9 - 74.0	67.3 - 74.1	15.5	45.3 - 52.1
R79	1155 Pennsylvania Avenue	56.0 - 59.4	66.6 - 73.8	67.0 - 73.9	14.9	45.0 - 51.9
R80	1155 Pennsylvania Avenue	56.0 - 56.0	50.0 - 51.3	57.0 - 57.3	1.3	35.0 - 35.3
R81	1155 Pennsylvania Avenue	56.0 - 56.0	49.0 - 50.5	56.8 - 57.1	1.1	34.8 - 35.1
R82	1155 Pennsylvania Avenue	56.0 - 57.8	63.2 - 69.6	64.0 - 69.9	12.2	42.0 - 47.9
R83	1155 Pennsylvania Avenue	56.0 - 58.8	62.7 - 68.9	63.5 - 69.3	10.5	41.5 - 47.3
R84	1155 Pennsylvania Avenue	56.0 - 56.0	45.5 - 63.2	56.4 - 64.0	8.0	34.4 - 42.0
R85	1155 Pennsylvania Avenue	56.0 - 57.4	58.9 - 64.8	60.7 - 65.5	8.1	38.7 - 43.5
R86	1155 Pennsylvania Avenue	56.0 - 56.0	43.9 - 59.3	56.3 - 61.0	5.0	34.3 - 39.0
R87	1155 Pennsylvania Avenue	56.0 - 56.0	53.1 - 55.8	57.8 - 58.9	2.9	35.8 - 36.9
R88	1260 Cronton Loop	56.0 - 58.8	40.7 - 42.5	56.1 - 58.9	0.2	34.1 - 36.9
R89	1260 Cronton Loop	56.0 - 62.4	41.9 - 45.6	56.2 - 62.5	0.2	34.2 - 40.5
R90	1260 Cronton Loop	57.0 - 65.9	43.7 - 63.9	57.2 - 68.0	2.1	35.2 - 46.0
R91	1260 Cronton Loop	56.0 - 62.9	62.4 - 68.2	63.3 - 69.3	8.0	41.3 - 47.3
R92	1260 Cronton Loop	56.0 - 60.3	44.8 - 65.9	56.3 - 67.0	6.7	34.3 - 45.0
R93	1260 Cronton Loop	56.0 - 56.0	44.0 - 61.5	56.3 - 62.6	6.6	34.3 - 40.6
R94	1260 Cronton Loop	56.0 - 61.8	44.0 - 64.1	56.3 - 66.1	4.3	34.3 - 44.1

Source: VHB 2022

Table 19-16 Phase 1A – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 5 through 12

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	48.2 - 48.9	65.8 - 66.4	0.1	43.8 - 44.4
R02	10835 Flatlands Avenue	65.0 - 65.4	50.1 - 50.1	65.1 - 65.5	0.1	43.1 - 43.5
R03	10835 Flatlands Avenue	69.1 - 69.7	51.5 - 53.4	69.2 - 69.8	0.1	47.2 - 47.8
R04	Farragut Road Park	71.5 - 71.5	54.0 - 54.0	71.6 - 71.6	0.1	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	54.3 - 54.3	67.5 - 67.5	0.2	40.5 - 40.5
R06	730 Louisiana Avenue	59.3 - 59.3	42.8 - 42.8	59.4 - 59.4	0.1	32.4 - 32.4
R07	730 Louisiana Avenue	56.0 - 56.0	43.6 - 43.6	56.2 - 56.2	0.2	29.2 - 29.2
R08	730 Louisiana Avenue	58.2 - 58.2	51.6 - 51.6	59.1 - 59.1	0.9	32.1 - 32.1
R09	730 Louisiana Avenue	62.4 - 62.4	54.4 - 54.4	63.0 - 63.0	0.6	36.0 - 36.0
R10	790 Louisiana Avenue	61.3 - 63.1	36.4 - 36.6	61.3 - 63.1	0.0	39.3 - 41.1
R11	508 Louisiana Avenue	59.8 - 61.2	34.0 - 34.3	59.8 - 61.2	0.0	37.8 - 39.2
R12	556 Louisiana Avenue	56.0 - 58.4	36.8 - 37.5	56.1 - 58.4	0.1	34.1 - 36.4
R14	12048 Flatlands Avenue	65.3 - 68.8	38.7 - 39.9	65.3 - 68.8	0.0	43.3 - 46.8
R39	12041 Flatlands Avenue	58.3 - 58.3	58.3 - 58.3	61.3 - 61.3	3.0	34.3 - 34.3
R40	12079 Flatlands Avenue	56.0 - 56.0	48.9 - 48.9	56.8 - 56.8	0.8	29.8 - 29.8
R41	12079 Flatlands Avenue	59.5 - 59.5	65.1 - 65.1	66.2 - 66.2	6.7	39.2 - 39.2
R42	1036 Sheffield Avenue	60.5 - 61.7	67.5 - 71.3	68.3 - 71.8	10.1	41.3 - 44.8
R43	1036 Sheffield Avenue	56.0 - 59.2	67.9 - 70.9	68.2 - 71.2	14.3	41.2 - 44.2
R44	1118 Pennsylvania Avenue	64.3 - 64.3	62.7 - 62.7	66.6 - 66.6	2.3	39.6 - 39.6
R45	1143 Flatlands Avenue	63.4 - 63.4	60.5 - 60.5	65.2 - 65.2	1.8	38.2 - 38.2
R46	1111 Pennsylvania Avenue	56.6 - 56.6	57.4 - 57.4	60.0 - 60.0	3.4	33.0 - 33.0
R47	148 Cozine Avenue	64.3 - 65.1	59.1 - 59.2	65.4 - 66.1	1.1	43.4 - 44.1
R48	148 Cozine Avenue	57.7 - 60.5	55.5 - 58.8	59.7 - 62.7	2.2	37.7 - 40.7
R49	148 Cozine Avenue	56.0 - 56.0	46.4 - 51.7	56.5 - 57.4	1.4	34.5 - 35.4
R50	190 Cozine Avenue	59.0 - 67.2	48.8 - 59.9	60.4 - 67.9	1.4	38.4 - 45.9
R51	1 Vandalia Avenue	58.8 - 64.5	39.6 - 44.3	58.9 - 64.5	0.1	36.9 - 42.5
R52	1 Vandalia Avenue	59.7 - 64.9	57.1 - 60.2	61.7 - 66.2	2.1	39.7 - 44.2
R53	1 Vandalia Avenue	56.0 - 58.1	55.8 - 62.1	58.9 - 63.6	5.5	36.9 - 41.6
R54	1 Vandalia Avenue	56.0 - 61.8	38.9 - 39.9	56.1 - 61.8	0.1	34.1 - 39.8
R55	1 Vandalia Avenue	56.0 - 56.0	43.4 - 43.4	56.2 - 56.2	0.2	34.2 - 34.2
R56	1 Vandalia Avenue	56.0 - 56.0	59.9 - 59.9	61.4 - 61.4	5.4	39.4 - 39.4
R57	1 Vandalia Avenue	56.0 - 56.8	44.3 - 51.6	56.3 - 57.9	1.3	34.3 - 35.9
R58	1 Vandalia Avenue	56.0 - 56.0	42.8 - 46.4	56.2 - 56.5	0.5	34.2 - 34.5
R59	1 Vandalia Avenue	56.0 - 56.7	54.5 - 59.8	58.3 - 61.5	5.3	36.3 - 39.5
R60	1 Vandalia Avenue	56.0 - 56.0	39.7 - 42.3	56.1 - 56.2	0.2	34.1 - 34.2
R61	1180 Pennsylvania Avenue	56.0 - 57.4	53.7 - 58.9	58.5 - 60.8	4.6	36.5 - 38.8
R62	1180 Pennsylvania Avenue	56.0 - 58.9	65.0 - 68.9	65.8 - 69.2	11.3	43.8 - 47.2
R63	1180 Pennsylvania Avenue	56.0 - 56.0	55.3 - 59.7	58.7 - 61.2	5.2	36.7 - 39.2
R64	1180 Pennsylvania Avenue	56.0 - 57.3	64.0 - 68.6	64.8 - 68.9	12.8	42.8 - 46.9
R65	99 Vandalia Avenue	56.0 - 56.0	59.6 - 64.3	61.2 - 64.9	8.9	39.2 - 42.9

Table 19-16 Phase 1A – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 5 through 12

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R66	99 Vandalia Avenue	56.0 - 56.0	60.2 - 64.9	61.6 - 65.4	9.4	39.6 - 43.4
R67	99 Vandalia Avenue	56.0 - 57.9	39.3 - 41.7	56.1 - 58.0	0.2	34.1 - 36.0
R68	99 Vandalia Avenue	56.7 - 62.2	55.9 - 62.5	59.3 - 65.4	3.5	37.3 - 43.4
R69	1170 Pennsylvania Avenue	56.2 - 60.4	66.3 - 71.4	66.7 - 71.6	13.9	44.7 - 49.6
R70	1170 Pennsylvania Avenue	56.0 - 56.0	66.0 - 70.8	66.4 - 70.9	14.9	44.4 - 48.9
R71	1170 Pennsylvania Avenue	56.0 - 56.0	64.7 - 69.5	65.2 - 69.7	13.7	43.2 - 47.7
R72	1170 Pennsylvania Avenue	56.0 - 57.3	57.8 - 62.6	60.0 - 63.6	6.9	38.0 - 41.6
R73	1170 Pennsylvania Avenue	59.5 - 62.1	51.7 - 57.5	60.2 - 63.3	1.9	38.2 - 41.3
R74	1155 Pennsylvania Avenue	56.0 - 61.9	61.7 - 66.4	62.7 - 67.6	7.1	40.7 - 45.6
R75	1155 Pennsylvania Avenue	56.0 - 58.8	59.4 - 64.1	61.0 - 65.1	8.7	39.0 - 43.1
R76	1155 Pennsylvania Avenue	56.0 - 56.0	43.5 - 53.2	56.2 - 57.8	1.8	34.2 - 35.8
R77	1155 Pennsylvania Avenue	56.0 - 58.5	41.8 - 43.6	56.2 - 58.6	0.2	34.2 - 36.6
R78	1155 Pennsylvania Avenue	56.0 - 59.1	61.0 - 65.6	62.3 - 66.4	8.7	40.3 - 44.4
R79	1155 Pennsylvania Avenue	56.0 - 59.4	60.8 - 65.5	62.1 - 66.4	9.2	40.1 - 44.4
R80	1155 Pennsylvania Avenue	56.0 - 56.0	40.9 - 42.9	56.1 - 56.2	0.2	34.1 - 34.2
R81	1155 Pennsylvania Avenue	56.0 - 56.0	40.3 - 42.2	56.1 - 56.2	0.2	34.1 - 34.2
R82	1155 Pennsylvania Avenue	56.0 - 57.8	57.7 - 62.3	59.9 - 63.6	7.1	37.9 - 41.6
R83	1155 Pennsylvania Avenue	56.0 - 58.8	57.1 - 61.8	59.6 - 63.5	6.0	37.6 - 41.5
R84	1155 Pennsylvania Avenue	56.0 - 56.0	37.2 - 53.9	56.1 - 58.1	2.1	34.1 - 36.1
R85	1155 Pennsylvania Avenue	56.0 - 57.4	51.5 - 58.7	57.3 - 61.1	4.4	35.3 - 39.1
R86	1155 Pennsylvania Avenue	56.0 - 56.0	35.9 - 51.9	56.0 - 57.4	1.4	34.0 - 35.4
R87	1155 Pennsylvania Avenue	56.0 - 56.0	40.7 - 45.7	56.1 - 56.4	0.4	34.1 - 34.4
R88	1260 Cronton Loop	56.0 - 58.8	34.6 - 37.3	56.0 - 58.8	0.0	34.0 - 36.8
R89	1260 Cronton Loop	56.0 - 62.4	35.6 - 41.9	56.0 - 62.4	0.1	34.0 - 40.4
R90	1260 Cronton Loop	57.0 - 65.9	37.5 - 56.1	57.0 - 66.3	0.4	35.0 - 44.3
R91	1260 Cronton Loop	56.0 - 62.9	56.7 - 61.9	59.4 - 65.4	4.1	37.4 - 43.4
R92	1260 Cronton Loop	56.0 - 60.3	37.4 - 61.7	56.1 - 64.1	3.9	34.1 - 42.1
R93	1260 Cronton Loop	56.0 - 56.0	36.5 - 59.7	56.0 - 61.2	5.2	34.0 - 39.2
R94	1260 Cronton Loop	56.0 - 61.8	36.6 - 60.0	56.0 - 64.0	2.2	34.0 - 42.0

Source: VHB 2022

Table 19-17 Phase 1A – Fit-Out Construction Noise Levels: Months 13 through 17

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	38.0 - 41.1	65.7 - 66.3	0.0	43.7 - 44.3
R02	10835 Flatlands Avenue	65.0 - 65.4	38.5 - 38.7	65.0 - 65.4	0.0	43.0 - 43.4
R03	10835 Flatlands Avenue	69.1 - 69.7	41.7 - 42.0	69.1 - 69.7	0.0	47.1 - 47.7
R04	Farragut Road Park	71.5 - 71.5	42.1 - 42.1	71.5 - 71.5	0.0	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	33.8 - 33.8	67.3 - 67.3	0.0	40.3 - 40.3
R06	730 Louisiana Avenue	59.3 - 59.3	29.0 - 29.0	59.3 - 59.3	0.0	32.3 - 32.3
R07	730 Louisiana Avenue	56.0 - 56.0	34.1 - 34.1	56.0 - 56.0	0.0	29.0 - 29.0
R08	730 Louisiana Avenue	58.2 - 58.2	42.5 - 42.5	58.3 - 58.3	0.1	31.3 - 31.3
R09	730 Louisiana Avenue	62.4 - 62.4	42.4 - 42.4	62.4 - 62.4	0.0	35.4 - 35.4
R10	790 Louisiana Avenue	61.3 - 63.1	27.8 - 28.1	61.3 - 63.1	0.0	39.3 - 41.1
R11	508 Louisiana Avenue	59.8 - 61.2	25.3 - 25.6	59.8 - 61.2	0.0	37.8 - 39.2
R12	556 Louisiana Avenue	56.0 - 58.4	26.7 - 26.8	56.0 - 58.4	0.0	34.0 - 36.4
R14	12048 Flatlands Avenue	65.3 - 68.8	28.6 - 29.5	65.3 - 68.8	0.0	43.3 - 46.8
R39	12041 Flatlands Avenue	58.3 - 58.3	38.3 - 38.3	58.3 - 58.3	0.0	31.3 - 31.3
R40	12079 Flatlands Avenue	56.0 - 56.0	34.6 - 34.6	56.0 - 56.0	0.0	29.0 - 29.0
R41	12079 Flatlands Avenue	59.5 - 59.5	45.8 - 45.8	59.7 - 59.7	0.2	32.7 - 32.7
R42	1036 Sheffield Avenue	60.5 - 61.7	45.3 - 48.8	60.6 - 61.9	0.2	33.6 - 34.9
R43	1036 Sheffield Avenue	56.0 - 59.2	45.3 - 48.7	56.4 - 59.5	0.6	29.4 - 32.5
R44	1118 Pennsylvania Avenue	64.3 - 64.3	35.9 - 35.9	64.3 - 64.3	0.0	37.3 - 37.3
R45	1143 Flatlands Avenue	63.4 - 63.4	55.4 - 55.4	64.0 - 64.0	0.6	37.0 - 37.0
R46	1111 Pennsylvania Avenue	56.6 - 56.6	43.7 - 43.7	56.8 - 56.8	0.2	29.8 - 29.8
R47	148 Cozine Avenue	64.3 - 65.1	52.6 - 52.8	64.6 - 65.3	0.3	42.6 - 43.3
R48	148 Cozine Avenue	57.7 - 60.5	46.4 - 51.0	58.0 - 61.0	0.5	36.0 - 39.0
R49	148 Cozine Avenue	56.0 - 56.0	38.1 - 42.6	56.1 - 56.2	0.2	34.1 - 34.2
R50	190 Cozine Avenue	59.0 - 67.2	44.9 - 48.8	59.2 - 67.3	0.2	37.2 - 45.3
R51	1 Vandalia Avenue	58.8 - 64.5	27.6 - 30.3	58.8 - 64.5	0.0	36.8 - 42.5
R52	1 Vandalia Avenue	59.7 - 64.9	35.6 - 40.3	59.7 - 64.9	0.0	37.7 - 42.9
R53	1 Vandalia Avenue	56.0 - 58.1	37.5 - 44.7	56.1 - 58.3	0.3	34.1 - 36.3
R54	1 Vandalia Avenue	56.0 - 61.8	28.6 - 28.8	56.0 - 61.8	0.0	34.0 - 39.8
R55	1 Vandalia Avenue	56.0 - 56.0	31.1 - 31.1	56.0 - 56.0	0.0	34.0 - 34.0
R56	1 Vandalia Avenue	56.0 - 56.0	43.3 - 43.3	56.2 - 56.2	0.2	34.2 - 34.2
R57	1 Vandalia Avenue	56.0 - 56.8	31.2 - 33.4	56.0 - 56.8	0.0	34.0 - 34.8
R58	1 Vandalia Avenue	56.0 - 56.0	31.9 - 32.2	56.0 - 56.0	0.0	34.0 - 34.0
R59	1 Vandalia Avenue	56.0 - 56.7	35.3 - 39.3	56.0 - 56.8	0.1	34.0 - 34.8
R60	1 Vandalia Avenue	56.0 - 56.0	31.5 - 31.9	56.0 - 56.0	0.0	34.0 - 34.0
R61	1180 Pennsylvania Avenue	56.0 - 57.4	34.6 - 48.8	56.3 - 57.4	0.7	34.3 - 35.4
R62	1180 Pennsylvania Avenue	56.0 - 58.9	47.2 - 51.4	56.7 - 59.4	1.0	34.7 - 37.4
R63	1180 Pennsylvania Avenue	56.0 - 56.0	37.4 - 40.6	56.1 - 56.1	0.1	34.1 - 34.1
R64	1180 Pennsylvania Avenue	56.0 - 57.3	42.6 - 46.8	56.2 - 57.4	0.5	34.2 - 35.4
R65	99 Vandalia Avenue	56.0 - 56.0	36.5 - 40.0	56.0 - 56.1	0.1	34.0 - 34.1

Table 19-17 Phase 1A – Fit-Out Construction Noise Levels: Months 13 through 17

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R66	99 Vandalia Avenue	56.0 - 56.0	36.7 - 40.3	56.1 - 56.1	0.1	34.1 - 34.1
R67	99 Vandalia Avenue	56.0 - 57.9	32.0 - 33.3	56.0 - 57.9	0.0	34.0 - 35.9
R68	99 Vandalia Avenue	56.7 - 62.2	45.8 - 50.5	57.0 - 62.5	0.4	35.0 - 40.5
R69	1170 Pennsylvania Avenue	56.2 - 60.4	40.6 - 45.4	56.5 - 60.5	0.3	34.5 - 38.5
R70	1170 Pennsylvania Avenue	56.0 - 56.0	39.6 - 41.7	56.1 - 56.2	0.2	34.1 - 34.2
R71	1170 Pennsylvania Avenue	56.0 - 56.0	37.5 - 38.8	56.1 - 56.1	0.1	34.1 - 34.1
R72	1170 Pennsylvania Avenue	56.0 - 57.3	36.8 - 38.1	56.1 - 57.3	0.1	34.1 - 35.3
R73	1170 Pennsylvania Avenue	59.5 - 62.1	37.6 - 52.7	59.5 - 62.5	0.8	37.5 - 40.5
R74	1155 Pennsylvania Avenue	56.0 - 61.9	52.8 - 57.5	57.7 - 63.2	1.7	35.7 - 41.2
R75	1155 Pennsylvania Avenue	56.0 - 58.8	50.2 - 55.2	57.0 - 60.3	2.4	35.0 - 38.3
R76	1155 Pennsylvania Avenue	56.0 - 56.0	48.2 - 53.2	56.7 - 57.8	1.8	34.7 - 35.8
R77	1155 Pennsylvania Avenue	56.0 - 58.5	38.2 - 40.1	56.1 - 58.5	0.1	34.1 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	51.7 - 57.9	57.5 - 61.2	2.7	35.5 - 39.2
R79	1155 Pennsylvania Avenue	56.0 - 59.4	53.2 - 58.7	57.9 - 61.8	3.0	35.9 - 39.8
R80	1155 Pennsylvania Avenue	56.0 - 56.0	35.1 - 36.3	56.0 - 56.0	0.0	34.0 - 34.0
R81	1155 Pennsylvania Avenue	56.0 - 56.0	34.4 - 35.2	56.0 - 56.0	0.0	34.0 - 34.0
R82	1155 Pennsylvania Avenue	56.0 - 57.8	49.1 - 54.0	56.8 - 59.3	1.5	34.8 - 37.3
R83	1155 Pennsylvania Avenue	56.0 - 58.8	48.4 - 53.5	56.7 - 59.9	1.1	34.7 - 37.9
R84	1155 Pennsylvania Avenue	56.0 - 56.0	30.2 - 40.4	56.0 - 56.1	0.1	34.0 - 34.1
R85	1155 Pennsylvania Avenue	56.0 - 57.4	45.2 - 48.4	56.3 - 57.9	0.5	34.3 - 35.9
R86	1155 Pennsylvania Avenue	56.0 - 56.0	28.5 - 37.4	56.0 - 56.1	0.1	34.0 - 34.1
R87	1155 Pennsylvania Avenue	56.0 - 56.0	28.0 - 30.2	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	26.1 - 26.4	56.0 - 58.8	0.0	34.0 - 36.8
R89	1260 Cronton Loop	56.0 - 62.4	27.2 - 27.7	56.0 - 62.4	0.0	34.0 - 40.4
R90	1260 Cronton Loop	57.0 - 65.9	28.9 - 36.6	57.0 - 65.9	0.0	35.0 - 43.9
R91	1260 Cronton Loop	56.0 - 62.9	36.0 - 40.7	56.0 - 62.9	0.0	34.0 - 40.9
R92	1260 Cronton Loop	56.0 - 60.3	30.0 - 41.8	56.0 - 60.4	0.1	34.0 - 38.4
R93	1260 Cronton Loop	56.0 - 56.0	29.2 - 34.4	56.0 - 56.0	0.0	34.0 - 34.0
R94	1260 Cronton Loop	56.0 - 61.8	29.3 - 47.3	56.0 - 62.0	0.2	34.0 - 40.0

Source: VHB 2022

Table 19-18 Phase 1A – Fit-Out Construction Noise Levels: Months 18 through 23

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	48.9 - 50.5	65.8 - 66.4	0.1	43.8 - 44.4
R02	10835 Flatlands Avenue	65.0 - 65.4	49.5 - 50.1	65.1 - 65.5	0.1	43.1 - 43.5
R03	10835 Flatlands Avenue	69.1 - 69.7	52.2 - 53.2	69.2 - 69.8	0.1	47.2 - 47.8
R04	Farragut Road Park	71.5 - 71.5	53.3 - 53.3	71.6 - 71.6	0.1	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	52.9 - 52.9	67.5 - 67.5	0.2	40.5 - 40.5
R06	730 Louisiana Avenue	59.3 - 59.3	44.0 - 44.0	59.4 - 59.4	0.1	32.4 - 32.4
R07	730 Louisiana Avenue	56.0 - 56.0	45.5 - 45.5	56.4 - 56.4	0.4	29.4 - 29.4
R08	730 Louisiana Avenue	58.2 - 58.2	54.1 - 54.1	59.6 - 59.6	1.4	32.6 - 32.6
R09	730 Louisiana Avenue	62.4 - 62.4	54.8 - 54.8	63.1 - 63.1	0.7	36.1 - 36.1
R10	790 Louisiana Avenue	61.3 - 63.1	38.2 - 38.4	61.3 - 63.1	0.0	39.3 - 41.1
R11	508 Louisiana Avenue	59.8 - 61.2	35.6 - 35.8	59.8 - 61.2	0.0	37.8 - 39.2
R12	556 Louisiana Avenue	56.0 - 58.4	37.9 - 38.2	56.1 - 58.4	0.1	34.1 - 36.4
R14	12048 Flatlands Avenue	65.3 - 68.8	37.8 - 41.0	65.3 - 68.8	0.0	43.3 - 46.8
R39	12041 Flatlands Avenue	58.3 - 58.3	57.3 - 57.3	60.8 - 60.8	2.5	33.8 - 33.8
R40	12079 Flatlands Avenue	56.0 - 56.0	47.6 - 47.6	56.6 - 56.6	0.6	29.6 - 29.6
R41	12079 Flatlands Avenue	59.5 - 59.5	62.6 - 62.6	64.3 - 64.3	4.8	37.3 - 37.3
R42	1036 Sheffield Avenue	60.5 - 61.7	64.6 - 68.7	66.0 - 69.5	8.2	39.0 - 42.5
R43	1036 Sheffield Avenue	56.0 - 59.2	64.3 - 68.2	64.9 - 68.5	11.7	37.9 - 41.5
R44	1118 Pennsylvania Avenue	64.3 - 64.3	45.3 - 45.3	64.4 - 64.4	0.1	37.4 - 37.4
R45	1143 Flatlands Avenue	63.4 - 63.4	58.3 - 58.3	64.6 - 64.6	1.2	37.6 - 37.6
R46	1111 Pennsylvania Avenue	56.6 - 56.6	47.7 - 47.7	57.1 - 57.1	0.5	30.1 - 30.1
R47	148 Cozine Avenue	64.3 - 65.1	57.8 - 57.9	65.2 - 65.9	0.9	43.2 - 43.9
R48	148 Cozine Avenue	57.7 - 60.5	51.1 - 55.3	58.6 - 61.6	1.1	36.6 - 39.6
R49	148 Cozine Avenue	56.0 - 56.0	44.2 - 48.8	56.3 - 56.8	0.8	34.3 - 34.8
R50	190 Cozine Avenue	59.0 - 67.2	52.4 - 56.4	59.9 - 67.5	0.9	37.9 - 45.5
R51	1 Vandalia Avenue	58.8 - 64.5	39.8 - 48.5	59.2 - 64.5	0.4	37.2 - 42.5
R52	1 Vandalia Avenue	59.7 - 64.9	56.4 - 61.3	61.4 - 66.5	1.7	39.4 - 44.5
R53	1 Vandalia Avenue	56.0 - 58.1	54.8 - 62.7	58.5 - 64.0	6.0	36.5 - 42.0
R54	1 Vandalia Avenue	56.0 - 61.8	40.2 - 40.4	56.1 - 61.8	0.1	34.1 - 39.8
R55	1 Vandalia Avenue	56.0 - 56.0	43.1 - 43.1	56.2 - 56.2	0.2	34.2 - 34.2
R56	1 Vandalia Avenue	56.0 - 56.0	57.5 - 57.5	59.8 - 59.8	3.8	37.8 - 37.8
R57	1 Vandalia Avenue	56.0 - 56.8	42.3 - 46.4	56.2 - 57.2	0.5	34.2 - 35.2
R58	1 Vandalia Avenue	56.0 - 56.0	41.7 - 42.2	56.2 - 56.2	0.2	34.2 - 34.2
R59	1 Vandalia Avenue	56.0 - 56.7	50.2 - 57.3	57.0 - 60.0	3.7	35.0 - 38.0
R60	1 Vandalia Avenue	56.0 - 56.0	41.9 - 42.7	56.2 - 56.2	0.2	34.2 - 34.2
R61	1180 Pennsylvania Avenue	56.0 - 57.4	49.7 - 59.6	57.5 - 61.2	5.0	35.5 - 39.2
R62	1180 Pennsylvania Avenue	56.0 - 58.9	63.6 - 67.7	64.6 - 68.1	11.0	42.6 - 46.1
R63	1180 Pennsylvania Avenue	56.0 - 56.0	55.9 - 60.5	59.0 - 61.8	5.8	37.0 - 39.8
R64	1180 Pennsylvania Avenue	56.0 - 57.3	62.4 - 67.1	63.6 - 67.4	11.4	41.6 - 45.4
R65	99 Vandalia Avenue	56.0 - 56.0	55.2 - 59.8	58.6 - 61.3	5.3	36.6 - 39.3

Table 19-18 Phase 1A – Fit-Out Construction Noise Levels: Months 18 through 23

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R66	99 Vandalia Avenue	56.0 - 56.0	46.8 - 57.6	56.5 - 59.9	3.9	34.5 - 37.9
R67	99 Vandalia Avenue	56.0 - 57.9	41.8 - 42.6	56.2 - 58.0	0.2	34.2 - 36.0
R68	99 Vandalia Avenue	56.7 - 62.2	43.0 - 45.1	56.9 - 62.3	0.2	34.9 - 40.3
R69	1170 Pennsylvania Avenue	56.2 - 60.4	50.3 - 52.7	57.5 - 61.0	1.6	35.5 - 39.0
R70	1170 Pennsylvania Avenue	56.0 - 56.0	49.7 - 52.8	56.9 - 57.7	1.7	34.9 - 35.7
R71	1170 Pennsylvania Avenue	56.0 - 56.0	50.4 - 54.8	57.1 - 58.5	2.5	35.1 - 36.5
R72	1170 Pennsylvania Avenue	56.0 - 57.3	46.7 - 47.9	56.5 - 57.8	0.6	34.5 - 35.8
R73	1170 Pennsylvania Avenue	59.5 - 62.1	47.2 - 49.7	59.7 - 62.3	0.4	37.7 - 40.3
R74	1155 Pennsylvania Avenue	56.0 - 61.9	59.2 - 64.6	60.9 - 66.3	5.5	38.9 - 44.3
R75	1155 Pennsylvania Avenue	56.0 - 58.8	57.6 - 62.4	59.9 - 63.8	7.0	37.9 - 41.8
R76	1155 Pennsylvania Avenue	56.0 - 56.0	54.0 - 58.7	58.1 - 60.6	4.6	36.1 - 38.6
R77	1155 Pennsylvania Avenue	56.0 - 58.5	39.7 - 44.9	56.1 - 58.6	0.2	34.1 - 36.6
R78	1155 Pennsylvania Avenue	56.0 - 59.1	60.0 - 65.2	61.7 - 66.0	7.8	39.7 - 44.0
R79	1155 Pennsylvania Avenue	56.0 - 59.4	59.3 - 65.8	61.1 - 66.5	8.1	39.1 - 44.5
R80	1155 Pennsylvania Avenue	56.0 - 56.0	43.0 - 43.4	56.2 - 56.2	0.2	34.2 - 34.2
R81	1155 Pennsylvania Avenue	56.0 - 56.0	42.1 - 42.7	56.2 - 56.2	0.2	34.2 - 34.2
R82	1155 Pennsylvania Avenue	56.0 - 57.8	56.4 - 61.2	59.2 - 62.8	5.5	37.2 - 40.8
R83	1155 Pennsylvania Avenue	56.0 - 58.8	55.7 - 60.5	58.9 - 62.7	4.2	36.9 - 40.7
R84	1155 Pennsylvania Avenue	56.0 - 56.0	37.9 - 50.6	56.1 - 57.1	1.1	34.1 - 35.1
R85	1155 Pennsylvania Avenue	56.0 - 57.4	48.8 - 55.7	56.8 - 59.6	2.5	34.8 - 37.6
R86	1155 Pennsylvania Avenue	56.0 - 56.0	35.9 - 47.7	56.0 - 56.6	0.6	34.0 - 34.6
R87	1155 Pennsylvania Avenue	56.0 - 56.0	35.5 - 40.1	56.0 - 56.1	0.1	34.0 - 34.1
R88	1260 Cronton Loop	56.0 - 58.8	36.3 - 37.2	56.0 - 58.8	0.1	34.0 - 36.8
R89	1260 Cronton Loop	56.0 - 62.4	37.3 - 38.9	56.1 - 62.4	0.1	34.1 - 40.4
R90	1260 Cronton Loop	57.0 - 65.9	39.5 - 55.0	57.1 - 66.2	0.4	35.1 - 44.2
R91	1260 Cronton Loop	56.0 - 62.9	54.1 - 58.8	58.2 - 64.3	2.6	36.2 - 42.3
R92	1260 Cronton Loop	56.0 - 60.3	39.9 - 54.1	56.1 - 61.2	1.1	34.1 - 39.2
R93	1260 Cronton Loop	56.0 - 56.0	39.1 - 51.3	56.1 - 57.3	1.3	34.1 - 35.3
R94	1260 Cronton Loop	56.0 - 61.8	39.6 - 46.1	56.1 - 61.9	0.1	34.1 - 39.9

Source: VHB 2022

Table 19-19 Phase 1B – Foundation Construction Noise Levels: Months 25 through 28

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	56.1 - 56.5	66.2 - 66.7	0.5	44.2 - 44.7
R02	10835 Flatlands Avenue	65.0 - 65.4	57.2 - 57.9	65.8 - 66.1	0.8	43.8 - 44.1
R03	10835 Flatlands Avenue	69.1 - 69.7	58.9 - 60.7	69.5 - 70.2	0.5	47.5 - 48.2
R04	Farragut Road Park	71.5 - 71.5	61.6 - 61.6	71.9 - 71.9	0.4	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	60.7 - 60.7	68.2 - 68.2	0.9	41.2 - 41.2
R06	730 Louisiana Avenue	59.3 - 59.3	49.2 - 49.2	59.7 - 59.7	0.4	32.7 - 32.7
R07	730 Louisiana Avenue	56.0 - 56.0	53.4 - 53.4	57.9 - 57.9	1.9	30.9 - 30.9
R08	730 Louisiana Avenue	58.2 - 58.2	57.8 - 57.8	61.0 - 61.0	2.8	34.0 - 34.0
R09	730 Louisiana Avenue	62.4 - 62.4	60.0 - 60.0	64.4 - 64.4	2.0	37.4 - 37.4
R10	790 Louisiana Avenue	61.3 - 63.1	47.3 - 49.0	61.5 - 63.2	0.2	39.5 - 41.2
R11	508 Louisiana Avenue	59.8 - 61.2	44.3 - 50.9	59.9 - 61.6	0.4	37.9 - 39.6
R12	556 Louisiana Avenue	56.0 - 58.4	43.6 - 44.5	56.2 - 58.6	0.3	34.2 - 36.6
R14	12048 Flatlands Avenue	65.3 - 68.8	49.2 - 50.0	65.4 - 68.8	0.1	43.4 - 46.8
R28	Proposed Building 1	62.9 - 65.9	75.1 - 82.5	75.4 - 82.6	17.9	48.4 - 55.6
R29	Proposed Building 2	56.0 - 57.6	76.5 - 83.2	76.5 - 83.2	26.1	49.5 - 56.2
R30	Proposed Building 1	67.2 - 71.2	63.6 - 72.6	68.8 - 74.7	4.2	39.8 - 42.7
R31	Proposed Building 1	56.0 - 56.0	65.2 - 75.0	65.7 - 75.1	19.1	38.7 - 48.1
R32	Proposed Building 2	56.0 - 56.3	67.3 - 75.9	67.6 - 75.9	19.8	40.6 - 48.9
R33	Proposed Building 2	56.0 - 56.2	67.6 - 72.7	67.9 - 72.8	16.8	40.9 - 45.8
R34	Proposed Building 1	66.3 - 70.4	51.5 - 53.5	66.4 - 70.5	0.1	35.7 - 38.5
R35	Proposed Building 2	59.1 - 63.9	52.3 - 54.8	59.9 - 64.4	0.8	29.4 - 32.4
R39	12041 Flatlands Avenue	58.3 - 58.3	65.3 - 65.3	66.1 - 66.1	7.8	39.1 - 39.1
R40	12079 Flatlands Avenue	56.0 - 56.0	68.1 - 68.1	68.4 - 68.4	12.4	41.4 - 41.4
R41	12079 Flatlands Avenue	59.5 - 59.5	70.9 - 70.9	71.2 - 71.2	11.7	44.2 - 44.2
R42	1036 Sheffield Avenue	60.5 - 61.7	72.5 - 75.6	72.8 - 75.8	14.1	45.8 - 48.8
R43	1036 Sheffield Avenue	56.0 - 59.2	65.7 - 67.8	66.1 - 68.4	10.3	39.1 - 41.4
R44	1118 Pennsylvania Avenue	64.3 - 64.3	57.8 - 57.8	65.2 - 65.2	0.9	38.2 - 38.2
R45	1143 Flatlands Avenue	63.4 - 63.4	47.5 - 47.5	63.5 - 63.5	0.1	36.5 - 36.5
R46	1111 Pennsylvania Avenue	56.6 - 56.6	52.9 - 52.9	58.1 - 58.1	1.5	31.1 - 31.1
R47	148 Cozine Avenue	64.3 - 65.1	55.5 - 56.4	64.8 - 65.6	0.5	42.8 - 43.6
R48	148 Cozine Avenue	57.7 - 60.5	53.4 - 58.0	59.1 - 62.4	1.9	37.1 - 40.4
R49	148 Cozine Avenue	56.0 - 56.0	47.1 - 50.8	56.5 - 57.1	1.1	34.5 - 35.1
R50	190 Cozine Avenue	59.0 - 67.2	46.1 - 56.4	59.4 - 67.5	0.5	37.4 - 45.5
R51	1 Vandalia Avenue	58.8 - 64.5	49.8 - 59.8	61.8 - 64.7	3.0	39.8 - 42.7
R52	1 Vandalia Avenue	59.7 - 64.9	64.0 - 69.7	65.4 - 70.9	6.5	43.4 - 48.9
R53	1 Vandalia Avenue	56.0 - 58.1	63.0 - 70.6	63.8 - 70.8	13.4	41.8 - 48.8
R54	1 Vandalia Avenue	56.0 - 61.8	46.2 - 48.4	56.4 - 62.0	0.4	34.4 - 40.0
R55	1 Vandalia Avenue	56.0 - 56.0	52.1 - 52.1	57.5 - 57.5	1.5	35.5 - 35.5
R56	1 Vandalia Avenue	56.0 - 56.0	66.4 - 66.4	66.8 - 66.8	10.8	44.8 - 44.8
R57	1 Vandalia Avenue	56.0 - 56.8	62.9 - 69.0	63.7 - 69.3	13.1	41.7 - 47.3

Table 19-19 Phase 1B – Foundation Construction Noise Levels: Months 25 through 28

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R58	1 Vandalia Avenue	56.0 - 56.0	48.7 - 50.4	56.7 - 57.1	1.1	34.7 - 35.1
R59	1 Vandalia Avenue	56.0 - 56.7	62.1 - 67.4	63.1 - 67.7	11.3	41.1 - 45.7
R60	1 Vandalia Avenue	56.0 - 56.0	49.3 - 50.7	56.8 - 57.1	1.1	34.8 - 35.1
R61	1180 Pennsylvania Avenue	56.0 - 57.4	67.5 - 73.4	67.8 - 73.5	16.9	45.8 - 51.5
R62	1180 Pennsylvania Avenue	56.0 - 58.9	74.0 - 79.0	74.1 - 79.0	22.4	52.1 - 57.0
R63	1180 Pennsylvania Avenue	56.0 - 56.0	56.5 - 58.9	59.3 - 60.7	4.7	37.3 - 38.7
R64	1180 Pennsylvania Avenue	56.0 - 57.3	65.4 - 74.0	66.0 - 74.1	17.9	44.0 - 52.1
R65	99 Vandalia Avenue	56.0 - 56.0	64.1 - 70.3	64.7 - 70.5	14.5	42.7 - 48.5
R66	99 Vandalia Avenue	56.0 - 56.0	65.0 - 70.7	65.5 - 70.8	14.8	43.5 - 48.8
R67	99 Vandalia Avenue	56.0 - 57.9	46.9 - 49.1	56.5 - 58.4	0.7	34.5 - 36.4
R68	99 Vandalia Avenue	56.7 - 62.2	48.4 - 62.2	57.3 - 65.2	3.5	35.3 - 43.2
R69	1170 Pennsylvania Avenue	56.2 - 60.4	67.7 - 73.3	68.0 - 73.5	14.1	46.0 - 51.5
R70	1170 Pennsylvania Avenue	56.0 - 56.0	68.5 - 74.3	68.7 - 74.4	18.4	46.7 - 52.4
R71	1170 Pennsylvania Avenue	56.0 - 56.0	68.5 - 74.4	68.7 - 74.5	18.5	46.7 - 52.5
R72	1170 Pennsylvania Avenue	56.0 - 57.3	62.6 - 68.0	63.5 - 68.4	11.3	41.5 - 46.4
R73	1170 Pennsylvania Avenue	59.5 - 62.1	50.8 - 52.9	60.0 - 62.6	0.6	38.0 - 40.6
R74	1155 Pennsylvania Avenue	56.0 - 61.9	52.6 - 63.9	57.6 - 66.0	4.1	35.6 - 44.0
R75	1155 Pennsylvania Avenue	56.0 - 58.8	54.2 - 60.7	58.2 - 62.7	4.5	36.2 - 40.7
R76	1155 Pennsylvania Avenue	56.0 - 56.0	44.1 - 47.2	56.3 - 56.5	0.5	34.3 - 34.5
R77	1155 Pennsylvania Avenue	56.0 - 58.5	45.8 - 50.1	56.4 - 59.1	0.6	34.4 - 37.1
R78	1155 Pennsylvania Avenue	56.0 - 59.1	61.7 - 67.1	63.0 - 67.7	9.2	41.0 - 45.7
R79	1155 Pennsylvania Avenue	56.0 - 59.4	59.3 - 65.5	61.1 - 66.5	7.4	39.1 - 44.5
R80	1155 Pennsylvania Avenue	56.0 - 56.0	47.3 - 47.9	56.5 - 56.6	0.6	34.5 - 34.6
R81	1155 Pennsylvania Avenue	56.0 - 56.0	46.3 - 47.1	56.4 - 56.5	0.5	34.4 - 34.5
R82	1155 Pennsylvania Avenue	56.0 - 57.8	57.3 - 63.5	59.7 - 64.5	6.8	37.7 - 42.5
R83	1155 Pennsylvania Avenue	56.0 - 58.8	57.3 - 63.7	59.7 - 64.8	6.4	37.7 - 42.8
R84	1155 Pennsylvania Avenue	56.0 - 56.0	43.3 - 47.8	56.2 - 56.6	0.6	34.2 - 34.6
R85	1155 Pennsylvania Avenue	56.0 - 57.4	48.8 - 54.7	56.8 - 59.3	2.0	34.8 - 37.3
R86	1155 Pennsylvania Avenue	56.0 - 56.0	42.3 - 45.9	56.2 - 56.4	0.4	34.2 - 34.4
R87	1155 Pennsylvania Avenue	56.0 - 56.0	42.2 - 43.9	56.2 - 56.3	0.3	34.2 - 34.3
R88	1260 Cronton Loop	56.0 - 58.8	42.1 - 46.0	56.2 - 59.0	0.3	34.2 - 37.0
R89	1260 Cronton Loop	56.0 - 62.4	43.8 - 56.6	56.3 - 63.4	1.5	34.3 - 41.4
R90	1260 Cronton Loop	57.0 - 65.9	49.6 - 62.6	57.7 - 67.6	2.3	35.7 - 45.6
R91	1260 Cronton Loop	56.0 - 62.9	45.5 - 59.6	56.4 - 64.6	1.7	34.4 - 42.6
R92	1260 Cronton Loop	56.0 - 60.3	45.0 - 66.8	56.3 - 67.7	7.4	34.3 - 45.7
R93	1260 Cronton Loop	56.0 - 56.0	57.3 - 65.6	59.7 - 66.1	10.1	37.7 - 44.1
R94	1260 Cronton Loop	56.0 - 61.8	43.7 - 59.5	56.2 - 63.8	2.0	34.2 - 41.8

Source: VHB 2022

Table 19-20 Phase 1B – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 29 through 36

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	54.0 - 55.4	66.0 - 66.5	0.4	44.0 - 44.5
R02	10835 Flatlands Avenue	65.0 - 65.4	54.7 - 55.6	65.4 - 65.8	0.4	43.4 - 43.8
R03	10835 Flatlands Avenue	69.1 - 69.7	58.7 - 59.5	69.5 - 70.1	0.4	47.5 - 48.1
R04	Farragut Road Park	71.5 - 71.5	59.7 - 59.7	71.8 - 71.8	0.3	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	58.7 - 58.7	67.9 - 67.9	0.6	40.9 - 40.9
R06	730 Louisiana Avenue	59.3 - 59.3	53.7 - 53.7	60.4 - 60.4	1.1	33.4 - 33.4
R07	730 Louisiana Avenue	56.0 - 56.0	60.9 - 60.9	62.1 - 62.1	6.1	35.1 - 35.1
R08	730 Louisiana Avenue	58.2 - 58.2	61.2 - 61.2	63.0 - 63.0	4.8	36.0 - 36.0
R09	730 Louisiana Avenue	62.4 - 62.4	62.5 - 62.5	65.5 - 65.5	3.1	38.5 - 38.5
R10	790 Louisiana Avenue	61.3 - 63.1	60.5 - 62.5	64.6 - 65.7	3.3	42.6 - 43.7
R11	508 Louisiana Avenue	59.8 - 61.2	54.0 - 56.5	60.8 - 62.5	1.3	38.8 - 40.5
R12	556 Louisiana Avenue	56.0 - 58.4	46.9 - 47.8	56.5 - 58.8	0.6	34.5 - 36.8
R14	12048 Flatlands Avenue	65.3 - 68.8	50.1 - 50.9	65.5 - 68.9	0.2	43.5 - 46.9
R28	Proposed Building 1	62.9 - 65.9	72.0 - 77.4	72.5 - 77.6	13.7	45.5 - 50.6
R29	Proposed Building 2	56.0 - 57.6	72.1 - 77.3	72.2 - 77.3	21.0	45.2 - 50.3
R30	Proposed Building 1	67.2 - 71.2	63.1 - 65.4	68.7 - 72.0	1.5	38.8 - 40.0
R31	Proposed Building 1	56.0 - 56.0	65.6 - 70.9	66.1 - 71.0	15.0	39.1 - 44.0
R32	Proposed Building 2	56.0 - 56.3	66.1 - 71.1	66.5 - 71.2	15.2	39.5 - 44.2
R33	Proposed Building 2	56.0 - 56.2	62.4 - 69.6	63.3 - 69.8	13.8	36.3 - 42.8
R34	Proposed Building 1	66.3 - 70.4	46.8 - 50.3	66.3 - 70.4	0.1	35.7 - 38.4
R35	Proposed Building 2	59.1 - 63.9	47.9 - 53.7	59.4 - 64.3	0.5	29.0 - 32.3
R39	12041 Flatlands Avenue	58.3 - 58.3	64.0 - 64.0	65.0 - 65.0	6.7	38.0 - 38.0
R40	12079 Flatlands Avenue	56.0 - 56.0	68.1 - 68.1	68.4 - 68.4	12.4	41.4 - 41.4
R41	12079 Flatlands Avenue	59.5 - 59.5	70.5 - 70.5	70.8 - 70.8	11.3	43.8 - 43.8
R42	1036 Sheffield Avenue	60.5 - 61.7	71.6 - 73.1	71.9 - 73.4	12.1	44.9 - 46.4
R43	1036 Sheffield Avenue	56.0 - 59.2	63.8 - 64.2	64.5 - 65.4	8.5	37.5 - 38.4
R44	1118 Pennsylvania Avenue	64.3 - 64.3	57.8 - 57.8	65.2 - 65.2	0.9	38.2 - 38.2
R45	1143 Flatlands Avenue	63.4 - 63.4	44.3 - 44.3	63.5 - 63.5	0.1	36.5 - 36.5
R46	1111 Pennsylvania Avenue	56.6 - 56.6	53.4 - 53.4	58.3 - 58.3	1.7	31.3 - 31.3
R47	148 Cozine Avenue	64.3 - 65.1	52.1 - 55.5	64.6 - 65.6	0.5	42.6 - 43.6
R48	148 Cozine Avenue	57.7 - 60.5	51.8 - 54.4	58.7 - 61.5	1.0	36.7 - 39.5
R49	148 Cozine Avenue	56.0 - 56.0	44.8 - 49.1	56.3 - 56.8	0.8	34.3 - 34.8
R50	190 Cozine Avenue	59.0 - 67.2	44.2 - 53.1	59.3 - 67.4	0.3	37.3 - 45.4
R51	1 Vandalia Avenue	58.8 - 64.5	54.3 - 63.5	63.2 - 65.6	4.7	41.2 - 43.6
R52	1 Vandalia Avenue	59.7 - 64.9	67.1 - 76.0	67.8 - 76.3	14.3	45.8 - 54.3
R53	1 Vandalia Avenue	56.0 - 58.1	68.2 - 76.8	68.5 - 76.9	19.9	46.5 - 54.9
R54	1 Vandalia Avenue	56.0 - 61.8	53.5 - 56.2	57.9 - 62.8	1.9	35.9 - 40.8
R55	1 Vandalia Avenue	56.0 - 56.0	69.9 - 69.9	70.1 - 70.1	14.1	48.1 - 48.1
R56	1 Vandalia Avenue	56.0 - 56.0	72.8 - 72.8	72.9 - 72.9	16.9	50.9 - 50.9

Table 19-20 Phase 1B – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 29 through 36

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R57	1 Vandalia Avenue	56.0 - 56.8	68.8 - 78.3	69.0 - 78.3	22.0	47.0 - 56.3
R58	1 Vandalia Avenue	56.0 - 56.0	54.9 - 58.2	58.5 - 60.2	4.2	36.5 - 38.2
R59	1 Vandalia Avenue	56.0 - 56.7	66.3 - 72.9	66.7 - 73.0	16.6	44.7 - 51.0
R60	1 Vandalia Avenue	56.0 - 56.0	54.7 - 59.8	58.4 - 61.3	5.3	36.4 - 39.3
R61	1180 Pennsylvania Avenue	56.0 - 57.4	71.7 - 77.9	71.8 - 77.9	20.7	49.8 - 55.9
R62	1180 Pennsylvania Avenue	56.0 - 58.9	69.4 - 74.6	69.7 - 74.7	17.4	47.7 - 52.7
R63	1180 Pennsylvania Avenue	56.0 - 56.0	65.1 - 71.6	65.6 - 71.7	15.7	43.6 - 49.7
R64	1180 Pennsylvania Avenue	56.0 - 57.3	61.7 - 66.7	63.0 - 67.1	10.9	41.0 - 45.1
R65	99 Vandalia Avenue	56.0 - 56.0	61.4 - 66.7	62.5 - 67.1	11.1	40.5 - 45.1
R66	99 Vandalia Avenue	56.0 - 56.0	63.5 - 69.3	64.2 - 69.5	13.5	42.2 - 47.5
R67	99 Vandalia Avenue	56.0 - 57.9	46.4 - 49.6	56.5 - 58.4	0.8	34.5 - 36.4
R68	99 Vandalia Avenue	56.7 - 62.2	56.9 - 61.5	59.8 - 64.9	3.1	37.8 - 42.9
R69	1170 Pennsylvania Avenue	56.2 - 60.4	61.5 - 68.0	62.7 - 68.7	9.2	40.7 - 46.7
R70	1170 Pennsylvania Avenue	56.0 - 56.0	66.4 - 71.2	66.8 - 71.3	15.3	44.8 - 49.3
R71	1170 Pennsylvania Avenue	56.0 - 56.0	65.3 - 70.2	65.8 - 70.4	14.4	43.8 - 48.4
R72	1170 Pennsylvania Avenue	56.0 - 57.3	60.2 - 64.4	61.6 - 65.2	8.0	39.6 - 43.2
R73	1170 Pennsylvania Avenue	59.5 - 62.1	47.8 - 53.1	59.8 - 62.4	0.6	37.8 - 40.4
R74	1155 Pennsylvania Avenue	56.0 - 61.9	60.0 - 65.7	61.5 - 67.2	5.5	39.5 - 45.2
R75	1155 Pennsylvania Avenue	56.0 - 58.8	52.5 - 61.7	57.6 - 63.5	4.7	35.6 - 41.5
R76	1155 Pennsylvania Avenue	56.0 - 56.0	41.7 - 47.9	56.2 - 56.6	0.6	34.2 - 34.6
R77	1155 Pennsylvania Avenue	56.0 - 58.5	42.2 - 56.9	56.2 - 60.7	2.6	34.2 - 38.7
R78	1155 Pennsylvania Avenue	56.0 - 59.1	54.6 - 62.7	59.0 - 64.3	5.2	37.0 - 42.3
R79	1155 Pennsylvania Avenue	56.0 - 59.4	45.9 - 57.6	56.8 - 61.6	2.2	34.8 - 39.6
R80	1155 Pennsylvania Avenue	56.0 - 56.0	43.5 - 55.2	56.2 - 58.6	2.6	34.2 - 36.6
R81	1155 Pennsylvania Avenue	56.0 - 56.0	41.9 - 44.8	56.2 - 56.3	0.3	34.2 - 34.3
R82	1155 Pennsylvania Avenue	56.0 - 57.8	51.0 - 58.7	57.2 - 61.3	3.7	35.2 - 39.3
R83	1155 Pennsylvania Avenue	56.0 - 58.8	51.9 - 59.7	57.4 - 62.3	3.5	35.4 - 40.3
R84	1155 Pennsylvania Avenue	56.0 - 56.0	40.2 - 46.8	56.1 - 56.5	0.5	34.1 - 34.5
R85	1155 Pennsylvania Avenue	56.0 - 57.4	46.6 - 52.1	56.5 - 58.5	1.2	34.5 - 36.5
R86	1155 Pennsylvania Avenue	56.0 - 56.0	39.7 - 46.6	56.1 - 56.5	0.5	34.1 - 34.5
R87	1155 Pennsylvania Avenue	56.0 - 56.0	39.4 - 41.3	56.1 - 56.1	0.1	34.1 - 34.1
R88	1260 Cronton Loop	56.0 - 58.8	44.2 - 45.6	56.3 - 59.0	0.4	34.3 - 37.0
R89	1260 Cronton Loop	56.0 - 62.4	46.2 - 57.8	56.4 - 63.7	1.5	34.4 - 41.7
R90	1260 Cronton Loop	57.0 - 65.9	57.5 - 67.6	60.3 - 69.8	6.1	38.3 - 47.8
R91	1260 Cronton Loop	56.0 - 62.9	53.1 - 59.0	57.9 - 64.1	2.4	35.9 - 42.1
R92	1260 Cronton Loop	56.0 - 60.3	53.4 - 63.3	57.9 - 65.1	5.0	35.9 - 43.1
R93	1260 Cronton Loop	56.0 - 56.0	52.2 - 61.5	57.5 - 62.6	6.6	35.5 - 40.6
R94	1260 Cronton Loop	56.0 - 61.8	43.6 - 54.9	56.2 - 62.6	0.8	34.2 - 40.6

Source: VHB 2022

Table 19-21 Phase 1B – Superstructure/Fit-Out Construction Noise Levels: Months 37 through 43

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	47.6 - 48.2	65.8 - 66.4	0.1	43.8 - 44.4
R02	10835 Flatlands Avenue	65.0 - 65.4	50.4 - 50.7	65.2 - 65.5	0.2	43.2 - 43.5
R03	10835 Flatlands Avenue	69.1 - 69.7	51.6 - 52.7	69.2 - 69.8	0.1	47.2 - 47.8
R04	Farragut Road Park	71.5 - 71.5	54.7 - 54.7	71.6 - 71.6	0.1	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	49.4 - 49.4	67.4 - 67.4	0.1	40.4 - 40.4
R06	730 Louisiana Avenue	59.3 - 59.3	40.7 - 40.7	59.4 - 59.4	0.1	32.4 - 32.4
R07	730 Louisiana Avenue	56.0 - 56.0	46.9 - 46.9	56.5 - 56.5	0.5	29.5 - 29.5
R08	730 Louisiana Avenue	58.2 - 58.2	44.5 - 44.5	58.4 - 58.4	0.2	31.4 - 31.4
R09	730 Louisiana Avenue	62.4 - 62.4	40.9 - 40.9	62.4 - 62.4	0.0	35.4 - 35.4
R10	790 Louisiana Avenue	61.3 - 63.1	38.8 - 41.9	61.3 - 63.1	0.0	39.3 - 41.1
R11	508 Louisiana Avenue	59.8 - 61.2	34.6 - 48.5	59.8 - 61.4	0.2	37.8 - 39.4
R12	556 Louisiana Avenue	56.0 - 58.4	34.4 - 43.4	56.0 - 58.5	0.1	34.0 - 36.5
R14	12048 Flatlands Avenue	65.3 - 68.8	40.3 - 40.5	65.3 - 68.8	0.0	43.3 - 46.8
R28	Proposed Building 1	62.9 - 65.9	69.7 - 74.5	70.5 - 75.0	10.6	43.5 - 48.0
R29	Proposed Building 2	56.0 - 57.6	62.9 - 70.1	63.7 - 70.3	13.0	36.7 - 43.3
R30	Proposed Building 1	67.2 - 71.2	54.4 - 63.3	68.7 - 71.4	1.5	38.3 - 39.4
R31	Proposed Building 1	56.0 - 56.0	62.0 - 66.7	63.0 - 67.1	11.1	36.0 - 40.1
R32	Proposed Building 2	56.0 - 56.3	64.3 - 69.0	64.9 - 69.2	13.2	37.9 - 42.2
R33	Proposed Building 2	56.0 - 56.2	44.3 - 49.8	56.3 - 56.9	0.9	29.3 - 29.9
R34	Proposed Building 1	66.3 - 70.4	42.7 - 44.7	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	43.3 - 45.0	59.2 - 63.9	0.1	28.7 - 31.9
R39	12041 Flatlands Avenue	58.3 - 58.3	56.3 - 56.3	60.4 - 60.4	2.1	33.4 - 33.4
R40	12079 Flatlands Avenue	56.0 - 56.0	59.5 - 59.5	61.1 - 61.1	5.1	34.1 - 34.1
R41	12079 Flatlands Avenue	59.5 - 59.5	65.8 - 65.8	66.7 - 66.7	7.2	39.7 - 39.7
R42	1036 Sheffield Avenue	60.5 - 61.7	68.9 - 69.1	69.5 - 69.8	9.0	42.5 - 42.8
R43	1036 Sheffield Avenue	56.0 - 59.2	58.8 - 59.3	60.7 - 62.3	4.7	33.7 - 35.3
R44	1118 Pennsylvania Avenue	64.3 - 64.3	49.7 - 49.7	64.4 - 64.4	0.1	37.4 - 37.4
R45	1143 Flatlands Avenue	63.4 - 63.4	38.5 - 38.5	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	50.6 - 50.6	57.6 - 57.6	1.0	30.6 - 30.6
R47	148 Cozine Avenue	64.3 - 65.1	50.3 - 53.9	64.5 - 65.4	0.3	42.5 - 43.4
R48	148 Cozine Avenue	57.7 - 60.5	44.7 - 46.2	57.9 - 60.7	0.2	35.9 - 38.7
R49	148 Cozine Avenue	56.0 - 56.0	38.1 - 40.9	56.1 - 56.1	0.1	34.1 - 34.1
R50	190 Cozine Avenue	59.0 - 67.2	49.1 - 51.5	59.5 - 67.3	0.5	37.5 - 45.3
R51	1 Vandalia Avenue	58.8 - 64.5	37.8 - 43.7	58.9 - 64.5	0.1	36.9 - 42.5
R52	1 Vandalia Avenue	59.7 - 64.9	39.7 - 58.6	59.8 - 65.7	0.9	37.8 - 43.7
R53	1 Vandalia Avenue	56.0 - 58.1	39.9 - 57.2	56.1 - 60.6	2.6	34.1 - 38.6
R54	1 Vandalia Avenue	56.0 - 61.8	38.1 - 47.6	56.1 - 61.8	0.5	34.1 - 39.8
R55	1 Vandalia Avenue	56.0 - 56.0	40.4 - 40.4	56.1 - 56.1	0.1	34.1 - 34.1
R56	1 Vandalia Avenue	56.0 - 56.0	41.3 - 41.3	56.1 - 56.1	0.1	34.1 - 34.1

Table 19-21 Phase 1B – Superstructure/Fit-Out Construction Noise Levels: Months 37 through 43

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R57	1 Vandalia Avenue	56.0 - 56.8	52.7 - 57.8	57.7 - 60.0	4.0	35.7 - 38.0
R58	1 Vandalia Avenue	56.0 - 56.0	39.6 - 41.2	56.1 - 56.1	0.1	34.1 - 34.1
R59	1 Vandalia Avenue	56.0 - 56.7	49.0 - 53.8	56.8 - 58.2	1.9	34.8 - 36.2
R60	1 Vandalia Avenue	56.0 - 56.0	39.7 - 44.1	56.1 - 56.3	0.3	34.1 - 34.3
R61	1180 Pennsylvania Avenue	56.0 - 57.4	60.7 - 64.9	62.0 - 65.4	9.4	40.0 - 43.4
R62	1180 Pennsylvania Avenue	56.0 - 58.9	54.2 - 59.9	58.7 - 62.1	5.3	36.7 - 40.1
R63	1180 Pennsylvania Avenue	56.0 - 56.0	46.9 - 51.2	56.5 - 57.2	1.2	34.5 - 35.2
R64	1180 Pennsylvania Avenue	56.0 - 57.3	46.3 - 49.2	56.5 - 57.6	0.8	34.5 - 35.6
R65	99 Vandalia Avenue	56.0 - 56.0	49.3 - 54.2	56.8 - 58.2	2.2	34.8 - 36.2
R66	99 Vandalia Avenue	56.0 - 56.0	54.0 - 58.7	58.1 - 60.6	4.6	36.1 - 38.6
R67	99 Vandalia Avenue	56.0 - 57.9	38.0 - 41.2	56.1 - 58.0	0.1	34.1 - 36.0
R68	99 Vandalia Avenue	56.7 - 62.2	47.3 - 52.2	57.2 - 62.6	0.5	35.2 - 40.6
R69	1170 Pennsylvania Avenue	56.2 - 60.4	48.3 - 53.2	57.0 - 61.1	0.8	35.0 - 39.1
R70	1170 Pennsylvania Avenue	56.0 - 56.0	52.8 - 58.3	57.7 - 60.3	4.3	35.7 - 38.3
R71	1170 Pennsylvania Avenue	56.0 - 56.0	52.1 - 57.7	57.5 - 59.9	3.9	35.5 - 37.9
R72	1170 Pennsylvania Avenue	56.0 - 57.3	51.7 - 57.1	57.4 - 59.9	3.2	35.4 - 37.9
R73	1170 Pennsylvania Avenue	59.5 - 62.1	41.1 - 53.9	59.6 - 62.1	0.8	37.6 - 40.1
R74	1155 Pennsylvania Avenue	56.0 - 61.9	39.3 - 52.5	56.1 - 62.0	0.7	34.1 - 40.0
R75	1155 Pennsylvania Avenue	56.0 - 58.8	38.4 - 42.9	56.1 - 58.9	0.1	34.1 - 36.9
R76	1155 Pennsylvania Avenue	56.0 - 56.0	32.9 - 33.8	56.0 - 56.0	0.0	34.0 - 34.0
R77	1155 Pennsylvania Avenue	56.0 - 58.5	33.9 - 36.1	56.0 - 58.5	0.0	34.0 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	39.2 - 42.7	56.1 - 59.2	0.1	34.1 - 37.2
R79	1155 Pennsylvania Avenue	56.0 - 59.4	39.8 - 44.8	56.2 - 59.5	0.2	34.2 - 37.5
R80	1155 Pennsylvania Avenue	56.0 - 56.0	36.6 - 36.9	56.0 - 56.1	0.1	34.0 - 34.1
R81	1155 Pennsylvania Avenue	56.0 - 56.0	37.0 - 37.3	56.1 - 56.1	0.1	34.1 - 34.1
R82	1155 Pennsylvania Avenue	56.0 - 57.8	49.2 - 53.9	56.8 - 59.3	1.6	34.8 - 37.3
R83	1155 Pennsylvania Avenue	56.0 - 58.8	49.4 - 54.3	56.9 - 60.1	1.4	34.9 - 38.1
R84	1155 Pennsylvania Avenue	56.0 - 56.0	33.7 - 34.0	56.0 - 56.0	0.0	34.0 - 34.0
R85	1155 Pennsylvania Avenue	56.0 - 57.4	37.1 - 40.3	56.1 - 57.5	0.1	34.1 - 35.5
R86	1155 Pennsylvania Avenue	56.0 - 56.0	32.7 - 32.9	56.0 - 56.0	0.0	34.0 - 34.0
R87	1155 Pennsylvania Avenue	56.0 - 56.0	33.7 - 34.1	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	33.1 - 34.3	56.0 - 58.8	0.0	34.0 - 36.8
R89	1260 Cronton Loop	56.0 - 62.4	34.4 - 47.4	56.0 - 62.5	0.1	34.0 - 40.5
R90	1260 Cronton Loop	57.0 - 65.9	37.3 - 50.3	57.0 - 66.0	0.1	35.0 - 44.0
R91	1260 Cronton Loop	56.0 - 62.9	36.3 - 46.7	56.0 - 63.0	0.1	34.0 - 41.0
R92	1260 Cronton Loop	56.0 - 60.3	36.9 - 56.1	56.1 - 61.6	1.7	34.1 - 39.6
R93	1260 Cronton Loop	56.0 - 56.0	36.3 - 55.1	56.0 - 58.6	2.6	34.0 - 36.6
R94	1260 Cronton Loop	56.0 - 61.8	34.4 - 45.0	56.0 - 61.9	0.1	34.0 - 39.9

Source: VHB 2022

Table 19-22 Phase 1B – Fit-Out Construction Noise Levels: Months 44 through 47

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	52.0 - 52.5	65.9 - 66.5	0.2	43.9 - 44.5
R02	10835 Flatlands Avenue	65.0 - 65.4	52.4 - 52.4	65.2 - 65.6	0.2	43.2 - 43.6
R03	10835 Flatlands Avenue	69.1 - 69.7	54.9 - 55.5	69.3 - 69.9	0.2	47.3 - 47.9
R04	Farragut Road Park	71.5 - 71.5	56.9 - 56.9	71.6 - 71.6	0.1	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	57.9 - 57.9	67.8 - 67.8	0.5	40.8 - 40.8
R06	730 Louisiana Avenue	59.3 - 59.3	42.8 - 42.8	59.4 - 59.4	0.1	32.4 - 32.4
R07	730 Louisiana Avenue	56.0 - 56.0	46.6 - 46.6	56.5 - 56.5	0.5	29.5 - 29.5
R08	730 Louisiana Avenue	58.2 - 58.2	48.9 - 48.9	58.7 - 58.7	0.5	31.7 - 31.7
R09	730 Louisiana Avenue	62.4 - 62.4	45.0 - 45.0	62.5 - 62.5	0.1	35.5 - 35.5
R10	790 Louisiana Avenue	61.3 - 63.1	41.4 - 42.9	61.4 - 63.1	0.1	39.4 - 41.1
R11	508 Louisiana Avenue	59.8 - 61.2	36.9 - 38.0	59.8 - 61.2	0.0	37.8 - 39.2
R12	556 Louisiana Avenue	56.0 - 58.4	36.9 - 37.7	56.1 - 58.4	0.1	34.1 - 36.4
R14	12048 Flatlands Avenue	65.3 - 68.8	43.5 - 48.8	65.4 - 68.8	0.1	43.4 - 46.8
R28	Proposed Building 1	62.9 - 65.9	66.3 - 71.8	67.9 - 72.6	8.6	40.9 - 45.6
R29	Proposed Building 2	56.0 - 57.6	67.0 - 72.2	67.3 - 72.3	15.9	40.3 - 45.3
R30	Proposed Building 1	67.2 - 71.2	46.4 - 53.8	67.2 - 71.3	0.1	37.4 - 39.3
R31	Proposed Building 1	56.0 - 56.0	63.3 - 68.2	64.0 - 68.5	12.5	37.0 - 41.5
R32	Proposed Building 2	56.0 - 56.3	63.2 - 68.4	64.0 - 68.6	12.6	37.0 - 41.6
R33	Proposed Building 2	56.0 - 56.2	45.4 - 58.6	56.4 - 60.5	4.5	29.4 - 33.5
R34	Proposed Building 1	66.3 - 70.4	43.7 - 45.3	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	43.1 - 45.0	59.2 - 64.0	0.1	28.7 - 32.0
R39	12041 Flatlands Avenue	58.3 - 58.3	61.3 - 61.3	63.1 - 63.1	4.8	36.1 - 36.1
R40	12079 Flatlands Avenue	56.0 - 56.0	64.6 - 64.6	65.2 - 65.2	9.2	38.2 - 38.2
R41	12079 Flatlands Avenue	59.5 - 59.5	63.4 - 63.4	64.9 - 64.9	5.4	37.9 - 37.9
R42	1036 Sheffield Avenue	60.5 - 61.7	62.4 - 63.3	64.6 - 65.6	4.1	37.6 - 38.6
R43	1036 Sheffield Avenue	56.0 - 59.2	46.7 - 50.2	56.5 - 59.7	0.5	29.5 - 32.7
R44	1118 Pennsylvania Avenue	64.3 - 64.3	48.6 - 48.6	64.4 - 64.4	0.1	37.4 - 37.4
R45	1143 Flatlands Avenue	63.4 - 63.4	39.9 - 39.9	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	40.8 - 40.8	56.7 - 56.7	0.1	29.7 - 29.7
R47	148 Cozine Avenue	64.3 - 65.1	41.8 - 45.9	64.3 - 65.2	0.1	42.3 - 43.2
R48	148 Cozine Avenue	57.7 - 60.5	45.7 - 49.2	58.0 - 60.8	0.3	36.0 - 38.8
R49	148 Cozine Avenue	56.0 - 56.0	40.2 - 42.8	56.1 - 56.2	0.2	34.1 - 34.2
R50	190 Cozine Avenue	59.0 - 67.2	46.5 - 53.4	59.3 - 67.4	0.3	37.3 - 45.4
R51	1 Vandalia Avenue	58.8 - 64.5	40.3 - 47.0	58.9 - 64.5	0.1	36.9 - 42.5
R52	1 Vandalia Avenue	59.7 - 64.9	42.1 - 63.2	59.8 - 67.1	2.2	37.8 - 45.1
R53	1 Vandalia Avenue	56.0 - 58.1	42.0 - 64.4	56.2 - 65.3	7.3	34.2 - 43.3
R54	1 Vandalia Avenue	56.0 - 61.8	40.1 - 47.0	56.1 - 61.8	0.2	34.1 - 39.8
R55	1 Vandalia Avenue	56.0 - 56.0	42.1 - 42.1	56.2 - 56.2	0.2	34.2 - 34.2
R56	1 Vandalia Avenue	56.0 - 56.0	42.8 - 42.8	56.2 - 56.2	0.2	34.2 - 34.2

Table 19-22 Phase 1B – Fit-Out Construction Noise Levels: Months 44 through 47

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R57	1 Vandalia Avenue	56.0 - 56.8	55.7 - 62.4	58.9 - 63.4	7.1	36.9 - 41.4
R58	1 Vandalia Avenue	56.0 - 56.0	41.2 - 50.1	56.1 - 57.0	1.0	34.1 - 35.0
R59	1 Vandalia Avenue	56.0 - 56.7	50.8 - 60.6	57.7 - 62.0	5.7	35.7 - 40.0
R60	1 Vandalia Avenue	56.0 - 56.0	42.0 - 48.4	56.2 - 56.7	0.7	34.2 - 34.7
R61	1180 Pennsylvania Avenue	56.0 - 57.4	61.1 - 66.1	62.3 - 66.6	9.9	40.3 - 44.6
R62	1180 Pennsylvania Avenue	56.0 - 58.9	56.3 - 62.4	60.1 - 63.9	5.4	38.1 - 41.9
R63	1180 Pennsylvania Avenue	56.0 - 56.0	48.4 - 56.4	56.7 - 59.2	3.2	34.7 - 37.2
R64	1180 Pennsylvania Avenue	56.0 - 57.3	45.0 - 48.7	56.4 - 57.5	0.7	34.4 - 35.5
R65	99 Vandalia Avenue	56.0 - 56.0	51.0 - 55.4	57.2 - 58.7	2.7	35.2 - 36.7
R66	99 Vandalia Avenue	56.0 - 56.0	41.7 - 46.7	56.2 - 56.5	0.5	34.2 - 34.5
R67	99 Vandalia Avenue	56.0 - 57.9	39.8 - 48.7	56.1 - 58.0	0.7	34.1 - 36.0
R68	99 Vandalia Avenue	56.7 - 62.2	39.7 - 40.1	56.8 - 62.2	0.1	34.8 - 40.2
R69	1170 Pennsylvania Avenue	56.2 - 60.4	52.2 - 56.9	57.9 - 62.0	2.2	35.9 - 40.0
R70	1170 Pennsylvania Avenue	56.0 - 56.0	56.5 - 60.8	59.3 - 62.0	6.0	37.3 - 40.0
R71	1170 Pennsylvania Avenue	56.0 - 56.0	52.6 - 57.0	57.6 - 59.5	3.5	35.6 - 37.5
R72	1170 Pennsylvania Avenue	56.0 - 57.3	44.0 - 49.2	56.3 - 57.5	0.8	34.3 - 35.5
R73	1170 Pennsylvania Avenue	59.5 - 62.1	43.9 - 44.1	59.6 - 62.2	0.1	37.6 - 40.2
R74	1155 Pennsylvania Avenue	56.0 - 61.9	42.3 - 50.3	56.2 - 62.1	0.5	34.2 - 40.1
R75	1155 Pennsylvania Avenue	56.0 - 58.8	40.0 - 49.0	56.1 - 59.2	0.5	34.1 - 37.2
R76	1155 Pennsylvania Avenue	56.0 - 56.0	37.6 - 38.4	56.1 - 56.1	0.1	34.1 - 34.1
R77	1155 Pennsylvania Avenue	56.0 - 58.5	38.4 - 44.4	56.1 - 58.5	0.2	34.1 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	40.1 - 50.2	56.4 - 59.6	0.5	34.4 - 37.6
R79	1155 Pennsylvania Avenue	56.0 - 59.4	49.2 - 54.4	56.9 - 60.6	1.6	34.9 - 38.6
R80	1155 Pennsylvania Avenue	56.0 - 56.0	38.4 - 38.6	56.1 - 56.1	0.1	34.1 - 34.1
R81	1155 Pennsylvania Avenue	56.0 - 56.0	38.7 - 38.9	56.1 - 56.1	0.1	34.1 - 34.1
R82	1155 Pennsylvania Avenue	56.0 - 57.8	50.1 - 55.2	57.0 - 59.7	2.3	35.0 - 37.7
R83	1155 Pennsylvania Avenue	56.0 - 58.8	51.6 - 57.2	57.3 - 61.0	2.7	35.3 - 39.0
R84	1155 Pennsylvania Avenue	56.0 - 56.0	34.6 - 34.8	56.0 - 56.0	0.0	34.0 - 34.0
R85	1155 Pennsylvania Avenue	56.0 - 57.4	45.1 - 50.2	56.3 - 58.2	0.8	34.3 - 36.2
R86	1155 Pennsylvania Avenue	56.0 - 56.0	33.7 - 33.8	56.0 - 56.0	0.0	34.0 - 34.0
R87	1155 Pennsylvania Avenue	56.0 - 56.0	34.5 - 35.3	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	35.5 - 37.6	56.0 - 58.8	0.0	34.0 - 36.8
R89	1260 Cronton Loop	56.0 - 62.4	37.1 - 51.4	56.1 - 62.7	0.4	34.1 - 40.7
R90	1260 Cronton Loop	57.0 - 65.9	38.7 - 56.0	57.1 - 66.3	0.4	35.1 - 44.3
R91	1260 Cronton Loop	56.0 - 62.9	38.4 - 46.8	56.1 - 63.0	0.1	34.1 - 41.0
R92	1260 Cronton Loop	56.0 - 60.3	38.1 - 43.5	56.1 - 60.4	0.1	34.1 - 38.4
R93	1260 Cronton Loop	56.0 - 56.0	37.3 - 45.7	56.1 - 56.4	0.4	34.1 - 34.4
R94	1260 Cronton Loop	56.0 - 61.8	37.1 - 37.6	56.1 - 61.8	0.1	34.1 - 39.8

Source: VHB 2022

Table 19-23 Phase 2A – Foundation/Superstructure Construction Noise Levels: Months 49 through 55

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	55.9 - 56.5	66.2 - 66.7	0.5	44.2 - 44.7
R02	10835 Flatlands Avenue	65.0 - 65.4	55.4 - 56.8	65.5 - 66.0	0.6	43.5 - 44.0
R03	10835 Flatlands Avenue	69.1 - 69.7	59.8 - 60.9	69.6 - 70.2	0.5	47.6 - 48.2
R04	Farragut Road Park	71.5 - 71.5	62.6 - 62.6	72.0 - 72.0	0.5	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	65.3 - 65.3	69.4 - 69.4	2.1	42.4 - 42.4
R06	730 Louisiana Avenue	59.3 - 59.3	56.8 - 56.8	61.2 - 61.2	1.9	34.2 - 34.2
R07	730 Louisiana Avenue	56.0 - 56.0	58.1 - 58.1	60.2 - 60.2	4.2	33.2 - 33.2
R08	730 Louisiana Avenue	58.2 - 58.2	57.3 - 57.3	60.8 - 60.8	2.6	33.8 - 33.8
R09	730 Louisiana Avenue	62.4 - 62.4	53.8 - 53.8	63.0 - 63.0	0.6	36.0 - 36.0
R10	790 Louisiana Avenue	61.3 - 63.1	55.2 - 55.9	62.3 - 63.8	1.0	40.3 - 41.8
R11	508 Louisiana Avenue	59.8 - 61.2	50.2 - 50.8	60.3 - 61.6	0.5	38.3 - 39.6
R12	556 Louisiana Avenue	56.0 - 58.4	42.0 - 45.4	56.2 - 58.6	0.2	34.2 - 36.6
R14	12048 Flatlands Avenue	65.3 - 68.8	69.2 - 74.1	72.0 - 74.6	9.3	50.0 - 52.6
R22	Proposed Building 3	56.0 - 56.0	68.7 - 76.6	68.9 - 76.6	20.6	47.3 - 49.6
R23	Proposed Building 3	60.0 - 61.8	60.2 - 68.8	63.1 - 69.5	8.1	39.4 - 42.5
R24	Proposed Building 3	56.0 - 56.0	62.7 - 70.6	63.5 - 70.7	14.7	36.5 - 43.7
R25	Proposed Building 4	56.0 - 56.0	67.9 - 74.2	68.2 - 74.3	18.3	41.2 - 47.3
R26	Proposed Building 3	58.8 - 64.6	50.7 - 63.7	59.4 - 66.9	3.0	35.0 - 39.9
R27	Proposed Building 4	56.0 - 56.0	53.9 - 58.8	58.1 - 60.6	4.6	31.1 - 33.6
R28	Proposed Building 1	62.9 - 65.9	50.5 - 61.0	63.1 - 67.1	1.2	36.1 - 40.1
R29	Proposed Building 2	56.0 - 57.6	56.6 - 64.6	59.4 - 65.4	7.8	32.4 - 38.4
R30	Proposed Building 1	67.2 - 71.2	44.3 - 58.9	67.2 - 71.4	0.2	37.5 - 39.4
R31	Proposed Building 1	56.0 - 56.0	58.1 - 66.0	60.2 - 66.4	10.4	33.2 - 39.4
R32	Proposed Building 2	56.0 - 56.3	59.0 - 66.0	60.8 - 66.4	10.3	33.8 - 39.4
R33	Proposed Building 2	56.0 - 56.2	44.0 - 49.4	56.3 - 56.9	0.9	29.3 - 29.9
R34	Proposed Building 1	66.3 - 70.4	43.4 - 45.8	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	43.8 - 46.8	59.2 - 64.0	0.1	28.7 - 32.0
R36	Proposed Building 4	56.0 - 57.9	66.5 - 75.9	66.9 - 76.0	18.2	39.9 - 49.0
R37	Proposed Building 4	56.0 - 56.0	51.2 - 51.7	57.2 - 57.4	1.4	30.2 - 30.4
R38	Proposed Building 4	56.0 - 56.0	49.8 - 55.2	56.9 - 58.6	2.6	29.9 - 31.6
R39	12041 Flatlands Avenue	58.3 - 58.3	68.7 - 68.7	69.1 - 69.1	10.8	42.1 - 42.1
R40	12079 Flatlands Avenue	56.0 - 56.0	69.0 - 69.0	69.2 - 69.2	13.2	42.2 - 42.2
R41	12079 Flatlands Avenue	59.5 - 59.5	66.0 - 66.0	66.9 - 66.9	7.4	39.9 - 39.9
R42	1036 Sheffield Avenue	60.5 - 61.7	65.1 - 67.1	66.4 - 68.2	6.5	39.4 - 41.2
R43	1036 Sheffield Avenue	56.0 - 59.2	47.2 - 52.3	56.5 - 60.0	0.8	29.5 - 33.0
R44	1118 Pennsylvania Avenue	64.3 - 64.3	51.6 - 51.6	64.5 - 64.5	0.2	37.5 - 37.5
R45	1143 Flatlands Avenue	63.4 - 63.4	41.9 - 41.9	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	46.1 - 46.1	57.0 - 57.0	0.4	30.0 - 30.0
R47	148 Cozine Avenue	64.3 - 65.1	50.9 - 54.7	64.5 - 65.5	0.4	42.5 - 43.5

Table 19-23 Phase 2A – Foundation/Superstructure Construction Noise Levels: Months 49 through 55

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R48	148 Cozine Avenue	57.7 - 60.5	53.2 - 54.9	59.0 - 61.6	1.3	37.0 - 39.6
R49	148 Cozine Avenue	56.0 - 56.0	46.9 - 51.2	56.5 - 57.2	1.2	34.5 - 35.2
R50	190 Cozine Avenue	59.0 - 67.2	49.0 - 56.0	59.7 - 67.5	0.7	37.7 - 45.5
R51	1 Vandalia Avenue	58.8 - 64.5	44.4 - 47.0	59.0 - 64.6	0.2	37.0 - 42.6
R52	1 Vandalia Avenue	59.7 - 64.9	46.2 - 59.9	60.0 - 66.1	1.2	38.0 - 44.1
R53	1 Vandalia Avenue	56.0 - 58.1	45.4 - 61.1	56.4 - 62.9	4.8	34.4 - 40.9
R54	1 Vandalia Avenue	56.0 - 61.8	45.0 - 47.7	56.3 - 62.0	0.3	34.3 - 40.0
R55	1 Vandalia Avenue	56.0 - 56.0	47.5 - 47.5	56.6 - 56.6	0.6	34.6 - 34.6
R56	1 Vandalia Avenue	56.0 - 56.0	46.4 - 46.4	56.5 - 56.5	0.5	34.5 - 34.5
R57	1 Vandalia Avenue	56.0 - 56.8	55.6 - 63.3	58.8 - 64.2	7.4	36.8 - 42.2
R58	1 Vandalia Avenue	56.0 - 56.0	44.7 - 46.5	56.3 - 56.5	0.5	34.3 - 34.5
R59	1 Vandalia Avenue	56.0 - 56.7	55.3 - 62.8	58.7 - 63.8	7.1	36.7 - 41.8
R60	1 Vandalia Avenue	56.0 - 56.0	43.9 - 45.6	56.3 - 56.4	0.4	34.3 - 34.4
R61	1180 Pennsylvania Avenue	56.0 - 57.4	60.6 - 66.8	61.9 - 67.3	10.0	39.9 - 45.3
R62	1180 Pennsylvania Avenue	56.0 - 58.9	54.6 - 59.5	59.3 - 61.9	3.8	37.3 - 39.9
R63	1180 Pennsylvania Avenue	56.0 - 56.0	55.2 - 59.5	58.6 - 61.1	5.1	36.6 - 39.1
R64	1180 Pennsylvania Avenue	56.0 - 57.3	47.9 - 48.5	56.7 - 57.8	0.7	34.7 - 35.8
R65	99 Vandalia Avenue	56.0 - 56.0	49.3 - 54.9	56.8 - 58.5	2.5	34.8 - 36.5
R66	99 Vandalia Avenue	56.0 - 56.0	42.6 - 50.7	56.2 - 57.1	1.1	34.2 - 35.1
R67	99 Vandalia Avenue	56.0 - 57.9	42.2 - 43.3	56.2 - 58.0	0.2	34.2 - 36.0
R68	99 Vandalia Avenue	56.7 - 62.2	43.0 - 43.7	56.9 - 62.3	0.2	34.9 - 40.3
R69	1170 Pennsylvania Avenue	56.2 - 60.4	43.8 - 49.6	56.5 - 60.7	0.4	34.5 - 38.7
R70	1170 Pennsylvania Avenue	56.0 - 56.0	46.1 - 50.9	56.4 - 57.2	1.2	34.4 - 35.2
R71	1170 Pennsylvania Avenue	56.0 - 56.0	42.9 - 47.1	56.2 - 56.5	0.5	34.2 - 34.5
R72	1170 Pennsylvania Avenue	56.0 - 57.3	42.9 - 45.5	56.2 - 57.6	0.3	34.2 - 35.6
R73	1170 Pennsylvania Avenue	59.5 - 62.1	42.6 - 44.5	59.6 - 62.2	0.1	37.6 - 40.2
R74	1155 Pennsylvania Avenue	56.0 - 61.9	42.5 - 49.2	56.2 - 62.1	0.2	34.2 - 40.1
R75	1155 Pennsylvania Avenue	56.0 - 58.8	39.6 - 46.3	56.1 - 59.0	0.2	34.1 - 37.0
R76	1155 Pennsylvania Avenue	56.0 - 56.0	38.5 - 39.5	56.1 - 56.1	0.1	34.1 - 34.1
R77	1155 Pennsylvania Avenue	56.0 - 58.5	38.3 - 38.7	56.1 - 58.5	0.1	34.1 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	40.1 - 48.7	56.1 - 59.5	0.4	34.1 - 37.5
R79	1155 Pennsylvania Avenue	56.0 - 59.4	41.0 - 50.2	56.1 - 59.9	0.5	34.1 - 37.9
R80	1155 Pennsylvania Avenue	56.0 - 56.0	39.7 - 39.9	56.1 - 56.1	0.1	34.1 - 34.1
R81	1155 Pennsylvania Avenue	56.0 - 56.0	39.2 - 39.8	56.1 - 56.1	0.1	34.1 - 34.1
R82	1155 Pennsylvania Avenue	56.0 - 57.8	38.2 - 51.7	56.1 - 58.7	1.0	34.1 - 36.7
R83	1155 Pennsylvania Avenue	56.0 - 58.8	37.8 - 55.0	56.1 - 60.3	1.5	34.1 - 38.3
R84	1155 Pennsylvania Avenue	56.0 - 56.0	37.5 - 37.6	56.1 - 56.1	0.1	34.1 - 34.1
R85	1155 Pennsylvania Avenue	56.0 - 57.4	50.0 - 53.6	57.0 - 58.9	1.6	35.0 - 36.9
R86	1155 Pennsylvania Avenue	56.0 - 56.0	36.8 - 37.0	56.1 - 56.1	0.1	34.1 - 34.1
R87	1155 Pennsylvania Avenue	56.0 - 56.0	36.6 - 38.6	56.0 - 56.1	0.1	34.0 - 34.1

Table 19-23 Phase 2A – Foundation/Superstructure Construction Noise Levels: Months 49 through 55

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R88	1260 Cronton Loop	56.0 - 58.8	39.9 - 42.2	56.1 - 58.9	0.1	34.1 - 36.9
R89	1260 Cronton Loop	56.0 - 62.4	41.0 - 55.1	56.1 - 63.1	0.7	34.1 - 41.1
R90	1260 Cronton Loop	57.0 - 65.9	43.1 - 59.9	57.2 - 66.9	1.0	35.2 - 44.9
R91	1260 Cronton Loop	56.0 - 62.9	41.3 - 58.6	56.2 - 64.3	1.4	34.2 - 42.3
R92	1260 Cronton Loop	56.0 - 60.3	39.8 - 53.1	56.1 - 61.1	0.8	34.1 - 39.1
R93	1260 Cronton Loop	56.0 - 56.0	39.7 - 53.5	56.1 - 57.9	1.9	34.1 - 35.9
R94	1260 Cronton Loop	56.0 - 61.8	39.1 - 42.8	56.1 - 61.9	0.1	34.1 - 39.9

Source: VHB 2022

Table 19-24 Phase 2A – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 56 through 61

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	55.0 - 55.5	66.1 - 66.6	0.4	44.1 - 44.6
R02	10835 Flatlands Avenue	65.0 - 65.4	55.3 - 56.1	65.5 - 65.9	0.5	43.5 - 43.9
R03	10835 Flatlands Avenue	69.1 - 69.7	58.5 - 58.8	69.5 - 70.0	0.4	47.5 - 48.0
R04	Farragut Road Park	71.5 - 71.5	62.0 - 62.0	72.0 - 72.0	0.5	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	63.6 - 63.6	68.8 - 68.8	1.5	41.8 - 41.8
R06	730 Louisiana Avenue	59.3 - 59.3	56.8 - 56.8	61.2 - 61.2	1.9	34.2 - 34.2
R07	730 Louisiana Avenue	56.0 - 56.0	57.9 - 57.9	60.1 - 60.1	4.1	33.1 - 33.1
R08	730 Louisiana Avenue	58.2 - 58.2	57.5 - 57.5	60.9 - 60.9	2.7	33.9 - 33.9
R09	730 Louisiana Avenue	62.4 - 62.4	51.9 - 51.9	62.8 - 62.8	0.4	35.8 - 35.8
R10	790 Louisiana Avenue	61.3 - 63.1	50.2 - 51.0	61.7 - 63.3	0.4	39.7 - 41.3
R11	508 Louisiana Avenue	59.8 - 61.2	45.3 - 45.8	60.0 - 61.3	0.2	38.0 - 39.3
R12	556 Louisiana Avenue	56.0 - 58.4	39.1 - 41.5	56.1 - 58.5	0.1	34.1 - 36.5
R14	12048 Flatlands Avenue	65.3 - 68.8	68.5 - 72.0	71.7 - 72.8	7.5	49.7 - 50.8
R22	Proposed Building 3	56.0 - 56.0	64.8 - 71.9	65.3 - 72.0	16.0	43.7 - 45.0
R23	Proposed Building 3	60.0 - 61.8	59.1 - 64.6	62.6 - 66.3	5.2	38.1 - 39.3
R24	Proposed Building 3	56.0 - 56.0	62.1 - 67.8	63.1 - 68.1	12.1	36.1 - 41.1
R25	Proposed Building 4	56.0 - 56.0	66.5 - 70.6	66.9 - 70.7	14.7	39.9 - 43.7
R26	Proposed Building 3	58.8 - 64.6	50.7 - 54.7	59.4 - 65.0	0.7	32.9 - 38.0
R27	Proposed Building 4	56.0 - 56.0	54.5 - 57.8	58.3 - 60.0	4.0	31.3 - 33.0
R28	Proposed Building 1	62.9 - 65.9	50.2 - 58.8	63.1 - 66.7	0.8	36.1 - 39.7
R29	Proposed Building 2	56.0 - 57.6	56.0 - 61.8	59.1 - 63.2	5.6	32.1 - 36.2
R30	Proposed Building 1	67.2 - 71.2	53.5 - 58.8	67.4 - 71.4	0.3	37.5 - 39.4
R31	Proposed Building 1	56.0 - 56.0	60.2 - 63.9	61.6 - 64.6	8.6	34.6 - 37.6
R32	Proposed Building 2	56.0 - 56.3	59.9 - 63.5	61.4 - 64.3	8.0	34.4 - 37.3
R33	Proposed Building 2	56.0 - 56.2	48.8 - 61.4	56.8 - 62.5	6.5	29.8 - 35.5
R34	Proposed Building 1	66.3 - 70.4	42.5 - 44.2	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	42.8 - 44.7	59.2 - 63.9	0.1	28.7 - 31.9
R36	Proposed Building 4	56.0 - 57.9	68.3 - 79.1	68.5 - 79.1	22.0	41.5 - 52.1
R37	Proposed Building 4	56.0 - 56.0	50.7 - 51.5	57.1 - 57.3	1.3	30.1 - 30.3
R38	Proposed Building 4	56.0 - 56.0	61.5 - 69.9	62.6 - 70.1	14.1	35.6 - 43.1
R39	12041 Flatlands Avenue	58.3 - 58.3	68.9 - 68.9	69.3 - 69.3	11.0	42.3 - 42.3
R40	12079 Flatlands Avenue	56.0 - 56.0	66.6 - 66.6	67.0 - 67.0	11.0	40.0 - 40.0
R41	12079 Flatlands Avenue	59.5 - 59.5	63.3 - 63.3	64.8 - 64.8	5.3	37.8 - 37.8
R42	1036 Sheffield Avenue	60.5 - 61.7	61.2 - 64.3	63.9 - 66.0	4.8	36.9 - 39.0
R43	1036 Sheffield Avenue	56.0 - 59.2	46.1 - 47.9	56.4 - 59.5	0.4	29.4 - 32.5
R44	1118 Pennsylvania Avenue	64.3 - 64.3	48.1 - 48.1	64.4 - 64.4	0.1	37.4 - 37.4
R45	1143 Flatlands Avenue	63.4 - 63.4	39.0 - 39.0	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	42.7 - 42.7	56.8 - 56.8	0.2	29.8 - 29.8
R47	148 Cozine Avenue	64.3 - 65.1	47.7 - 52.3	64.4 - 65.3	0.2	42.4 - 43.3
R48	148 Cozine Avenue	57.7 - 60.5	50.9 - 52.9	58.5 - 61.2	0.8	36.5 - 39.2

Table 19-24 Phase 2A – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 56 through 61

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R49	148 Cozine Avenue	56.0 - 56.0	44.2 - 47.8	56.3 - 56.6	0.6	34.3 - 34.6
R50	190 Cozine Avenue	59.0 - 67.2	46.3 - 52.6	59.4 - 67.3	0.4	37.4 - 45.3
R51	1 Vandalia Avenue	58.8 - 64.5	43.2 - 45.9	59.0 - 64.5	0.2	37.0 - 42.5
R52	1 Vandalia Avenue	59.7 - 64.9	45.9 - 62.9	60.0 - 67.0	2.1	38.0 - 45.0
R53	1 Vandalia Avenue	56.0 - 58.1	45.0 - 64.0	56.3 - 65.0	6.9	34.3 - 43.0
R54	1 Vandalia Avenue	56.0 - 61.8	44.0 - 49.1	56.3 - 62.0	0.3	34.3 - 40.0
R55	1 Vandalia Avenue	56.0 - 56.0	47.4 - 47.4	56.6 - 56.6	0.6	34.6 - 34.6
R56	1 Vandalia Avenue	56.0 - 56.0	52.6 - 52.6	57.6 - 57.6	1.6	35.6 - 35.6
R57	1 Vandalia Avenue	56.0 - 56.8	58.6 - 66.6	60.5 - 67.0	10.3	38.5 - 45.0
R58	1 Vandalia Avenue	56.0 - 56.0	44.6 - 47.1	56.3 - 56.5	0.5	34.3 - 34.5
R59	1 Vandalia Avenue	56.0 - 56.7	59.5 - 66.1	61.1 - 66.6	10.0	39.1 - 44.6
R60	1 Vandalia Avenue	56.0 - 56.0	44.0 - 45.6	56.3 - 56.4	0.4	34.3 - 34.4
R61	1180 Pennsylvania Avenue	56.0 - 57.4	66.0 - 73.3	66.4 - 73.4	16.7	44.4 - 51.4
R62	1180 Pennsylvania Avenue	56.0 - 58.9	62.5 - 68.9	64.0 - 69.3	11.1	42.0 - 47.3
R63	1180 Pennsylvania Avenue	56.0 - 56.0	57.8 - 62.8	60.0 - 63.6	7.6	38.0 - 41.6
R64	1180 Pennsylvania Avenue	56.0 - 57.3	47.7 - 53.7	56.8 - 58.5	1.8	34.8 - 36.5
R65	99 Vandalia Avenue	56.0 - 56.0	53.4 - 57.8	57.9 - 60.0	4.0	35.9 - 38.0
R66	99 Vandalia Avenue	56.0 - 56.0	49.2 - 51.9	56.8 - 57.4	1.4	34.8 - 35.4
R67	99 Vandalia Avenue	56.0 - 57.9	41.6 - 42.6	56.2 - 58.0	0.2	34.2 - 36.0
R68	99 Vandalia Avenue	56.7 - 62.2	41.8 - 42.9	56.8 - 62.3	0.1	34.8 - 40.3
R69	1170 Pennsylvania Avenue	56.2 - 60.4	46.1 - 55.3	57.0 - 61.6	1.3	35.0 - 39.6
R70	1170 Pennsylvania Avenue	56.0 - 56.0	51.9 - 55.6	57.4 - 58.8	2.8	35.4 - 36.8
R71	1170 Pennsylvania Avenue	56.0 - 56.0	43.3 - 59.3	56.2 - 61.0	5.0	34.2 - 39.0
R72	1170 Pennsylvania Avenue	56.0 - 57.3	42.9 - 50.8	56.2 - 58.2	1.0	34.2 - 36.2
R73	1170 Pennsylvania Avenue	59.5 - 62.1	43.0 - 43.8	59.6 - 62.2	0.1	37.6 - 40.2
R74	1155 Pennsylvania Avenue	56.0 - 61.9	49.6 - 56.1	56.9 - 62.9	1.0	34.9 - 40.9
R75	1155 Pennsylvania Avenue	56.0 - 58.8	38.6 - 50.0	56.1 - 59.3	0.6	34.1 - 37.3
R76	1155 Pennsylvania Avenue	56.0 - 56.0	37.1 - 37.5	56.1 - 56.1	0.1	34.1 - 34.1
R77	1155 Pennsylvania Avenue	56.0 - 58.5	37.0 - 37.9	56.1 - 58.5	0.1	34.1 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	39.9 - 54.2	56.1 - 60.3	1.2	34.1 - 38.3
R79	1155 Pennsylvania Avenue	56.0 - 59.4	39.6 - 51.1	56.1 - 60.0	0.6	34.1 - 38.0
R80	1155 Pennsylvania Avenue	56.0 - 56.0	38.5 - 39.0	56.1 - 56.1	0.1	34.1 - 34.1
R81	1155 Pennsylvania Avenue	56.0 - 56.0	37.8 - 38.5	56.1 - 56.1	0.1	34.1 - 34.1
R82	1155 Pennsylvania Avenue	56.0 - 57.8	38.7 - 46.6	56.1 - 58.0	0.3	34.1 - 36.0
R83	1155 Pennsylvania Avenue	56.0 - 58.8	46.0 - 50.9	56.4 - 59.5	0.9	34.4 - 37.5
R84	1155 Pennsylvania Avenue	56.0 - 56.0	35.7 - 36.2	56.0 - 56.0	0.0	34.0 - 34.0
R85	1155 Pennsylvania Avenue	56.0 - 57.4	40.2 - 44.8	56.1 - 57.6	0.2	34.1 - 35.6
R86	1155 Pennsylvania Avenue	56.0 - 56.0	35.2 - 36.0	56.0 - 56.0	0.0	34.0 - 34.0
R87	1155 Pennsylvania Avenue	56.0 - 56.0	35.6 - 36.1	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	37.7 - 39.3	56.1 - 58.8	0.1	34.1 - 36.8

Table 19-24 Phase 2A – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 56 through 61

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R89	1260 Cronton Loop	56.0 - 62.4	39.0 - 49.8	56.1 - 62.6	0.2	34.1 - 40.6
R90	1260 Cronton Loop	57.0 - 65.9	41.6 - 58.1	57.1 - 66.6	0.8	35.1 - 44.6
R91	1260 Cronton Loop	56.0 - 62.9	41.0 - 59.8	56.2 - 64.6	1.7	34.2 - 42.6
R92	1260 Cronton Loop	56.0 - 60.3	41.4 - 56.8	56.1 - 61.9	1.6	34.1 - 39.9
R93	1260 Cronton Loop	56.0 - 56.0	38.2 - 56.2	56.1 - 59.1	3.1	34.1 - 37.1
R94	1260 Cronton Loop	56.0 - 61.8	38.4 - 43.0	56.1 - 61.9	0.1	34.1 - 39.9

Source: VHB 2022

Table 19-25 Phase 2A – Superstructure/Fit-Out Construction Noise Levels: Months 62 through 66

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	36.0 - 38.1	65.7 - 66.3	0.0	43.7 - 44.3
R02	10835 Flatlands Avenue	65.0 - 65.4	33.3 - 39.5	65.0 - 65.4	0.0	43.0 - 43.4
R03	10835 Flatlands Avenue	69.1 - 69.7	46.7 - 46.9	69.1 - 69.7	0.0	47.1 - 47.7
R04	Farragut Road Park	71.5 - 71.5	40.3 - 40.3	71.5 - 71.5	0.0	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	53.1 - 53.1	67.5 - 67.5	0.2	40.5 - 40.5
R06	730 Louisiana Avenue	59.3 - 59.3	46.0 - 46.0	59.5 - 59.5	0.2	32.5 - 32.5
R07	730 Louisiana Avenue	56.0 - 56.0	45.1 - 45.1	56.3 - 56.3	0.3	29.3 - 29.3
R08	730 Louisiana Avenue	58.2 - 58.2	46.2 - 46.2	58.5 - 58.5	0.3	31.5 - 31.5
R09	730 Louisiana Avenue	62.4 - 62.4	37.1 - 37.1	62.4 - 62.4	0.0	35.4 - 35.4
R10	790 Louisiana Avenue	61.3 - 63.1	37.8 - 38.4	61.3 - 63.1	0.0	39.3 - 41.1
R11	508 Louisiana Avenue	59.8 - 61.2	33.3 - 33.8	59.8 - 61.2	0.0	37.8 - 39.2
R12	556 Louisiana Avenue	56.0 - 58.4	30.6 - 31.8	56.0 - 58.4	0.0	34.0 - 36.4
R14	12048 Flatlands Avenue	65.3 - 68.8	59.0 - 62.4	67.1 - 69.2	1.8	45.1 - 47.2
R22	Proposed Building 3	56.0 - 56.0	45.9 - 53.3	56.4 - 57.9	1.9	29.4 - 30.9
R23	Proposed Building 3	60.0 - 61.8	34.7 - 37.6	60.0 - 61.8	0.0	33.4 - 34.8
R24	Proposed Building 3	56.0 - 56.0	47.7 - 55.6	56.6 - 58.8	2.8	29.6 - 31.8
R25	Proposed Building 4	56.0 - 56.0	55.7 - 60.4	58.9 - 61.7	5.7	31.9 - 34.7
R26	Proposed Building 3	58.8 - 64.6	35.3 - 36.4	58.8 - 64.6	0.0	32.2 - 37.6
R27	Proposed Building 4	56.0 - 56.0	37.3 - 39.1	56.1 - 56.1	0.1	29.1 - 29.1
R28	Proposed Building 1	62.9 - 65.9	38.0 - 41.6	62.9 - 65.9	0.0	35.9 - 38.9
R29	Proposed Building 2	56.0 - 57.6	37.8 - 42.6	56.1 - 57.7	0.1	29.1 - 30.7
R30	Proposed Building 1	67.2 - 71.2	29.1 - 31.6	67.2 - 71.2	0.0	37.3 - 39.2
R31	Proposed Building 1	56.0 - 56.0	45.7 - 50.7	56.4 - 57.1	1.1	29.4 - 30.1
R32	Proposed Building 2	56.0 - 56.3	45.8 - 51.8	56.4 - 57.6	1.4	29.4 - 30.6
R33	Proposed Building 2	56.0 - 56.2	30.3 - 40.0	56.0 - 56.2	0.1	29.0 - 29.2
R34	Proposed Building 1	66.3 - 70.4	27.7 - 31.1	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	30.9 - 33.9	59.1 - 63.9	0.0	28.6 - 31.9
R36	Proposed Building 4	56.0 - 57.9	56.2 - 65.9	59.1 - 66.4	9.3	32.1 - 39.4
R37	Proposed Building 4	56.0 - 56.0	37.8 - 38.4	56.1 - 56.1	0.1	29.1 - 29.1
R38	Proposed Building 4	56.0 - 56.0	37.7 - 43.1	56.1 - 56.2	0.2	29.1 - 29.2
R39	12041 Flatlands Avenue	58.3 - 58.3	52.3 - 52.3	59.3 - 59.3	1.0	32.3 - 32.3
R40	12079 Flatlands Avenue	56.0 - 56.0	50.3 - 50.3	57.0 - 57.0	1.0	30.0 - 30.0
R41	12079 Flatlands Avenue	59.5 - 59.5	43.5 - 43.5	59.6 - 59.6	0.1	32.6 - 32.6
R42	1036 Sheffield Avenue	60.5 - 61.7	38.2 - 40.9	60.5 - 61.7	0.0	33.5 - 34.7
R43	1036 Sheffield Avenue	56.0 - 59.2	30.5 - 31.1	56.0 - 59.2	0.0	29.0 - 32.2
R44	1118 Pennsylvania Avenue	64.3 - 64.3	28.0 - 28.0	64.3 - 64.3	0.0	37.3 - 37.3
R45	1143 Flatlands Avenue	63.4 - 63.4	25.3 - 25.3	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	25.5 - 25.5	56.6 - 56.6	0.0	29.6 - 29.6
R47	148 Cozine Avenue	64.3 - 65.1	28.4 - 31.6	64.3 - 65.1	0.0	42.3 - 43.1
R48	148 Cozine Avenue	57.7 - 60.5	28.8 - 28.9	57.7 - 60.5	0.0	35.7 - 38.5

Table 19-25 Phase 2A – Superstructure/Fit-Out Construction Noise Levels: Months 62 through 66

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R49	148 Cozine Avenue	56.0 - 56.0	26.1 - 27.2	56.0 - 56.0	0.0	34.0 - 34.0
R50	190 Cozine Avenue	59.0 - 67.2	26.6 - 32.7	59.0 - 67.2	0.0	37.0 - 45.2
R51	1 Vandalia Avenue	58.8 - 64.5	34.7 - 45.2	58.8 - 64.5	0.1	36.8 - 42.5
R52	1 Vandalia Avenue	59.7 - 64.9	37.7 - 49.9	59.7 - 65.0	0.1	37.7 - 43.0
R53	1 Vandalia Avenue	56.0 - 58.1	34.9 - 52.4	56.0 - 59.1	1.0	34.0 - 37.1
R54	1 Vandalia Avenue	56.0 - 61.8	33.3 - 35.8	56.0 - 61.8	0.0	34.0 - 39.8
R55	1 Vandalia Avenue	56.0 - 56.0	37.0 - 37.0	56.1 - 56.1	0.1	34.1 - 34.1
R56	1 Vandalia Avenue	56.0 - 56.0	35.8 - 35.8	56.0 - 56.0	0.0	34.0 - 34.0
R57	1 Vandalia Avenue	56.0 - 56.8	34.3 - 49.8	56.0 - 57.6	0.8	34.0 - 35.6
R58	1 Vandalia Avenue	56.0 - 56.0	32.7 - 34.4	56.0 - 56.0	0.0	34.0 - 34.0
R59	1 Vandalia Avenue	56.0 - 56.7	36.1 - 49.8	56.0 - 57.5	0.8	34.0 - 35.5
R60	1 Vandalia Avenue	56.0 - 56.0	32.6 - 34.2	56.0 - 56.0	0.0	34.0 - 34.0
R61	1180 Pennsylvania Avenue	56.0 - 57.4	46.4 - 57.3	56.5 - 60.3	3.0	34.5 - 38.3
R62	1180 Pennsylvania Avenue	56.0 - 58.9	38.1 - 44.5	56.2 - 59.0	0.2	34.2 - 37.0
R63	1180 Pennsylvania Avenue	56.0 - 56.0	36.4 - 46.0	56.0 - 56.4	0.4	34.0 - 34.4
R64	1180 Pennsylvania Avenue	56.0 - 57.3	35.2 - 39.5	56.0 - 57.3	0.1	34.0 - 35.3
R65	99 Vandalia Avenue	56.0 - 56.0	33.0 - 41.2	56.0 - 56.1	0.1	34.0 - 34.1
R66	99 Vandalia Avenue	56.0 - 56.0	30.4 - 40.1	56.0 - 56.1	0.1	34.0 - 34.1
R67	99 Vandalia Avenue	56.0 - 57.9	30.6 - 31.4	56.0 - 57.9	0.0	34.0 - 35.9
R68	99 Vandalia Avenue	56.7 - 62.2	31.3 - 31.4	56.7 - 62.2	0.0	34.7 - 40.2
R69	1170 Pennsylvania Avenue	56.2 - 60.4	32.3 - 35.6	56.2 - 60.4	0.0	34.2 - 38.4
R70	1170 Pennsylvania Avenue	56.0 - 56.0	32.5 - 35.7	56.0 - 56.0	0.0	34.0 - 34.0
R71	1170 Pennsylvania Avenue	56.0 - 56.0	30.4 - 33.8	56.0 - 56.0	0.0	34.0 - 34.0
R72	1170 Pennsylvania Avenue	56.0 - 57.3	31.1 - 32.8	56.0 - 57.3	0.0	34.0 - 35.3
R73	1170 Pennsylvania Avenue	59.5 - 62.1	30.7 - 39.5	59.5 - 62.1	0.0	37.5 - 40.1
R74	1155 Pennsylvania Avenue	56.0 - 61.9	29.9 - 36.1	56.0 - 61.9	0.0	34.0 - 39.9
R75	1155 Pennsylvania Avenue	56.0 - 58.8	26.9 - 33.4	56.0 - 58.8	0.0	34.0 - 36.8
R76	1155 Pennsylvania Avenue	56.0 - 56.0	26.1 - 26.4	56.0 - 56.0	0.0	34.0 - 34.0
R77	1155 Pennsylvania Avenue	56.0 - 58.5	25.9 - 26.2	56.0 - 58.5	0.0	34.0 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	27.8 - 32.5	56.0 - 59.1	0.0	34.0 - 37.1
R79	1155 Pennsylvania Avenue	56.0 - 59.4	27.6 - 33.5	56.0 - 59.4	0.0	34.0 - 37.4
R80	1155 Pennsylvania Avenue	56.0 - 56.0	25.5 - 25.8	56.0 - 56.0	0.0	34.0 - 34.0
R81	1155 Pennsylvania Avenue	56.0 - 56.0	25.1 - 25.4	56.0 - 56.0	0.0	34.0 - 34.0
R82	1155 Pennsylvania Avenue	56.0 - 57.8	24.2 - 34.5	56.0 - 57.8	0.0	34.0 - 35.8
R83	1155 Pennsylvania Avenue	56.0 - 58.8	23.8 - 37.4	56.0 - 58.8	0.0	34.0 - 36.8
R84	1155 Pennsylvania Avenue	56.0 - 56.0	23.4 - 23.6	56.0 - 56.0	0.0	34.0 - 34.0
R85	1155 Pennsylvania Avenue	56.0 - 57.4	24.1 - 31.2	56.0 - 57.4	0.0	34.0 - 35.4
R86	1155 Pennsylvania Avenue	56.0 - 56.0	22.6 - 22.8	56.0 - 56.0	0.0	34.0 - 34.0
R87	1155 Pennsylvania Avenue	56.0 - 56.0	22.5 - 23.8	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	28.4 - 30.6	56.0 - 58.8	0.0	34.0 - 36.8

Table 19-25 Phase 2A – Superstructure/Fit-Out Construction Noise Levels: Months 62 through 66

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R89	1260 Cronton Loop	56.0 - 62.4	29.8 - 37.6	56.0 - 62.4	0.0	34.0 - 40.4
R90	1260 Cronton Loop	57.0 - 65.9	30.9 - 49.7	57.0 - 66.0	0.1	35.0 - 44.0
R91	1260 Cronton Loop	56.0 - 62.9	29.5 - 48.9	56.0 - 63.1	0.2	34.0 - 41.1
R92	1260 Cronton Loop	56.0 - 60.3	27.5 - 38.6	56.0 - 60.3	0.0	34.0 - 38.3
R93	1260 Cronton Loop	56.0 - 56.0	26.1 - 38.4	56.0 - 56.1	0.1	34.0 - 34.1
R94	1260 Cronton Loop	56.0 - 61.8	25.7 - 28.9	56.0 - 61.8	0.0	34.0 - 39.8

Source: VHB 2022

Table 19-26 Phase 2A – Fit-Out Construction Noise Levels: Months 67 through 72

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	47.7 - 47.8	65.8 - 66.4	0.1	43.8 - 44.4
R02	10835 Flatlands Avenue	65.0 - 65.4	51.6 - 52.4	65.2 - 65.6	0.2	43.2 - 43.6
R03	10835 Flatlands Avenue	69.1 - 69.7	51.3 - 54.1	69.2 - 69.8	0.1	47.2 - 47.8
R04	Farragut Road Park	71.5 - 71.5	54.8 - 54.8	71.6 - 71.6	0.1	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	61.4 - 61.4	68.3 - 68.3	1.0	41.3 - 41.3
R06	730 Louisiana Avenue	59.3 - 59.3	56.8 - 56.8	61.2 - 61.2	1.9	34.2 - 34.2
R07	730 Louisiana Avenue	56.0 - 56.0	56.4 - 56.4	59.2 - 59.2	3.2	32.2 - 32.2
R08	730 Louisiana Avenue	58.2 - 58.2	56.6 - 56.6	60.5 - 60.5	2.3	33.5 - 33.5
R09	730 Louisiana Avenue	62.4 - 62.4	43.5 - 43.5	62.5 - 62.5	0.1	35.5 - 35.5
R10	790 Louisiana Avenue	61.3 - 63.1	47.3 - 48.5	61.5 - 63.2	0.2	39.5 - 41.2
R11	508 Louisiana Avenue	59.8 - 61.2	43.0 - 44.6	59.9 - 61.3	0.1	37.9 - 39.3
R12	556 Louisiana Avenue	56.0 - 58.4	38.2 - 40.0	56.1 - 58.5	0.1	34.1 - 36.5
R14	12048 Flatlands Avenue	65.3 - 68.8	70.8 - 73.5	72.9 - 74.1	8.8	50.9 - 52.1
R22	Proposed Building 3	56.0 - 56.0	60.4 - 66.0	61.7 - 66.4	10.4	36.8 - 39.4
R23	Proposed Building 3	60.0 - 61.8	45.4 - 59.3	60.1 - 63.6	2.5	35.9 - 36.6
R24	Proposed Building 3	56.0 - 56.0	58.0 - 62.8	60.1 - 63.6	7.6	33.1 - 36.6
R25	Proposed Building 4	56.0 - 56.0	62.2 - 66.7	63.1 - 67.1	11.1	36.1 - 40.1
R26	Proposed Building 3	58.8 - 64.6	46.9 - 50.2	59.1 - 64.7	0.3	32.5 - 37.7
R27	Proposed Building 4	56.0 - 56.0	50.6 - 54.7	57.1 - 58.4	2.4	30.1 - 31.4
R28	Proposed Building 1	62.9 - 65.9	56.4 - 61.0	63.8 - 67.0	1.3	36.8 - 40.0
R29	Proposed Building 2	56.0 - 57.6	54.5 - 59.6	58.4 - 61.7	4.2	31.4 - 34.7
R30	Proposed Building 1	67.2 - 71.2	41.4 - 52.4	67.2 - 71.2	0.1	37.4 - 39.2
R31	Proposed Building 1	56.0 - 56.0	43.9 - 49.1	56.3 - 56.8	0.8	29.3 - 29.8
R32	Proposed Building 2	56.0 - 56.3	45.2 - 53.3	56.4 - 57.9	1.9	29.4 - 30.9
R33	Proposed Building 2	56.0 - 56.2	42.6 - 52.1	56.2 - 57.5	1.5	29.2 - 30.5
R34	Proposed Building 1	66.3 - 70.4	39.8 - 47.0	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	40.4 - 50.5	59.2 - 64.0	0.2	28.6 - 32.0
R36	Proposed Building 4	56.0 - 57.9	66.6 - 74.3	67.0 - 74.4	18.3	40.0 - 47.4
R37	Proposed Building 4	56.0 - 56.0	46.7 - 51.9	56.5 - 57.4	1.4	29.5 - 30.4
R38	Proposed Building 4	56.0 - 56.0	47.1 - 55.5	56.5 - 58.8	2.8	29.5 - 31.8
R39	12041 Flatlands Avenue	58.3 - 58.3	63.5 - 63.5	64.6 - 64.6	6.3	37.6 - 37.6
R40	12079 Flatlands Avenue	56.0 - 56.0	62.0 - 62.0	63.0 - 63.0	7.0	36.0 - 36.0
R41	12079 Flatlands Avenue	59.5 - 59.5	60.1 - 60.1	62.8 - 62.8	3.3	35.8 - 35.8
R42	1036 Sheffield Avenue	60.5 - 61.7	58.1 - 60.9	62.5 - 64.3	2.6	35.5 - 37.3
R43	1036 Sheffield Avenue	56.0 - 59.2	43.1 - 44.2	56.2 - 59.3	0.2	29.2 - 32.3
R44	1118 Pennsylvania Avenue	64.3 - 64.3	41.2 - 41.2	64.3 - 64.3	0.0	37.3 - 37.3
R45	1143 Flatlands Avenue	63.4 - 63.4	40.1 - 40.1	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	38.3 - 38.3	56.7 - 56.7	0.1	29.7 - 29.7
R47	148 Cozine Avenue	64.3 - 65.1	50.3 - 51.8	64.5 - 65.3	0.2	42.5 - 43.3
R48	148 Cozine Avenue	57.7 - 60.5	49.9 - 50.2	58.4 - 60.9	0.7	36.4 - 38.9

Table 19-26 Phase 2A – Fit-Out Construction Noise Levels: Months 67 through 72

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R49	148 Cozine Avenue	56.0 - 56.0	42.9 - 46.7	56.2 - 56.5	0.5	34.2 - 34.5
R50	190 Cozine Avenue	59.0 - 67.2	49.1 - 55.0	59.5 - 67.5	0.5	37.5 - 45.5
R51	1 Vandalia Avenue	58.8 - 64.5	42.0 - 47.8	58.9 - 64.6	0.1	36.9 - 42.6
R52	1 Vandalia Avenue	59.7 - 64.9	45.5 - 57.5	59.9 - 65.6	0.7	37.9 - 43.6
R53	1 Vandalia Avenue	56.0 - 58.1	43.5 - 60.1	56.2 - 62.2	4.1	34.2 - 40.2
R54	1 Vandalia Avenue	56.0 - 61.8	43.0 - 52.9	56.2 - 62.0	0.6	34.2 - 40.0
R55	1 Vandalia Avenue	56.0 - 56.0	46.0 - 46.0	56.4 - 56.4	0.4	34.4 - 34.4
R56	1 Vandalia Avenue	56.0 - 56.0	44.6 - 44.6	56.3 - 56.3	0.3	34.3 - 34.3
R57	1 Vandalia Avenue	56.0 - 56.8	44.4 - 59.4	56.3 - 61.3	4.5	34.3 - 39.3
R58	1 Vandalia Avenue	56.0 - 56.0	42.1 - 45.1	56.2 - 56.3	0.3	34.2 - 34.3
R59	1 Vandalia Avenue	56.0 - 56.7	44.8 - 57.5	56.3 - 60.1	3.4	34.3 - 38.1
R60	1 Vandalia Avenue	56.0 - 56.0	41.4 - 48.9	56.1 - 56.8	0.8	34.1 - 34.8
R61	1180 Pennsylvania Avenue	56.0 - 57.4	55.4 - 64.7	58.7 - 65.4	8.1	36.7 - 43.4
R62	1180 Pennsylvania Avenue	56.0 - 58.9	46.3 - 55.3	56.5 - 60.4	2.0	34.5 - 38.4
R63	1180 Pennsylvania Avenue	56.0 - 56.0	44.7 - 53.5	56.3 - 57.9	1.9	34.3 - 35.9
R64	1180 Pennsylvania Avenue	56.0 - 57.3	44.0 - 54.3	56.3 - 58.4	2.2	34.3 - 36.4
R65	99 Vandalia Avenue	56.0 - 56.0	41.8 - 51.0	56.2 - 57.2	1.2	34.2 - 35.2
R66	99 Vandalia Avenue	56.0 - 56.0	39.7 - 50.2	56.1 - 57.0	1.0	34.1 - 35.0
R67	99 Vandalia Avenue	56.0 - 57.9	39.1 - 45.4	56.1 - 58.0	0.3	34.1 - 36.0
R68	99 Vandalia Avenue	56.7 - 62.2	39.0 - 39.1	56.8 - 62.2	0.1	34.8 - 40.2
R69	1170 Pennsylvania Avenue	56.2 - 60.4	42.0 - 51.4	56.4 - 60.9	0.5	34.4 - 38.9
R70	1170 Pennsylvania Avenue	56.0 - 56.0	41.5 - 51.8	56.2 - 57.4	1.4	34.2 - 35.4
R71	1170 Pennsylvania Avenue	56.0 - 56.0	42.2 - 49.4	56.2 - 56.9	0.9	34.2 - 34.9
R72	1170 Pennsylvania Avenue	56.0 - 57.3	39.5 - 47.6	56.1 - 57.7	0.5	34.1 - 35.7
R73	1170 Pennsylvania Avenue	59.5 - 62.1	40.5 - 48.5	59.6 - 62.1	0.2	37.6 - 40.1
R74	1155 Pennsylvania Avenue	56.0 - 61.9	39.7 - 48.0	56.1 - 62.1	0.2	34.1 - 40.1
R75	1155 Pennsylvania Avenue	56.0 - 58.8	37.4 - 45.6	56.1 - 59.0	0.2	34.1 - 37.0
R76	1155 Pennsylvania Avenue	56.0 - 56.0	35.8 - 37.1	56.0 - 56.1	0.1	34.0 - 34.1
R77	1155 Pennsylvania Avenue	56.0 - 58.5	35.4 - 35.6	56.0 - 58.5	0.0	34.0 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	37.6 - 47.6	56.1 - 59.3	0.3	34.1 - 37.3
R79	1155 Pennsylvania Avenue	56.0 - 59.4	36.7 - 40.2	56.1 - 59.5	0.1	34.1 - 37.5
R80	1155 Pennsylvania Avenue	56.0 - 56.0	35.9 - 36.1	56.0 - 56.0	0.0	34.0 - 34.0
R81	1155 Pennsylvania Avenue	56.0 - 56.0	35.3 - 35.5	56.0 - 56.0	0.0	34.0 - 34.0
R82	1155 Pennsylvania Avenue	56.0 - 57.8	34.5 - 39.2	56.0 - 57.8	0.1	34.0 - 35.8
R83	1155 Pennsylvania Avenue	56.0 - 58.8	34.2 - 38.1	56.0 - 58.8	0.0	34.0 - 36.8
R84	1155 Pennsylvania Avenue	56.0 - 56.0	33.7 - 33.8	56.0 - 56.0	0.0	34.0 - 34.0
R85	1155 Pennsylvania Avenue	56.0 - 57.4	34.3 - 36.0	56.0 - 57.4	0.0	34.0 - 35.4
R86	1155 Pennsylvania Avenue	56.0 - 56.0	32.9 - 33.1	56.0 - 56.0	0.0	34.0 - 34.0
R87	1155 Pennsylvania Avenue	56.0 - 56.0	32.9 - 33.2	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	36.8 - 39.5	56.1 - 58.9	0.1	34.1 - 36.9

Table 19-26 Phase 2A – Fit-Out Construction Noise Levels: Months 67 through 72

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R89	1260 Cronton Loop	56.0 - 62.4	38.5 - 49.3	56.1 - 62.6	0.2	34.1 - 40.6
R90	1260 Cronton Loop	57.0 - 65.9	41.2 - 58.6	57.1 - 66.6	0.8	35.1 - 44.6
R91	1260 Cronton Loop	56.0 - 62.9	38.3 - 56.2	56.1 - 63.7	1.0	34.1 - 41.7
R92	1260 Cronton Loop	56.0 - 60.3	37.2 - 49.0	56.1 - 60.6	0.4	34.1 - 38.6
R93	1260 Cronton Loop	56.0 - 56.0	36.8 - 52.1	56.1 - 57.5	1.5	34.1 - 35.5
R94	1260 Cronton Loop	56.0 - 61.8	36.3 - 46.5	56.0 - 61.8	0.2	34.0 - 39.8

Source: VHB 2022

Table 19-27 Phase 2B/2C – Foundation/Superstructure Construction Noise Levels: Months 73 through 78

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	55.2 - 56.8	66.1 - 66.6	0.5	44.1 - 44.6
R02	10835 Flatlands Avenue	65.0 - 65.4	57.2 - 57.9	65.7 - 66.1	0.7	43.7 - 44.1
R03	10835 Flatlands Avenue	69.1 - 69.7	57.6 - 58.6	69.4 - 70.0	0.3	47.4 - 48.0
R04	Farragut Road Park	71.5 - 71.5	57.0 - 57.0	71.7 - 71.7	0.2	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	66.6 - 66.6	70.0 - 70.0	2.7	43.0 - 43.0
R06	730 Louisiana Avenue	59.3 - 59.3	59.4 - 59.4	62.4 - 62.4	3.1	35.4 - 35.4
R07	730 Louisiana Avenue	56.0 - 56.0	64.9 - 64.9	65.4 - 65.4	9.4	38.4 - 38.4
R08	730 Louisiana Avenue	58.2 - 58.2	65.5 - 65.5	66.2 - 66.2	8.0	39.2 - 39.2
R09	730 Louisiana Avenue	62.4 - 62.4	65.3 - 65.3	67.1 - 67.1	4.7	40.1 - 40.1
R10	790 Louisiana Avenue	61.3 - 63.1	62.2 - 65.5	65.3 - 67.4	4.5	43.3 - 45.4
R11	508 Louisiana Avenue	59.8 - 61.2	58.4 - 61.4	62.2 - 64.3	3.1	40.2 - 42.3
R12	556 Louisiana Avenue	56.0 - 58.4	48.6 - 55.7	56.7 - 60.3	1.9	34.7 - 38.3
R13	Proposed Building 6	56.0 - 59.4	66.6 - 74.3	67.0 - 74.4	15.6	44.6 - 47.4
R14	12048 Flatlands Avenue	65.3 - 68.8	69.2 - 72.5	72.0 - 73.3	8.0	50.0 - 51.3
R15	Proposed Building 6	59.5 - 61.3	48.7 - 52.3	59.8 - 61.8	0.5	33.5 - 34.8
R16	Proposed Building 6	56.0 - 56.0	55.2 - 66.7	58.6 - 67.1	11.1	31.6 - 40.1
R17	Proposed Building 6	56.0 - 56.0	66.4 - 74.7	66.8 - 74.8	18.8	41.9 - 47.8
R18	Proposed Building 5	56.0 - 56.0	55.7 - 67.4	58.9 - 67.7	11.7	31.9 - 40.7
R19	Proposed Building 5	56.0 - 57.6	46.2 - 47.4	56.4 - 58.0	0.5	29.5 - 31.0
R20	Proposed Building 5	56.0 - 56.0	52.8 - 66.3	57.7 - 66.7	10.7	31.9 - 39.7
R21	Proposed Building 5	56.0 - 56.0	46.8 - 50.4	56.5 - 57.1	1.1	29.5 - 30.1
R22	Proposed Building 3	56.0 - 56.0	45.5 - 54.7	56.4 - 58.4	2.4	29.6 - 31.4
R23	Proposed Building 3	60.0 - 61.8	44.8 - 46.1	60.1 - 61.9	0.1	33.5 - 34.9
R24	Proposed Building 3	56.0 - 56.0	45.6 - 57.9	56.4 - 60.1	4.1	29.4 - 33.1
R25	Proposed Building 4	56.0 - 56.0	48.1 - 57.8	56.7 - 60.0	4.0	29.7 - 33.0
R26	Proposed Building 3	58.8 - 64.6	46.4 - 52.3	59.0 - 64.8	0.3	32.5 - 37.8
R27	Proposed Building 4	56.0 - 56.0	47.8 - 51.6	56.6 - 57.3	1.3	29.6 - 30.3
R28	Proposed Building 1	62.9 - 65.9	45.8 - 55.0	63.0 - 66.2	0.3	36.0 - 39.2
R29	Proposed Building 2	56.0 - 57.6	48.1 - 55.8	56.8 - 59.8	2.2	29.8 - 32.8
R30	Proposed Building 1	67.2 - 71.2	40.6 - 42.9	67.2 - 71.2	0.0	37.3 - 39.2
R31	Proposed Building 1	56.0 - 56.0	46.3 - 52.3	56.4 - 57.5	1.5	29.4 - 30.5
R32	Proposed Building 2	56.0 - 56.3	44.3 - 51.8	56.3 - 57.6	1.3	29.3 - 30.6
R33	Proposed Building 2	56.0 - 56.2	44.7 - 51.3	56.3 - 57.4	1.2	29.3 - 30.4
R34	Proposed Building 1	66.3 - 70.4	40.1 - 41.8	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	42.7 - 43.8	59.2 - 63.9	0.1	28.7 - 31.9
R36	Proposed Building 4	56.0 - 57.9	53.6 - 66.7	58.0 - 67.2	9.3	31.0 - 40.2
R37	Proposed Building 4	56.0 - 56.0	48.2 - 53.7	56.7 - 58.0	2.0	29.7 - 31.0
R38	Proposed Building 4	56.0 - 56.0	52.5 - 65.4	57.6 - 65.9	9.9	30.6 - 38.9
R39	12041 Flatlands Avenue	58.3 - 58.3	51.4 - 51.4	59.1 - 59.1	0.8	32.1 - 32.1
R40	12079 Flatlands Avenue	56.0 - 56.0	45.8 - 45.8	56.4 - 56.4	0.4	29.4 - 29.4

Table 19-27 Phase 2B/2C – Foundation/Superstructure Construction Noise Levels: Months 73 through 78

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R41	12079 Flatlands Avenue	59.5 - 59.5	43.1 - 43.1	59.6 - 59.6	0.1	32.6 - 32.6
R42	1036 Sheffield Avenue	60.5 - 61.7	43.4 - 44.6	60.6 - 61.8	0.1	33.6 - 34.8
R43	1036 Sheffield Avenue	56.0 - 59.2	41.1 - 42.4	56.1 - 59.3	0.1	29.1 - 32.3
R44	1118 Pennsylvania Avenue	64.3 - 64.3	38.8 - 38.8	64.3 - 64.3	0.0	37.3 - 37.3
R45	1143 Flatlands Avenue	63.4 - 63.4	37.4 - 37.4	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	36.7 - 36.7	56.6 - 56.6	0.0	29.6 - 29.6
R47	148 Cozine Avenue	64.3 - 65.1	36.5 - 36.6	64.3 - 65.1	0.0	42.3 - 43.1
R48	148 Cozine Avenue	57.7 - 60.5	36.1 - 36.1	57.7 - 60.5	0.0	35.7 - 38.5
R49	148 Cozine Avenue	56.0 - 56.0	37.4 - 37.7	56.1 - 56.1	0.1	34.1 - 34.1
R50	190 Cozine Avenue	59.0 - 67.2	34.7 - 35.9	59.0 - 67.2	0.0	37.0 - 45.2
R51	1 Vandalia Avenue	58.8 - 64.5	61.7 - 69.9	63.5 - 70.7	8.7	41.5 - 48.7
R52	1 Vandalia Avenue	59.7 - 64.9	67.2 - 77.3	67.9 - 77.5	12.9	45.9 - 55.5
R53	1 Vandalia Avenue	56.0 - 58.1	62.3 - 72.9	63.2 - 73.0	15.3	41.2 - 51.0
R54	1 Vandalia Avenue	56.0 - 61.8	53.7 - 55.2	58.0 - 62.7	2.0	36.0 - 40.7
R55	1 Vandalia Avenue	56.0 - 56.0	62.8 - 62.8	63.6 - 63.6	7.6	41.6 - 41.6
R56	1 Vandalia Avenue	56.0 - 56.0	56.4 - 56.4	59.2 - 59.2	3.2	37.2 - 37.2
R57	1 Vandalia Avenue	56.0 - 56.8	49.4 - 65.3	56.9 - 65.9	9.1	34.9 - 43.9
R58	1 Vandalia Avenue	56.0 - 56.0	48.3 - 55.4	56.7 - 58.7	2.7	34.7 - 36.7
R59	1 Vandalia Avenue	56.0 - 56.7	49.1 - 60.5	56.8 - 62.0	5.4	34.8 - 40.0
R60	1 Vandalia Avenue	56.0 - 56.0	46.3 - 50.0	56.4 - 57.0	1.0	34.4 - 35.0
R61	1180 Pennsylvania Avenue	56.0 - 57.4	55.9 - 65.1	59.0 - 65.8	8.5	37.0 - 43.8
R62	1180 Pennsylvania Avenue	56.0 - 58.9	47.9 - 60.8	57.6 - 63.0	4.1	35.6 - 41.0
R63	1180 Pennsylvania Avenue	56.0 - 56.0	52.6 - 60.6	57.6 - 61.9	5.9	35.6 - 39.9
R64	1180 Pennsylvania Avenue	56.0 - 57.3	46.7 - 49.5	56.5 - 57.7	0.8	34.5 - 35.7
R65	99 Vandalia Avenue	56.0 - 56.0	49.5 - 57.6	56.9 - 59.9	3.9	34.9 - 37.9
R66	99 Vandalia Avenue	56.0 - 56.0	48.1 - 56.5	56.7 - 59.3	3.3	34.7 - 37.3
R67	99 Vandalia Avenue	56.0 - 57.9	42.5 - 44.9	56.2 - 58.1	0.3	34.2 - 36.1
R68	99 Vandalia Avenue	56.7 - 62.2	48.6 - 52.0	57.3 - 62.6	0.6	35.3 - 40.6
R69	1170 Pennsylvania Avenue	56.2 - 60.4	42.9 - 51.9	56.5 - 61.0	0.6	34.5 - 39.0
R70	1170 Pennsylvania Avenue	56.0 - 56.0	50.5 - 56.5	57.1 - 59.3	3.3	35.1 - 37.3
R71	1170 Pennsylvania Avenue	56.0 - 56.0	44.3 - 53.3	56.3 - 57.9	1.9	34.3 - 35.9
R72	1170 Pennsylvania Avenue	56.0 - 57.3	44.6 - 52.2	56.3 - 58.5	1.2	34.3 - 36.5
R73	1170 Pennsylvania Avenue	59.5 - 62.1	42.9 - 44.2	59.6 - 62.2	0.1	37.6 - 40.2
R74	1155 Pennsylvania Avenue	56.0 - 61.9	44.0 - 54.7	56.3 - 62.7	0.8	34.3 - 40.7
R75	1155 Pennsylvania Avenue	56.0 - 58.8	40.5 - 51.5	56.1 - 59.5	0.8	34.1 - 37.5
R76	1155 Pennsylvania Avenue	56.0 - 56.0	37.8 - 40.8	56.1 - 56.1	0.1	34.1 - 34.1
R77	1155 Pennsylvania Avenue	56.0 - 58.5	38.1 - 44.4	56.1 - 58.7	0.2	34.1 - 36.7
R78	1155 Pennsylvania Avenue	56.0 - 59.1	40.2 - 52.2	56.1 - 59.9	0.8	34.1 - 37.9
R79	1155 Pennsylvania Avenue	56.0 - 59.4	38.3 - 44.1	56.1 - 59.5	0.1	34.1 - 37.5
R80	1155 Pennsylvania Avenue	56.0 - 56.0	38.2 - 39.4	56.1 - 56.1	0.1	34.1 - 34.1

Table 19-27 Phase 2B/2C – Foundation/Superstructure Construction Noise Levels: Months 73 through 78

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R81	1155 Pennsylvania Avenue	56.0 - 56.0	37.7 - 40.2	56.1 - 56.1	0.1	34.1 - 34.1
R82	1155 Pennsylvania Avenue	56.0 - 57.8	36.5 - 39.6	56.0 - 57.8	0.1	34.0 - 35.8
R83	1155 Pennsylvania Avenue	56.0 - 58.8	36.1 - 38.0	56.0 - 58.8	0.1	34.0 - 36.8
R84	1155 Pennsylvania Avenue	56.0 - 56.0	36.1 - 38.4	56.0 - 56.1	0.1	34.0 - 34.1
R85	1155 Pennsylvania Avenue	56.0 - 57.4	35.4 - 36.4	56.0 - 57.4	0.0	34.0 - 35.4
R86	1155 Pennsylvania Avenue	56.0 - 56.0	36.2 - 39.1	56.0 - 56.1	0.1	34.0 - 34.1
R87	1155 Pennsylvania Avenue	56.0 - 56.0	35.6 - 36.8	56.0 - 56.1	0.1	34.0 - 34.1
R88	1260 Cronton Loop	56.0 - 58.8	43.0 - 51.1	56.2 - 59.5	0.9	34.2 - 37.5
R89	1260 Cronton Loop	56.0 - 62.4	44.5 - 59.3	56.3 - 64.1	1.7	34.3 - 42.1
R90	1260 Cronton Loop	57.0 - 65.9	44.5 - 59.9	57.2 - 66.9	1.0	35.2 - 44.9
R91	1260 Cronton Loop	56.0 - 62.9	42.6 - 58.4	56.2 - 64.2	1.3	34.2 - 42.2
R92	1260 Cronton Loop	56.0 - 60.3	46.1 - 57.2	56.4 - 62.0	1.9	34.4 - 40.0
R93	1260 Cronton Loop	56.0 - 56.0	40.4 - 57.6	56.1 - 59.9	3.9	34.1 - 37.9
R94	1260 Cronton Loop	56.0 - 61.8	39.9 - 45.5	56.1 - 61.9	0.1	34.1 - 39.9
R95	Proposed PAC	56.0 - 56.0	53.5 - 53.5	57.9 - 57.9	0.0	30.9 - 30.9

Source: VHB 2022

Table 19-28 Phase 2B/2C – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 79 through 85

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	55.0 - 56.0	66.1 - 66.6	0.4	44.1 - 44.6
R02	10835 Flatlands Avenue	65.0 - 65.4	56.2 - 57.3	65.6 - 66.0	0.6	43.6 - 44.0
R03	10835 Flatlands Avenue	69.1 - 69.7	57.7 - 59.1	69.4 - 70.1	0.4	47.4 - 48.1
R04	Farragut Road Park	71.5 - 71.5	56.1 - 56.1	71.6 - 71.6	0.1	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	67.5 - 67.5	70.4 - 70.4	3.1	43.4 - 43.4
R06	730 Louisiana Avenue	59.3 - 59.3	64.2 - 64.2	65.4 - 65.4	6.1	38.4 - 38.4
R07	730 Louisiana Avenue	56.0 - 56.0	65.6 - 65.6	66.1 - 66.1	10.1	39.1 - 39.1
R08	730 Louisiana Avenue	58.2 - 58.2	66.0 - 66.0	66.7 - 66.7	8.5	39.7 - 39.7
R09	730 Louisiana Avenue	62.4 - 62.4	64.6 - 64.6	66.6 - 66.6	4.2	39.6 - 39.6
R10	790 Louisiana Avenue	61.3 - 63.1	63.5 - 64.7	65.8 - 66.9	4.5	43.8 - 44.9
R11	508 Louisiana Avenue	59.8 - 61.2	59.4 - 60.4	62.6 - 63.8	2.9	40.6 - 41.8
R12	556 Louisiana Avenue	56.0 - 58.4	46.1 - 55.5	56.4 - 60.2	1.8	34.4 - 38.2
R13	Proposed Building 6	56.0 - 59.4	64.5 - 71.0	65.1 - 71.3	12.9	42.0 - 44.3
R14	12048 Flatlands Avenue	65.3 - 68.8	65.8 - 68.4	70.1 - 70.6	4.8	48.1 - 48.6
R15	Proposed Building 6	59.5 - 61.3	46.2 - 54.1	59.7 - 62.0	0.8	33.2 - 35.0
R16	Proposed Building 6	56.0 - 56.0	53.4 - 64.3	57.9 - 64.9	8.9	30.9 - 37.9
R17	Proposed Building 6	56.0 - 56.0	64.4 - 70.7	65.0 - 70.8	14.8	38.0 - 43.8
R18	Proposed Building 5	56.0 - 56.0	51.1 - 64.1	57.2 - 64.7	8.7	30.2 - 37.7
R19	Proposed Building 5	56.0 - 57.6	42.1 - 50.6	56.2 - 57.8	1.1	29.2 - 30.8
R20	Proposed Building 5	56.0 - 56.0	47.1 - 63.3	56.5 - 64.0	8.0	29.7 - 37.0
R21	Proposed Building 5	56.0 - 56.0	43.4 - 49.2	56.2 - 56.8	0.8	29.2 - 29.8
R22	Proposed Building 3	56.0 - 56.0	43.4 - 55.4	56.2 - 58.7	2.7	29.3 - 31.7
R23	Proposed Building 3	60.0 - 61.8	41.1 - 50.0	60.1 - 62.0	0.3	33.5 - 35.0
R24	Proposed Building 3	56.0 - 56.0	44.5 - 55.9	56.3 - 59.0	3.0	29.3 - 32.0
R25	Proposed Building 4	56.0 - 56.0	47.5 - 56.8	56.6 - 59.4	3.4	29.6 - 32.4
R26	Proposed Building 3	58.8 - 64.6	42.5 - 50.2	58.9 - 64.8	0.2	32.3 - 37.8
R27	Proposed Building 4	56.0 - 56.0	44.3 - 53.4	56.3 - 57.9	1.9	29.3 - 30.9
R28	Proposed Building 1	62.9 - 65.9	43.1 - 52.2	62.9 - 66.1	0.2	35.9 - 39.1
R29	Proposed Building 2	56.0 - 57.6	44.3 - 53.3	56.4 - 59.0	1.4	29.4 - 32.0
R30	Proposed Building 1	67.2 - 71.2	36.8 - 48.9	67.2 - 71.2	0.0	37.3 - 39.2
R31	Proposed Building 1	56.0 - 56.0	38.1 - 49.3	56.1 - 56.8	0.8	29.1 - 29.8
R32	Proposed Building 2	56.0 - 56.3	44.1 - 51.2	56.3 - 57.5	1.2	29.3 - 30.5
R33	Proposed Building 2	56.0 - 56.2	41.5 - 51.6	56.2 - 57.5	1.3	29.2 - 30.5
R34	Proposed Building 1	66.3 - 70.4	35.7 - 45.3	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	38.4 - 48.4	59.1 - 63.9	0.1	28.6 - 31.9
R36	Proposed Building 4	56.0 - 57.9	53.0 - 65.4	57.8 - 66.1	8.2	30.8 - 39.1
R37	Proposed Building 4	56.0 - 56.0	47.2 - 54.5	56.5 - 58.3	2.3	29.5 - 31.3
R38	Proposed Building 4	56.0 - 56.0	52.3 - 64.0	57.5 - 64.6	8.6	30.5 - 37.6
R39	12041 Flatlands Avenue	58.3 - 58.3	42.6 - 42.6	58.4 - 58.4	0.1	31.4 - 31.4

Table 19-28 Phase 2B/2C – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 79 through 85

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R40	12079 Flatlands Avenue	56.0 - 56.0	48.7 - 48.7	56.7 - 56.7	0.7	29.7 - 29.7
R41	12079 Flatlands Avenue	59.5 - 59.5	40.7 - 40.7	59.6 - 59.6	0.1	32.6 - 32.6
R42	1036 Sheffield Avenue	60.5 - 61.7	39.6 - 39.7	60.5 - 61.7	0.0	33.5 - 34.7
R43	1036 Sheffield Avenue	56.0 - 59.2	37.9 - 37.9	56.1 - 59.2	0.1	29.1 - 32.2
R44	1118 Pennsylvania Avenue	64.3 - 64.3	35.1 - 35.1	64.3 - 64.3	0.0	37.3 - 37.3
R45	1143 Flatlands Avenue	63.4 - 63.4	33.0 - 33.0	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	33.3 - 33.3	56.6 - 56.6	0.0	29.6 - 29.6
R47	148 Cozine Avenue	64.3 - 65.1	32.8 - 32.9	64.3 - 65.1	0.0	42.3 - 43.1
R48	148 Cozine Avenue	57.7 - 60.5	31.7 - 31.8	57.7 - 60.5	0.0	35.7 - 38.5
R49	148 Cozine Avenue	56.0 - 56.0	33.0 - 33.4	56.0 - 56.0	0.0	34.0 - 34.0
R50	190 Cozine Avenue	59.0 - 67.2	30.8 - 31.5	59.0 - 67.2	0.0	37.0 - 45.2
R51	1 Vandalia Avenue	58.8 - 64.5	57.7 - 66.4	61.3 - 68.3	5.5	39.3 - 46.3
R52	1 Vandalia Avenue	59.7 - 64.9	63.3 - 69.2	64.9 - 70.5	7.6	42.9 - 48.5
R53	1 Vandalia Avenue	56.0 - 58.1	60.3 - 67.9	61.7 - 68.3	10.2	39.7 - 46.3
R54	1 Vandalia Avenue	56.0 - 61.8	46.1 - 54.1	56.4 - 62.2	0.7	34.4 - 40.2
R55	1 Vandalia Avenue	56.0 - 56.0	60.6 - 60.6	61.9 - 61.9	5.9	39.9 - 39.9
R56	1 Vandalia Avenue	56.0 - 56.0	51.0 - 51.0	57.2 - 57.2	1.2	35.2 - 35.2
R57	1 Vandalia Avenue	56.0 - 56.8	46.1 - 61.9	56.4 - 63.1	6.3	34.4 - 41.1
R58	1 Vandalia Avenue	56.0 - 56.0	42.5 - 52.5	56.2 - 57.6	1.6	34.2 - 35.6
R59	1 Vandalia Avenue	56.0 - 56.7	47.2 - 60.1	56.5 - 61.7	5.0	34.5 - 39.7
R60	1 Vandalia Avenue	56.0 - 56.0	41.4 - 51.6	56.1 - 57.3	1.3	34.1 - 35.3
R61	1180 Pennsylvania Avenue	56.0 - 57.4	56.0 - 65.5	59.0 - 66.1	8.8	37.0 - 44.1
R62	1180 Pennsylvania Avenue	56.0 - 58.9	59.9 - 65.3	62.3 - 66.2	9.2	40.3 - 44.2
R63	1180 Pennsylvania Avenue	56.0 - 56.0	50.0 - 59.0	57.0 - 60.8	4.8	35.0 - 38.8
R64	1180 Pennsylvania Avenue	56.0 - 57.3	43.5 - 54.8	56.2 - 58.9	2.2	34.2 - 36.9
R65	99 Vandalia Avenue	56.0 - 56.0	49.7 - 53.9	56.9 - 58.1	2.1	34.9 - 36.1
R66	99 Vandalia Avenue	56.0 - 56.0	47.8 - 56.1	56.6 - 59.1	3.1	34.6 - 37.1
R67	99 Vandalia Avenue	56.0 - 57.9	39.1 - 47.2	56.1 - 58.1	0.4	34.1 - 36.1
R68	99 Vandalia Avenue	56.7 - 62.2	42.6 - 51.6	56.9 - 62.5	0.4	34.9 - 40.5
R69	1170 Pennsylvania Avenue	56.2 - 60.4	38.9 - 50.3	56.4 - 60.8	0.4	34.4 - 38.8
R70	1170 Pennsylvania Avenue	56.0 - 56.0	52.4 - 57.2	57.6 - 59.7	3.7	35.6 - 37.7
R71	1170 Pennsylvania Avenue	56.0 - 56.0	52.9 - 57.1	57.7 - 59.6	3.6	35.7 - 37.6
R72	1170 Pennsylvania Avenue	56.0 - 57.3	42.6 - 52.0	56.2 - 58.4	1.2	34.2 - 36.4
R73	1170 Pennsylvania Avenue	59.5 - 62.1	38.9 - 50.4	59.5 - 62.2	0.3	37.5 - 40.2
R74	1155 Pennsylvania Avenue	56.0 - 61.9	46.0 - 54.7	56.4 - 62.6	0.8	34.4 - 40.6
R75	1155 Pennsylvania Avenue	56.0 - 58.8	40.5 - 49.2	56.1 - 59.3	0.5	34.1 - 37.3
R76	1155 Pennsylvania Avenue	56.0 - 56.0	33.9 - 48.5	56.0 - 56.7	0.7	34.0 - 34.7
R77	1155 Pennsylvania Avenue	56.0 - 58.5	34.3 - 48.3	56.0 - 58.9	0.4	34.0 - 36.9
R78	1155 Pennsylvania Avenue	56.0 - 59.1	33.4 - 53.7	56.0 - 60.1	1.1	34.0 - 38.1

Table 19-28 Phase 2B/2C – Foundation/Superstructure/Fit-Out Construction Noise Levels: Months 79 through 85

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R79	1155 Pennsylvania Avenue	56.0 - 59.4	33.3 - 43.9	56.0 - 59.5	0.1	34.0 - 37.5
R80	1155 Pennsylvania Avenue	56.0 - 56.0	32.9 - 39.3	56.0 - 56.1	0.1	34.0 - 34.1
R81	1155 Pennsylvania Avenue	56.0 - 56.0	32.5 - 39.5	56.0 - 56.1	0.1	34.0 - 34.1
R82	1155 Pennsylvania Avenue	56.0 - 57.8	31.4 - 38.2	56.0 - 57.8	0.0	34.0 - 35.8
R83	1155 Pennsylvania Avenue	56.0 - 58.8	30.9 - 36.6	56.0 - 58.8	0.0	34.0 - 36.8
R84	1155 Pennsylvania Avenue	56.0 - 56.0	30.9 - 37.6	56.0 - 56.1	0.1	34.0 - 34.1
R85	1155 Pennsylvania Avenue	56.0 - 57.4	30.3 - 31.6	56.0 - 57.4	0.0	34.0 - 35.4
R86	1155 Pennsylvania Avenue	56.0 - 56.0	31.3 - 37.2	56.0 - 56.1	0.1	34.0 - 34.1
R87	1155 Pennsylvania Avenue	56.0 - 56.0	30.0 - 34.4	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	38.8 - 47.9	56.1 - 59.1	0.6	34.1 - 37.1
R89	1260 Cronton Loop	56.0 - 62.4	49.1 - 57.1	56.8 - 63.5	1.5	34.8 - 41.5
R90	1260 Cronton Loop	57.0 - 65.9	44.7 - 57.9	57.2 - 66.5	0.6	35.2 - 44.5
R91	1260 Cronton Loop	56.0 - 62.9	37.7 - 55.9	56.1 - 63.7	0.8	34.1 - 41.7
R92	1260 Cronton Loop	56.0 - 60.3	36.6 - 54.8	56.0 - 61.4	1.1	34.0 - 39.4
R93	1260 Cronton Loop	56.0 - 56.0	42.3 - 55.6	56.2 - 58.8	2.8	34.2 - 36.8
R94	1260 Cronton Loop	56.0 - 61.8	35.3 - 45.3	56.0 - 61.8	0.1	34.0 - 39.8
R95	Proposed PAC	56.0 - 56.0	54.9 - 54.9	58.5 - 58.5	0.0	31.5 - 31.5

Source: VHB 2022.

Table 19-29 Phase 2B/2C – Superstructure/Fit-Out Construction Noise Levels: Months 86 through 89

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	47.4 - 48.1	65.8 - 66.4	0.1	43.8 - 44.4
R02	10835 Flatlands Avenue	65.0 - 65.4	48.8 - 49.3	65.1 - 65.5	0.1	43.1 - 43.5
R03	10835 Flatlands Avenue	69.1 - 69.7	49.3 - 50.0	69.1 - 69.7	0.0	47.1 - 47.7
R04	Farragut Road Park	71.5 - 71.5	46.5 - 46.5	71.5 - 71.5	0.0	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	56.9 - 56.9	67.7 - 67.7	0.4	40.7 - 40.7
R06	730 Louisiana Avenue	59.3 - 59.3	53.1 - 53.1	60.2 - 60.2	0.9	33.2 - 33.2
R07	730 Louisiana Avenue	56.0 - 56.0	58.2 - 58.2	60.2 - 60.2	4.2	33.2 - 33.2
R08	730 Louisiana Avenue	58.2 - 58.2	58.9 - 58.9	61.6 - 61.6	3.4	34.6 - 34.6
R09	730 Louisiana Avenue	62.4 - 62.4	60.7 - 60.7	64.6 - 64.6	2.2	37.6 - 37.6
R10	790 Louisiana Avenue	61.3 - 63.1	59.6 - 61.8	63.5 - 65.4	2.5	41.5 - 43.4
R11	508 Louisiana Avenue	59.8 - 61.2	55.3 - 58.0	61.3 - 62.7	2.2	39.3 - 40.7
R12	556 Louisiana Avenue	56.0 - 58.4	39.7 - 46.3	56.1 - 58.7	0.3	34.1 - 36.7
R13	Proposed Building 6	56.0 - 59.4	44.2 - 49.5	56.3 - 59.7	0.5	30.4 - 32.7
R14	12048 Flatlands Avenue	65.3 - 68.8	39.9 - 40.2	65.3 - 68.8	0.0	43.3 - 46.8
R15	Proposed Building 6	59.5 - 61.3	33.8 - 37.9	59.5 - 61.3	0.0	33.0 - 34.3
R16	Proposed Building 6	56.0 - 56.0	34.3 - 39.8	56.0 - 56.1	0.1	29.0 - 29.1
R17	Proposed Building 6	56.0 - 56.0	38.9 - 49.7	56.1 - 56.9	0.9	29.1 - 29.9
R18	Proposed Building 5	56.0 - 56.0	34.7 - 44.3	56.0 - 56.3	0.3	29.0 - 29.3
R19	Proposed Building 5	56.0 - 57.6	29.9 - 34.1	56.0 - 57.6	0.0	29.0 - 30.6
R20	Proposed Building 5	56.0 - 56.0	33.7 - 42.6	56.0 - 56.2	0.2	29.0 - 29.2
R21	Proposed Building 5	56.0 - 56.0	30.4 - 31.9	56.0 - 56.0	0.0	29.0 - 29.0
R22	Proposed Building 3	56.0 - 56.0	30.4 - 42.1	56.0 - 56.2	0.2	29.0 - 29.2
R23	Proposed Building 3	60.0 - 61.8	28.8 - 35.7	60.0 - 61.8	0.0	33.4 - 34.8
R24	Proposed Building 3	56.0 - 56.0	30.3 - 43.0	56.0 - 56.2	0.2	29.0 - 29.2
R25	Proposed Building 4	56.0 - 56.0	32.7 - 41.0	56.0 - 56.1	0.1	29.0 - 29.1
R26	Proposed Building 3	58.8 - 64.6	31.2 - 36.8	58.8 - 64.6	0.0	32.2 - 37.6
R27	Proposed Building 4	56.0 - 56.0	33.2 - 40.8	56.0 - 56.1	0.1	29.0 - 29.1
R28	Proposed Building 1	62.9 - 65.9	30.5 - 36.2	62.9 - 65.9	0.0	35.9 - 38.9
R29	Proposed Building 2	56.0 - 57.6	32.7 - 40.7	56.0 - 57.7	0.1	29.0 - 30.7
R30	Proposed Building 1	67.2 - 71.2	24.6 - 31.2	67.2 - 71.2	0.0	37.3 - 39.2
R31	Proposed Building 1	56.0 - 56.0	28.5 - 38.7	56.0 - 56.1	0.1	29.0 - 29.1
R32	Proposed Building 2	56.0 - 56.3	27.0 - 33.3	56.0 - 56.3	0.0	29.0 - 29.3
R33	Proposed Building 2	56.0 - 56.2	29.4 - 38.7	56.0 - 56.2	0.1	29.0 - 29.2
R34	Proposed Building 1	66.3 - 70.4	24.1 - 31.7	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	25.9 - 32.5	59.1 - 63.9	0.0	28.6 - 31.9
R36	Proposed Building 4	56.0 - 57.9	36.9 - 47.1	56.1 - 58.1	0.4	29.1 - 31.1
R37	Proposed Building 4	56.0 - 56.0	32.9 - 42.0	56.0 - 56.2	0.2	29.0 - 29.2
R38	Proposed Building 4	56.0 - 56.0	35.8 - 47.1	56.0 - 56.5	0.5	29.0 - 29.5
R39	12041 Flatlands Avenue	58.3 - 58.3	35.7 - 35.7	58.3 - 58.3	0.0	31.3 - 31.3
R40	12079 Flatlands Avenue	56.0 - 56.0	30.2 - 30.2	56.0 - 56.0	0.0	29.0 - 29.0

Table 19-29 Phase 2B/2C – Superstructure/Fit-Out Construction Noise Levels: Months 86 through 89

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R41	12079 Flatlands Avenue	59.5 - 59.5	26.9 - 26.9	59.5 - 59.5	0.0	32.5 - 32.5
R42	1036 Sheffield Avenue	60.5 - 61.7	27.1 - 27.1	60.5 - 61.7	0.0	33.5 - 34.7
R43	1036 Sheffield Avenue	56.0 - 59.2	26.1 - 26.3	56.0 - 59.2	0.0	29.0 - 32.2
R44	1118 Pennsylvania Avenue	64.3 - 64.3	22.7 - 22.7	64.3 - 64.3	0.0	37.3 - 37.3
R45	1143 Flatlands Avenue	63.4 - 63.4	21.7 - 21.7	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	21.1 - 21.1	56.6 - 56.6	0.0	29.6 - 29.6
R47	148 Cozine Avenue	64.3 - 65.1	21.1 - 21.3	64.3 - 65.1	0.0	42.3 - 43.1
R48	148 Cozine Avenue	57.7 - 60.5	20.3 - 20.3	57.7 - 60.5	0.0	35.7 - 38.5
R49	148 Cozine Avenue	56.0 - 56.0	21.6 - 22.1	56.0 - 56.0	0.0	34.0 - 34.0
R50	190 Cozine Avenue	59.0 - 67.2	19.4 - 19.6	59.0 - 67.2	0.0	37.0 - 45.2
R51	1 Vandalia Avenue	58.8 - 64.5	49.9 - 60.4	61.0 - 65.5	2.2	39.0 - 43.5
R52	1 Vandalia Avenue	59.7 - 64.9	43.1 - 51.4	60.0 - 64.9	0.3	38.0 - 42.9
R53	1 Vandalia Avenue	56.0 - 58.1	38.7 - 43.6	56.1 - 58.1	0.2	34.1 - 36.1
R54	1 Vandalia Avenue	56.0 - 61.8	34.6 - 42.4	56.0 - 61.8	0.1	34.0 - 39.8
R55	1 Vandalia Avenue	56.0 - 56.0	44.0 - 44.0	56.3 - 56.3	0.3	34.3 - 34.3
R56	1 Vandalia Avenue	56.0 - 56.0	36.0 - 36.0	56.0 - 56.0	0.0	34.0 - 34.0
R57	1 Vandalia Avenue	56.0 - 56.8	32.7 - 44.2	56.0 - 56.9	0.3	34.0 - 34.9
R58	1 Vandalia Avenue	56.0 - 56.0	31.8 - 44.3	56.0 - 56.3	0.3	34.0 - 34.3
R59	1 Vandalia Avenue	56.0 - 56.7	29.6 - 41.2	56.0 - 56.8	0.1	34.0 - 34.8
R60	1 Vandalia Avenue	56.0 - 56.0	29.9 - 31.8	56.0 - 56.0	0.0	34.0 - 34.0
R61	1180 Pennsylvania Avenue	56.0 - 57.4	34.9 - 43.2	56.0 - 57.6	0.2	34.0 - 35.6
R62	1180 Pennsylvania Avenue	56.0 - 58.9	33.7 - 39.0	56.0 - 58.9	0.0	34.0 - 36.9
R63	1180 Pennsylvania Avenue	56.0 - 56.0	31.8 - 42.6	56.0 - 56.2	0.2	34.0 - 34.2
R64	1180 Pennsylvania Avenue	56.0 - 57.3	29.4 - 32.6	56.0 - 57.3	0.0	34.0 - 35.3
R65	99 Vandalia Avenue	56.0 - 56.0	28.1 - 31.7	56.0 - 56.0	0.0	34.0 - 34.0
R66	99 Vandalia Avenue	56.0 - 56.0	26.9 - 35.7	56.0 - 56.0	0.0	34.0 - 34.0
R67	99 Vandalia Avenue	56.0 - 57.9	26.9 - 34.8	56.0 - 57.9	0.0	34.0 - 35.9
R68	99 Vandalia Avenue	56.7 - 62.2	26.8 - 28.7	56.7 - 62.2	0.0	34.7 - 40.2
R69	1170 Pennsylvania Avenue	56.2 - 60.4	27.5 - 37.4	56.2 - 60.4	0.0	34.2 - 38.4
R70	1170 Pennsylvania Avenue	56.0 - 56.0	31.5 - 40.8	56.0 - 56.1	0.1	34.0 - 34.1
R71	1170 Pennsylvania Avenue	56.0 - 56.0	29.7 - 32.5	56.0 - 56.0	0.0	34.0 - 34.0
R72	1170 Pennsylvania Avenue	56.0 - 57.3	28.1 - 31.4	56.0 - 57.3	0.0	34.0 - 35.3
R73	1170 Pennsylvania Avenue	59.5 - 62.1	25.5 - 29.3	59.5 - 62.1	0.0	37.5 - 40.1
R74	1155 Pennsylvania Avenue	56.0 - 61.9	26.9 - 31.8	56.0 - 61.9	0.0	34.0 - 39.9
R75	1155 Pennsylvania Avenue	56.0 - 58.8	22.4 - 28.9	56.0 - 58.8	0.0	34.0 - 36.8
R76	1155 Pennsylvania Avenue	56.0 - 56.0	21.7 - 25.5	56.0 - 56.0	0.0	34.0 - 34.0
R77	1155 Pennsylvania Avenue	56.0 - 58.5	22.5 - 27.6	56.0 - 58.5	0.0	34.0 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	23.9 - 38.5	56.0 - 59.1	0.0	34.0 - 37.1
R79	1155 Pennsylvania Avenue	56.0 - 59.4	22.0 - 25.5	56.0 - 59.4	0.0	34.0 - 37.4
R80	1155 Pennsylvania Avenue	56.0 - 56.0	22.3 - 26.1	56.0 - 56.0	0.0	34.0 - 34.0

Table 19-29 Phase 2B/2C – Superstructure/Fit-Out Construction Noise Levels: Months 86 through 89

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R81	1155 Pennsylvania Avenue	56.0 - 56.0	22.0 - 26.0	56.0 - 56.0	0.0	34.0 - 34.0
R82	1155 Pennsylvania Avenue	56.0 - 57.8	21.0 - 25.8	56.0 - 57.8	0.0	34.0 - 35.8
R83	1155 Pennsylvania Avenue	56.0 - 58.8	20.1 - 23.8	56.0 - 58.8	0.0	34.0 - 36.8
R84	1155 Pennsylvania Avenue	56.0 - 56.0	20.8 - 24.0	56.0 - 56.0	0.0	34.0 - 34.0
R85	1155 Pennsylvania Avenue	56.0 - 57.4	19.5 - 23.0	56.0 - 57.4	0.0	34.0 - 35.4
R86	1155 Pennsylvania Avenue	56.0 - 56.0	20.9 - 32.2	56.0 - 56.0	0.0	34.0 - 34.0
R87	1155 Pennsylvania Avenue	56.0 - 56.0	20.4 - 32.3	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	36.8 - 37.9	56.1 - 58.8	0.1	34.1 - 36.8
R89	1260 Cronton Loop	56.0 - 62.4	44.1 - 51.1	56.8 - 62.5	0.9	34.8 - 40.5
R90	1260 Cronton Loop	57.0 - 65.9	34.0 - 49.3	57.3 - 65.9	0.3	35.3 - 43.9
R91	1260 Cronton Loop	56.0 - 62.9	27.2 - 39.9	56.0 - 62.9	0.0	34.0 - 40.9
R92	1260 Cronton Loop	56.0 - 60.3	25.9 - 38.2	56.0 - 60.3	0.0	34.0 - 38.3
R93	1260 Cronton Loop	56.0 - 56.0	25.7 - 35.6	56.0 - 56.0	0.0	34.0 - 34.0
R94	1260 Cronton Loop	56.0 - 61.8	24.5 - 37.3	56.0 - 61.8	0.0	34.0 - 39.8
R95	Proposed PAC	56.0 - 56.0	35.3 - 35.3	0.0 - 0.0	0.0	29.0 - 29.0

Source: VHB 2022

Table 19-30 Phase 2B/2C – Fit-Out Construction Noise Levels: Months 90 through 96

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R01	10835 Flatlands Avenue	65.7 - 66.3	51.0 - 51.0	65.8 - 66.4	0.1	43.8 - 44.4
R02	10835 Flatlands Avenue	65.0 - 65.4	52.1 - 52.1	65.2 - 65.6	0.2	43.2 - 43.6
R03	10835 Flatlands Avenue	69.1 - 69.7	49.3 - 51.3	69.1 - 69.8	0.1	47.1 - 47.8
R04	Farragut Road Park	71.5 - 71.5	44.5 - 44.5	71.5 - 71.5	0.0	0.0 - 0.0
R05	11110 Flatlands Avenue	67.3 - 67.3	59.0 - 59.0	67.9 - 67.9	0.6	40.9 - 40.9
R06	730 Louisiana Avenue	59.3 - 59.3	61.9 - 61.9	63.8 - 63.8	4.5	36.8 - 36.8
R07	730 Louisiana Avenue	56.0 - 56.0	61.6 - 61.6	62.7 - 62.7	6.7	35.7 - 35.7
R08	730 Louisiana Avenue	58.2 - 58.2	62.9 - 62.9	64.2 - 64.2	6.0	37.2 - 37.2
R09	730 Louisiana Avenue	62.4 - 62.4	59.4 - 59.4	64.2 - 64.2	1.8	37.2 - 37.2
R10	790 Louisiana Avenue	61.3 - 63.1	46.1 - 48.6	61.5 - 63.2	0.2	39.5 - 41.2
R11	508 Louisiana Avenue	59.8 - 61.2	42.6 - 45.9	59.9 - 61.3	0.1	37.9 - 39.3
R12	556 Louisiana Avenue	56.0 - 58.4	39.9 - 42.3	56.1 - 58.5	0.1	34.1 - 36.5
R13	Proposed Building 6	56.0 - 59.4	58.9 - 66.2	60.7 - 67.0	7.8	37.5 - 40.0
R14	12048 Flatlands Avenue	65.3 - 68.8	59.1 - 60.4	66.5 - 69.2	1.2	44.5 - 47.2
R15	Proposed Building 6	59.5 - 61.3	45.5 - 58.3	59.7 - 63.0	1.8	33.2 - 36.0
R16	Proposed Building 6	56.0 - 56.0	45.6 - 58.5	56.4 - 60.4	4.4	29.4 - 33.4
R17	Proposed Building 6	56.0 - 56.0	51.1 - 68.2	57.2 - 68.5	12.5	30.8 - 41.5
R18	Proposed Building 5	56.0 - 56.0	48.2 - 63.8	56.7 - 64.5	8.5	29.7 - 37.5
R19	Proposed Building 5	56.0 - 57.6	44.5 - 55.4	56.3 - 59.6	2.2	29.3 - 32.6
R20	Proposed Building 5	56.0 - 56.0	48.0 - 66.3	56.6 - 66.7	10.7	30.2 - 39.7
R21	Proposed Building 5	56.0 - 56.0	44.2 - 55.0	56.3 - 58.5	2.5	29.3 - 31.5
R22	Proposed Building 3	56.0 - 56.0	45.1 - 58.4	56.3 - 60.4	4.4	29.4 - 33.4
R23	Proposed Building 3	60.0 - 61.8	42.3 - 52.3	60.1 - 62.2	0.5	33.5 - 35.2
R24	Proposed Building 3	56.0 - 56.0	45.6 - 57.7	56.4 - 59.9	3.9	29.4 - 32.9
R25	Proposed Building 4	56.0 - 56.0	50.5 - 58.6	57.1 - 60.5	4.5	30.1 - 33.5
R26	Proposed Building 3	58.8 - 64.6	42.9 - 54.0	58.9 - 64.9	0.4	32.3 - 37.9
R27	Proposed Building 4	56.0 - 56.0	45.2 - 54.3	56.3 - 58.2	2.2	29.3 - 31.2
R28	Proposed Building 1	62.9 - 65.9	43.4 - 55.2	62.9 - 66.2	0.4	35.9 - 39.2
R29	Proposed Building 2	56.0 - 57.6	45.5 - 55.6	56.4 - 59.7	2.1	29.4 - 32.7
R30	Proposed Building 1	67.2 - 71.2	38.6 - 52.0	67.2 - 71.3	0.1	37.3 - 39.3
R31	Proposed Building 1	56.0 - 56.0	39.3 - 51.2	56.1 - 57.2	1.2	29.1 - 30.2
R32	Proposed Building 2	56.0 - 56.3	40.2 - 49.9	56.1 - 57.2	0.9	29.1 - 30.2
R33	Proposed Building 2	56.0 - 56.2	42.3 - 54.4	56.2 - 58.4	2.2	29.2 - 31.4
R34	Proposed Building 1	66.3 - 70.4	37.2 - 47.2	66.3 - 70.4	0.0	35.6 - 38.4
R35	Proposed Building 2	59.1 - 63.9	38.6 - 50.6	59.1 - 64.0	0.2	28.6 - 32.0
R36	Proposed Building 4	56.0 - 57.9	55.5 - 68.2	58.8 - 68.6	10.7	31.8 - 41.6
R37	Proposed Building 4	56.0 - 56.0	46.4 - 57.3	56.5 - 59.7	3.7	29.5 - 32.7
R38	Proposed Building 4	56.0 - 56.0	50.2 - 66.6	57.0 - 67.0	11.0	30.0 - 40.0
R39	12041 Flatlands Avenue	58.3 - 58.3	43.3 - 43.3	58.4 - 58.4	0.1	31.4 - 31.4
R40	12079 Flatlands Avenue	56.0 - 56.0	43.5 - 43.5	56.2 - 56.2	0.2	29.2 - 29.2

Table 19-30 Phase 2B/2C – Fit-Out Construction Noise Levels: Months 90 through 96

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R41	12079 Flatlands Avenue	59.5 - 59.5	41.0 - 41.0	59.6 - 59.6	0.1	32.6 - 32.6
R42	1036 Sheffield Avenue	60.5 - 61.7	41.5 - 41.7	60.6 - 61.7	0.1	33.6 - 34.7
R43	1036 Sheffield Avenue	56.0 - 59.2	40.0 - 40.0	56.1 - 59.3	0.1	29.1 - 32.3
R44	1118 Pennsylvania Avenue	64.3 - 64.3	36.2 - 36.2	64.3 - 64.3	0.0	37.3 - 37.3
R45	1143 Flatlands Avenue	63.4 - 63.4	34.4 - 34.4	63.4 - 63.4	0.0	36.4 - 36.4
R46	1111 Pennsylvania Avenue	56.6 - 56.6	34.4 - 34.4	56.6 - 56.6	0.0	29.6 - 29.6
R47	148 Cozine Avenue	64.3 - 65.1	33.7 - 33.8	64.3 - 65.1	0.0	42.3 - 43.1
R48	148 Cozine Avenue	57.7 - 60.5	33.4 - 33.4	57.7 - 60.5	0.0	35.7 - 38.5
R49	148 Cozine Avenue	56.0 - 56.0	34.0 - 34.8	56.0 - 56.0	0.0	34.0 - 34.0
R50	190 Cozine Avenue	59.0 - 67.2	31.3 - 32.2	59.0 - 67.2	0.0	37.0 - 45.2
R51	1 Vandalia Avenue	58.8 - 64.5	45.6 - 49.6	59.0 - 64.6	0.2	37.0 - 42.6
R52	1 Vandalia Avenue	59.7 - 64.9	45.5 - 51.3	59.9 - 65.1	0.2	37.9 - 43.1
R53	1 Vandalia Avenue	56.0 - 58.1	45.7 - 52.3	56.4 - 58.8	1.3	34.4 - 36.8
R54	1 Vandalia Avenue	56.0 - 61.8	43.5 - 52.6	56.2 - 62.2	0.5	34.2 - 40.2
R55	1 Vandalia Avenue	56.0 - 56.0	46.5 - 46.5	56.5 - 56.5	0.5	34.5 - 34.5
R56	1 Vandalia Avenue	56.0 - 56.0	45.8 - 45.8	56.4 - 56.4	0.4	34.4 - 34.4
R57	1 Vandalia Avenue	56.0 - 56.8	41.7 - 47.9	56.2 - 56.9	0.6	34.2 - 34.9
R58	1 Vandalia Avenue	56.0 - 56.0	40.7 - 47.0	56.1 - 56.5	0.5	34.1 - 34.5
R59	1 Vandalia Avenue	56.0 - 56.7	40.6 - 48.8	56.1 - 56.9	0.8	34.1 - 34.9
R60	1 Vandalia Avenue	56.0 - 56.0	39.1 - 48.8	56.1 - 56.8	0.8	34.1 - 34.8
R61	1180 Pennsylvania Avenue	56.0 - 57.4	52.4 - 57.4	57.6 - 59.9	3.7	35.6 - 37.9
R62	1180 Pennsylvania Avenue	56.0 - 58.9	58.8 - 64.3	61.7 - 65.4	6.7	39.7 - 43.4
R63	1180 Pennsylvania Avenue	56.0 - 56.0	38.9 - 43.9	56.1 - 56.3	0.3	34.1 - 34.3
R64	1180 Pennsylvania Avenue	56.0 - 57.3	40.8 - 49.5	56.1 - 57.5	0.8	34.1 - 35.5
R65	99 Vandalia Avenue	56.0 - 56.0	38.2 - 39.9	56.1 - 56.1	0.1	34.1 - 34.1
R66	99 Vandalia Avenue	56.0 - 56.0	38.2 - 39.8	56.1 - 56.1	0.1	34.1 - 34.1
R67	99 Vandalia Avenue	56.0 - 57.9	35.7 - 46.4	56.0 - 57.9	0.3	34.0 - 35.9
R68	99 Vandalia Avenue	56.7 - 62.2	36.7 - 42.3	56.7 - 62.2	0.0	34.7 - 40.2
R69	1170 Pennsylvania Avenue	56.2 - 60.4	39.3 - 50.7	56.3 - 60.8	0.4	34.3 - 38.8
R70	1170 Pennsylvania Avenue	56.0 - 56.0	53.8 - 60.1	58.0 - 61.5	5.5	36.0 - 39.5
R71	1170 Pennsylvania Avenue	56.0 - 56.0	49.8 - 56.9	56.9 - 59.5	3.5	34.9 - 37.5
R72	1170 Pennsylvania Avenue	56.0 - 57.3	34.3 - 43.9	56.0 - 57.3	0.2	34.0 - 35.3
R73	1170 Pennsylvania Avenue	59.5 - 62.1	35.9 - 38.5	59.5 - 62.1	0.0	37.5 - 40.1
R74	1155 Pennsylvania Avenue	56.0 - 61.9	38.1 - 46.2	56.1 - 61.9	0.2	34.1 - 39.9
R75	1155 Pennsylvania Avenue	56.0 - 58.8	31.9 - 42.6	56.0 - 58.9	0.1	34.0 - 36.9
R76	1155 Pennsylvania Avenue	56.0 - 56.0	31.1 - 32.4	56.0 - 56.0	0.0	34.0 - 34.0
R77	1155 Pennsylvania Avenue	56.0 - 58.5	31.3 - 32.0	56.0 - 58.5	0.0	34.0 - 36.5
R78	1155 Pennsylvania Avenue	56.0 - 59.1	33.4 - 52.7	56.0 - 60.0	0.9	34.0 - 38.0
R79	1155 Pennsylvania Avenue	56.0 - 59.4	33.3 - 45.8	56.0 - 59.6	0.2	34.0 - 37.6
R80	1155 Pennsylvania Avenue	56.0 - 56.0	31.4 - 33.0	56.0 - 56.0	0.0	34.0 - 34.0

Table 19-30 Phase 2B/2C – Fit-Out Construction Noise Levels: Months 90 through 96

Receptor	Location	Existing 8-9 AM Sound Level (dBA, L_{eq})	Construction Sound Level (dBA, L_{eq})	Future Sound Level (dBA, L_{eq})	Maximum Increase (dBA)	Interior Sound Level (dBA, L_{10})
R81	1155 Pennsylvania Avenue	56.0 - 56.0	32.0 - 45.2	56.0 - 56.3	0.3	34.0 - 34.3
R82	1155 Pennsylvania Avenue	56.0 - 57.8	31.7 - 44.4	56.0 - 57.9	0.2	34.0 - 35.9
R83	1155 Pennsylvania Avenue	56.0 - 58.8	31.3 - 43.7	56.0 - 58.9	0.1	34.0 - 36.9
R84	1155 Pennsylvania Avenue	56.0 - 56.0	30.8 - 44.0	56.0 - 56.3	0.3	34.0 - 34.3
R85	1155 Pennsylvania Avenue	56.0 - 57.4	30.6 - 42.8	56.0 - 57.5	0.2	34.0 - 35.5
R86	1155 Pennsylvania Avenue	56.0 - 56.0	30.4 - 36.7	56.0 - 56.1	0.1	34.0 - 34.1
R87	1155 Pennsylvania Avenue	56.0 - 56.0	29.1 - 29.9	56.0 - 56.0	0.0	34.0 - 34.0
R88	1260 Cronton Loop	56.0 - 58.8	38.7 - 44.4	56.1 - 58.9	0.3	34.1 - 36.9
R89	1260 Cronton Loop	56.0 - 62.4	39.6 - 49.3	56.1 - 62.6	0.4	34.1 - 40.6
R90	1260 Cronton Loop	57.0 - 65.9	38.9 - 51.3	57.1 - 66.0	0.2	35.1 - 44.0
R91	1260 Cronton Loop	56.0 - 62.9	35.8 - 36.6	56.0 - 62.9	0.0	34.0 - 40.9
R92	1260 Cronton Loop	56.0 - 60.3	33.6 - 39.2	56.0 - 60.3	0.1	34.0 - 38.3
R93	1260 Cronton Loop	56.0 - 56.0	33.1 - 37.6	56.0 - 56.1	0.1	34.0 - 34.1
R94	1260 Cronton Loop	56.0 - 61.8	31.9 - 33.0	56.0 - 61.8	0.0	34.0 - 39.8
R95	Proposed PAC	56.0 - 56.0	48.2 - 48.2	0.0 - 0.0	0.0	29.7 - 29.7

Source: VHB 2022

Construction noise levels would not exceed 85 dBA (L_{eq}) at any receptor location for any phase of construction; therefore, construction noise would not cause a significant adverse impact due to the Public Health noise criterion.

The following summarizes the results of the construction noise assessment, as shown in **Table 19-15** through **Table 19-30** at the nearest receptors to the Proposed Project by phase of construction.

Phase 1A – Construction of Proposed Buildings 1 and 2

Construction for Phase 1A including proposed buildings 1 and 2 is scheduled to last approximately 23 months. Since none of the proposed buildings would be completed during Phase 1A, receptors include only the existing receptors located adjacent to the Development Site.

- Between months 1 and 4, when foundation installation construction activities would occur, the maximum exterior sound levels would range from 56.1 to 80.9 dBA (L_{eq}), which would be an increase of up to 22.4 dBA over existing levels. Interior noise levels would range from 30.7 to 58.9 dBA (L_{10}). Construction noise levels would increase by 20 dBA or more at two building facades, between 15 and 20 dBA at six building facades, and between 10 and 15 dBA at eleven building facades.
- Between months 5 and 12, when foundation, superstructure, and exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.0 to 71.8 dBA (L_{eq}), which would be an increase of up to 14.9 dBA over existing

levels. Interior noise levels would range from 29.2 to 49.6 dBA (L_{10}). Construction noise levels would increase between 10 and 15 dBA at seven building facades.

- Between months 13 and 17, when exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.0 to 71.5 dBA (L_{eq}), which would be an increase of up to 3.0 dBA over existing levels. Interior noise levels would range from 29.0 to 47.7 dBA (L_{10}). Construction noise levels would not increase by 10 dBA or more at any building facades.
- Between months 18 and 23, when exterior and interior fit-out construction activities would occur, maximum exterior sound levels would range from 56.0 to 71.6 dBA (L_{eq}), which would be an increase of up to 11.7 dBA over existing levels. Interior noise levels would range from 29.4 to 47.8 dBA (L_{10}). Construction noise levels would increase by 10 dBA or more at three building facades.

Phase 1B – Construction of Proposed Buildings 3, 4, and CCC Garage

Construction for Phase 1B, including Building 3, 4 and the CCC Garage, is scheduled to last approximately 23 months. Construction associated with Buildings 1 and 2 is expected to be complete, with the buildings potentially occupied, at the start of construction for Phase 1B. Receptors include the existing receptors as well as new receptors associated with the Phase 1A, Buildings 1 and 2.

- Between months 25 and 28, when foundation installation construction activities would occur, the maximum exterior sound levels would range from 56.2 to 83.2 dBA (L_{eq}), which would be an increase of up to 26.1 dBA over existing levels. Interior noise levels would range from 29.4 to 57.0 dBA (L_{10}). Construction noise levels would increase by 20 dBA or more at two building facades, between 15 and 20 dBA at eight building facades, and between 10 and 15 dBA at 13 building facades.
- Between months 29 and 36, when foundation, superstructure, and exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.1 to 78.3 dBA (L_{eq}), which would be an increase of up to 22.0 dBA over existing levels. Interior noise levels would range from 29.0 to 56.3 dBA (L_{10}). Construction noise levels would increase by 20 dBA or more at three building facades, between 15 and 20 dBA at eight building facades, and between 10 and 15 dBA at 11 building facades.
- Between months 37 and 43, when exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.0 to 75.0 dBA (L_{eq}), which would be an increase of up to 13.2 dBA over existing levels. Interior noise levels would range from 28.7 to 48.0 dBA (L_{10}). Construction noise levels would increase by 10 dBA or more at four building facades.
- Between months 44 and 47, when exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.0 to 72.6 dBA (L_{eq}), which would be an increase of up to 15.9 dBA over existing levels. Interior noise levels would range from 28.7 to 47.9 dBA (L_{10}). Construction noise levels would increase by 15 dBA or more at one building facades and between 10 and 15 dBA at two building facades.

Phase 2A – Construction of Proposed Buildings 5, 6, and Performing Arts Center

Construction for Phase 2A, including Buildings 5, 6, and the PAC, is scheduled to last approximately 24 months. Construction associated with Buildings 1, 2, 3, and 4 is expected to be complete, with the buildings potentially occupied, at the start of construction for Phase 2A. Receptors include the existing receptors within the Project Study Area as well as new receptors associated with the Phase 1A, Buildings 1 and 2, and Phase 1B, Buildings 3 and 4.

- Between months 49 and 55, when foundation installation and superstructure construction activities would occur, the maximum exterior sound levels would range from 56.0 to 76.6 dBA (L_{eq}), which would be an increase of up to 20.6 dBA over existing levels. Interior noise levels would range from 28.7 to 52.6 dBA (L_{10}). Construction noise levels would increase by 20 dBA or more at one building facade, between 15-20 dBA at two building facades, and between 10 and 15 dBA at six building facades.
- Between months 56 and 61, when foundation, superstructure, and exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.0 to 79.1 dBA (L_{eq}), which would be an increase of up to 22.0 dBA over existing levels. Interior noise levels would range from 28.7 to 52.1 dBA (L_{10}). Construction noise levels would increase by 20 dBA or more at one building facade, between 15 and 20 dBA at two building facades, and between 10 and 15 dBA at eight building facades.
- Between months 62 and 66, when superstructure and exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.0 to 71.5 dBA (L_{eq}), which would be an increase of up to 9.3 dBA over existing levels. Interior noise levels would range from 28.6 to 47.7 dBA (L_{10}). Construction noise levels would not increase by 10 dBA or more at any building facades.
- Between months 67 and 72, when exterior and interior fit-out construction activities would occur, maximum exterior sound levels would range from 56.0 to 74.4 dBA (L_{eq}), which would be an increase of up to 18.3 dBA over existing levels. Interior noise levels would range from 28.6 to 52.1 dBA (L_{10}). Construction noise levels would increase by 15 dBA or more at one building facade and between 10 and 15 dBA at two building facades.

Phase 2B/2C – Construction of Proposed Buildings 7/ 8 and 9/ 10

Construction for Phase 2b/2C, including Buildings 7/8 and 9/10, is scheduled to last approximately 25 months. Construction associated with Buildings 1, 2, 3, 4, 5, 6 and the PAC is expected to be complete, with the buildings potentially occupied, at the start of construction for Phase 2B/2C. Receptors include the existing receptors within the project's Study Area as well as new receptors associated with all previously constructed buildings.

- Between months 73 and 78, when foundation installation and superstructure construction activities would occur, the maximum exterior sound levels would range from 56.0 to 77.5 dBA (L_{eq}), which would be an increase of up to 18.8 dBA over existing levels. Interior noise levels would range from 28.7 to 55.5 dBA (L_{10}). Construction noise levels would increase by 15 dBA or more at three building facades and between 10 and 15 dBA at four building facades.
- Between months 79 and 85, when foundation, superstructure, and exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would

range from 56.0 to 71.6 dBA (L_{eq}), which would be an increase of up to 14.8 dBA over existing levels. Interior noise levels would range from 28.6 to 48.6 dBA (L_{10}). Construction noise levels would increase by 10 dBA or more at four building facades.

- Between months 86 and 89, when superstructure and exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.0 to 71.5 dBA (L_{eq}), which would be an increase of up to 4.2 dBA over existing levels. Interior noise levels would range from 28.6 to 47.7 dBA (L_{10}). Construction noise levels would not increase by 10 dBA or more at any building facades.
- Between months 90 and 96, when exterior and interior fit-out construction activities would occur, the maximum exterior sound levels would range from 56.0 to 71.5 dBA (L_{eq}), which would be an increase of up to 12.5 dBA over existing levels. Interior noise levels would range from 28.6 to 47.8 dBA (L_{10}). Construction noise levels would increase by 10 dBA or more at four building facades.

Construction Noise Impact Assessment

As shown in **Figure 19-6** exterior and interior construction noise levels would exceed the thresholds at receptors located within close proximity to the Development Site. These receptors include existing receptors near the Development Site as well as receptors that would be introduced by the Proposed Actions during the phased development.

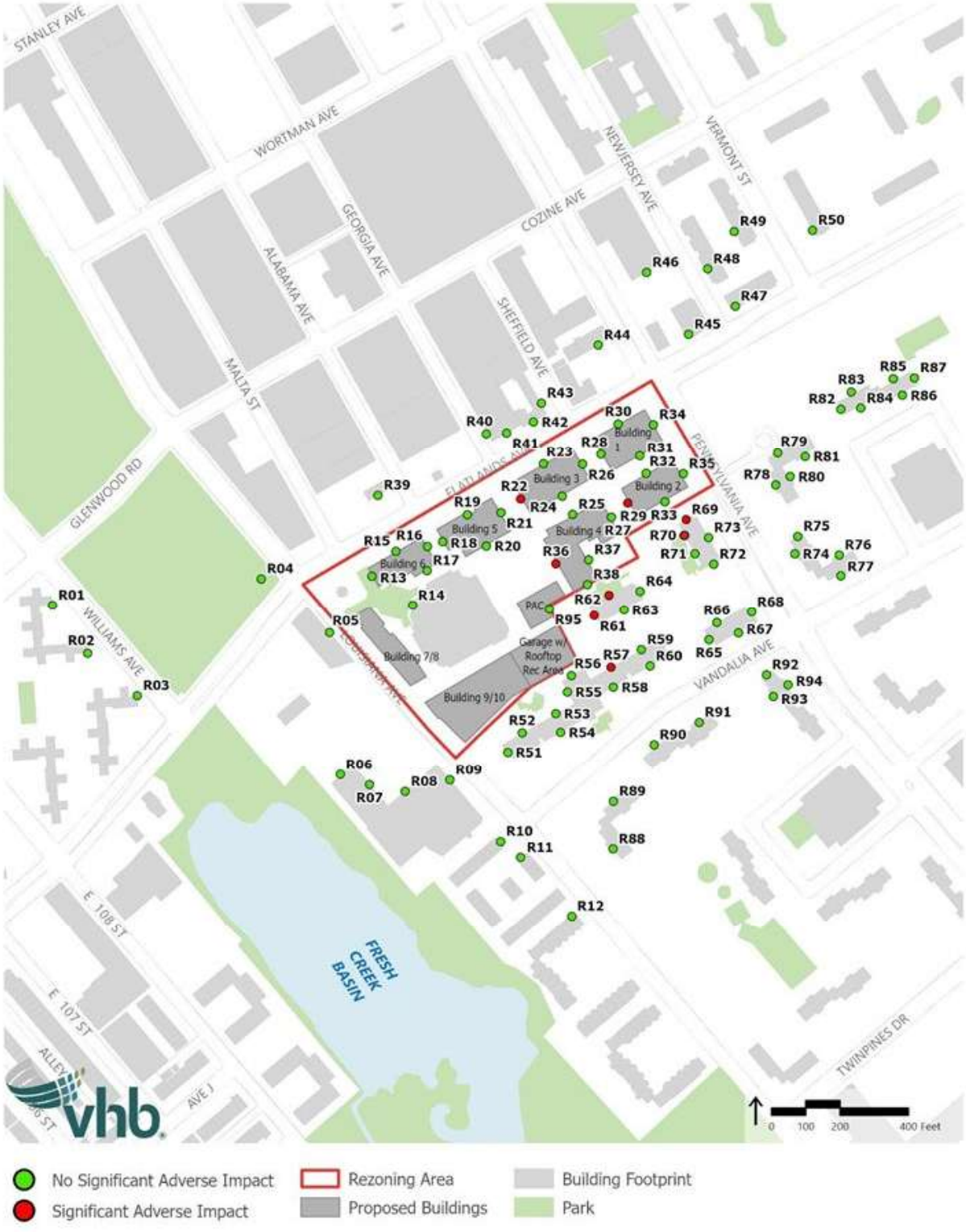
There would be a total of six buildings where construction noise levels would increase by 20 dBA or more over existing conditions for three months or longer and where this level of noise increase would cause interior noise levels to exceed the acceptable threshold for at least three consecutive months including:

- Proposed Building 2
- Proposed Building 3
- Proposed Building 4
- 1180 Pennsylvania Avenue
- 1170 Pennsylvania Avenue
- 1 Vandalia Avenue

- There would be a total of ~~six~~five buildings where construction noise levels would increase by 15 dBA or more over existing conditions for 12 months or longer and where this level of noise increase would cause interior noise levels to exceed the acceptable range for at least 12 consecutive months including:
  - Proposed Building 1
  - Proposed Building 2
  - Proposed Building 3
  - Proposed Building 4
  - 1180 Pennsylvania Avenue
  - 1170 Pennsylvania Avenue

In total, exterior and interior construction noise levels would exceed the thresholds at ~~seven~~six buildings, including three existing buildings and ~~four~~three buildings that would be introduced by the Proposed Actions during the phased development.

Figure 19-6 Construction Noise Assessment Results



Building by Building Conclusions

- ~~**Proposed Building 1 (R28, R30, R31, R34):** This 15-story residential building would be constructed in Phase 1A and would be located in the northeast corner (Block 3343, Lot 10) of the Development Site. Construction for Proposed Building 1 is scheduled to be completed in month 23. The western façade (R28), eastern façade (R34), northern façade (R30), and southern façade (R31), were assessed for potential noise impacts beginning in month 25.~~

  ~~Exterior future noise levels would range from 63.0 to 82.6 dBA (Leq) during Phase 1B of development, which would be an increase of up to 19.1 dBA (Leq). Exterior noise levels would range from 56.3 to 71.4 dBA (Leq) during Phase 2A of development, which would be an increase of up to 10.4 dBA (Leq). Exterior levels would range from 56.0 to 71.3 dBA (Leq) during Phase 2B/2C of development, which would be an increase of up to 1.5 dBA (Leq).~~

  ~~Based on building construction plans, Proposed Building 1 would have insulated glass windows and central air-conditioning, which would be expected to provide 30 dBA window/wall attenuation. The northern (R30) and eastern (R34) façades are required to have a minimum OITC rating of 35 dBA window/wall attenuation.~~

  ~~Interior construction noise levels would be up to 55.6 dBA (L_{10}) during Phase 1B, up to 40.1 dBA (L_{10}) during Phase 2A, and up to 39.3 dBA (L_{10}) during 2B/2C. Interior noise levels would exceed the interior noise criterion for residential spaces (45 dBA L_{10}) by up to 10.6 dBA during Phase 1B.~~

  ~~Increases in exterior noise of 20 dBA or more for three or more months would not occur at any façade. Increases in exterior noise of 15 to 20 dBA or more for 12 months or more would occur at one façade (R31). Increases in exterior noise of 10 dBA or more for 24 months or more would not occur at any facade on Proposed Building 1. Therefore, based on the predicted magnitude and duration of noise increases, construction noise associated with the proposed actions at Proposed Building 1 would have the potential to result in significant adverse construction noise impact. While there would be significant adverse construction noise impacts at this facade receptor (R31), acceptable interior noise criteria (45 dBA L10) for residential spaces would not be exceeded for 12 or more consecutive months of objectionable noise increase (i.e., 15 to 20 dBA of noise increase). Therefore, above mentioned insulated glass windows and central air conditioning at this receptor would fully mitigate the identified significant adverse construction noise impacts and there would not be a need for additional mitigation measures at this receptor. Further discussion is provided in **Chapter 20, Mitigation**.~~

- **Proposed Building 2 (R29, R32, R33, R35):** This 13-story residential building would be constructed in Phase 1A and would be located in the southeast corner (Block 3343, Lot 10) of the Development Site. Construction for Proposed Building 1 is scheduled to be completed in month 23. The western façade (R29), eastern façade (R35), northern façade (R32), and southern façade (R33), were assessed for potential noise impacts beginning in month 25.

  Exterior future noise levels would range from 56.3 to 83.2 dBA (L_{eq}) during Phase 1B of development, which would be an increase of up to 26.0 dBA (L_{eq}). Exterior noise levels would range from 56.0 to 66.4 dBA (L_{eq}) during Phase 2A of development, which would be an increase of up to 10.3 dBA (L_{eq}). Exterior levels would range from 56.0 to 64.0 dBA

(L_{eq}) during Phase 2B/2C of development, which would be an increase of up to 2.2 dBA (L_{eq}).

Based on building construction plans, Proposed Building 2 would have insulated glass windows and central air-conditioning, which would be expected to provide 30 dBA window/wall attenuation. The eastern façade (R35) is required to have a minimum OITC rating of 35 dBA window/wall attenuation.

Interior construction noise levels would be up to 56.2 dBA (L_{10}) during Phase 1B, up to 39.4 dBA (L_{10}) during Phase 2A, and up to 32.8 dBA (L_{10}) during 2B/2C. Interior noise levels would exceed the interior noise criterion for residential spaces (45 dBA L_{10}) by up to 11.2 dBA during Phase 1B.

Increases in exterior noise of 20 dBA or more for three or more months and interior noise levels exceeding 45 dBA (L_{10}) would occur at one façade (R29). Increases in exterior noise of 15 to 20 dBA or more for 12 months or more and interior noise levels exceeding 45 dBA (L_{10}) would occur at ~~two façades~~one façade (R29~~ and R32~~). Increases in exterior noise of 10 dBA or more for 24 months or more would not occur at any facades on Proposed Building 2.~~ Therefore, based on the predicted magnitude and duration of noise increases, construction noise associated with the proposed actions at Proposed Building 2 would have the potential to result in significant adverse construction noise impact. While there would be significant adverse construction noise impacts at the north facade receptor (R32), acceptable interior noise criteria (45 dBA L10) for residential spaces would not be exceeded for 12 or more consecutive months of objectionable noise increase (i.e., 15 to 20 dBA of noise increase) at this façade (R32). Therefore, above mentioned insulated glass window and central air conditioning would fully mitigate the identified significant adverse construction noise impacts at the north façade (R32) and there would not be a need for additional mitigation measures for the north facade receptor (R32). On the other hand, it~~

It is expected that interior noise levels at west façade (R29) would exceed 45 dBA L_{10} for the majority of ~~identified~~ significant ~~adverse construction~~incremental noise ~~impacts~~ impact and, therefore, above mentioned insulated glass windows and central air conditioning would not fully mitigate the identified significant adverse construction noise impacts at the west façade (R29). Further discussion is provided in **Chapter 20, Mitigation**.

› **Proposed Building 3 (R22 – R24, and R26):** This 14-story residential building would be constructed in Phase 1B and would be located in the northeast corner (Block 3343, Lot 1) of the Development Site. Construction for Proposed Building 3 is scheduled to be completed in month 47. The western façade (R22), eastern façade (R26), northern façade (R23), and southern façade (R24), were assessed for potential noise impacts beginning in month 49.

Exterior future noise levels would range from 56.4 to 76.6 dBA (L_{eq}) during Phase 2A of development, which would be an increase of up to 20.6 dBA (L_{eq}). Exterior noise levels would range from 56.~~0to~~0 to 64.9 dBA (L_{eq}) during Phase 2B/2C of development, which would be an increase of up to 4.4 dBA (L_{eq}).

Based on building construction plans, Proposed Building 3 would have insulated glass windows and central air-conditioning, which would be expected to provide 30 dBA window/wall attenuation.

Interior construction noise levels would be up to 49.6 dBA (L_{10}) during Phase 2A and up to 37.9 dBA (L_{10}) during 2B/2C. Interior noise levels would exceed the interior noise criterion for residential spaces (45 dBA L_{10}) by up to 4.6 dBA during Phase 2A.

Increases in exterior noise of 20 dBA or more for three or more months and interior noise levels exceeding 45 dBA (L_{10}) would occur at one façade (R22). Increases in exterior noise of 15 to 20 dBA or more for 12 months or more and interior noise levels exceeding 45 dBA (L_{10}) would occur at one facade (R22) on Proposed Building 3. Therefore, based on the predicted magnitude and duration of noise increases, and consideration of interior noise levels above the acceptable range, construction noise associated with the proposed actions at Proposed Building 3 would have the potential to result in significant adverse construction noise impact. These receptors are discussed further in **Chapter 20, Mitigation**.

- **Proposed Building 4 (R25, R27, and R36 – R38):** This 12-story residential building would be constructed in Phase 1B and would be located in the southeast corner (Block 3343, Lot 1) of the Development Site. Construction for Proposed Building 4 is scheduled to be completed in month 47. The western façade (R36), eastern façades (R27 and R37), northern façade (R25), and southern façade (R38), were assessed for potential noise impacts beginning in month 49.

  Exterior future noise levels would range from 56.1 to 79.1 dBA (L_{eq}) during Phase 2A of development, which would be an increase of up to 22.0 dBA (L_{eq}). Exterior noise levels would range from 56.0 to 68.6 dBA (L_{eq}) during Phase 2B/2C of development, which would be an increase of up to 11.0 dBA (L_{eq}).

  Based on building construction plans, Proposed Building 4 would have insulated glass windows and central air-conditioning, which would be expected to provide 30 dBA window/wall attenuation.

  Interior construction noise levels would be up to 52.1 dBA (L_{10}) during Phase 2A and up to 41.6 dBA (L_{10}) during 2B/2C. Interior noise levels would exceed the interior noise criterion for residential spaces (45 dBA L_{10}) by up to 7.1 dBA during Phase 2A.

  Increases in exterior noise of 20 dBA or more for three or more months and interior noise levels exceeding 45 dBA (L_{10}) would occur at one façade (R36). Increases in exterior noise of 15 to 20 dBA or more for 12 months or more and interior noise levels exceeding 45 dBA (L_{10}) would occur at one façade (R36) on Proposed Building 4. Therefore, based on the predicted magnitude and duration of noise increases, and consideration of interior noise levels above the acceptable range, construction noise associated with the proposed actions at Proposed Building 4 would have the potential to result in significant adverse construction noise impact. These receptors are discussed further in **Chapter 20, Mitigation**.

- **1180 Pennsylvania Avenue (R61 – R64):** This 12-story residential building is located south of the Development Site (Block 4431, Lot 70). The western façade (R61), eastern façade (R64), northern façade (R62), and southern façade (R63), were assessed for potential noise impacts.

  Exterior future noise levels would range from 56.1 to 75.4 dBA (L_{eq}) during Phase 1A of development, which would be an increase of up to 18.8 dBA (L_{eq}). Exterior noise levels would range from 56.4 to 79.0 dBA (L_{eq}) during Phase 1B, which would be an increase of

up to 22.4 dBA (L_{eq}). Exterior noise levels would range from 56.0 to 73.4 dBA (L_{eq}) during Phase 2A of development, which would be an increase of up to 16.7 dBA (L_{eq}). Exterior levels would range from 56.0 to 66.2 dBA (L_{eq}) during Phase 2B/2C of development, which would be an increase of up to 9.2 dBA (L_{eq}).

Based on street-level field observations, this building has insulated glass windows and through-wall air-conditioning, which would be expected to provide 25 dBA window/wall attenuation.

Interior construction noise levels would be up to 53.4 (L_{10}) during Phase 1A, up to 57.0 dBA (L_{10}) during Phase 1B, up to 51.4 dBA (L_{10}) during Phase 2A, and up to 44.2 dBA (L_{10}) during 2B/2C. Interior noise levels would exceed the interior noise criterion for residential spaces (45 dBA L_{10}) by up to 8.4 dBA during Phase 1A, up to 12.0 dBA during Phase 1B, and up to 6.4 dBA during Phase 2A.

Increases in exterior noise of 20 dBA or more for three or more months and interior noise levels exceeding 45 dBA (L_{10}) would occur at two façades (R61 and R62). Increases in exterior noise of 15 to 20 dBA or more for 12 months or more and interior noise levels exceeding 45 dBA (L_{10}) would occur at two façades (R61 and R62). Therefore, based on the predicted magnitude and duration of noise increases and consideration of interior noise levels above the acceptable range, construction noise associated with the proposed actions at 1180 Pennsylvania Avenue would have the potential to result in significant adverse construction noise impact. These receptors are discussed further in **Chapter 20, Mitigation**.

› **1170 Pennsylvania Avenue (R69 – R73):** This 12-story residential building is located south of the Development Site (Block 4434, Lot 60). The western façades (R70 and R71), eastern façade (R73), northern façade (R69), and southern façade (R72), were assessed for potential noise impacts.

Exterior future noise levels would range from 56.1 to 80.9 dBA (L_{eq}) during Phase 1A, which would be an increase of up to 22.4 dBA. Exterior noise levels would range from 56.3 to 74.5 dBA (L_{eq}) during Phase 1B of development, which would be an increase of up to 18.5 dBA (L_{eq}). Exterior noise levels would range from 56.0 to 62.2 dBA (L_{eq}) during Phase 2A of development, which would be an increase of up to 5.0 dBA (L_{eq}). Exterior levels would range from 56.0 to 62.2 dBA (L_{eq}) during Phase 2B/2C of development, which would be an increase of up to 5.5 dBA (L_{eq}).

Based on street-level field observations, this building has insulated glass windows and through-wall air-conditioning, which would be expected to provide 25 dBA window/wall attenuation.

Interior construction noise levels would be up to 58.9 (L_{10}) during Phase 1A, up to 52.5 dBA (L_{10}) during Phase 1B, up to 40.2 dBA (~~L_{eq}~~L_{10}) during Phase 2A, and up to 40.2 dBA (L_{10}) during 2B/2C. Interior noise levels would exceed the interior noise criterion for residential spaces (45 dBA L_{10}) by up to 13.9 dBA during Phase 1A and up to 7.5 dBA during Phase 1B.

Increases in exterior noise of 20 dBA or more for three or more months and interior noise levels exceeding 45 dBA (L_{10}) would occur at two façades (R69 and R70). Increases in exterior noise of 15 to 20 dBA or more for 12 months or more and interior noise levels exceeding 45 dBA (L_{10}) would occur at one façade (R70). Increases in exterior noise of 10 dBA or more for 24 months or more would not occur at any facade on the building

located at 1170 Pennsylvania Avenue. Therefore, based on the predicted magnitude and duration of noise increases and consideration of interior noise levels above the acceptable range, construction noise associated with the proposed actions at 1170 Pennsylvania Avenue would have the potential to result in significant adverse construction noise impact. These receptors are discussed further in **Chapter 20, Mitigation**.

› **1 Vandalia Avenue (R57 – R60):** This 10-story residential building is located south of the Development Site (Block 4431, Lot 10). The northern façades (R57 and R59) and southern façades (R58 and R60) were assessed for potential noise impacts.

Exterior future noise levels would range from 56.0 to 68.9 dBA (L_{eq}) during Phase 1A, which would be an increase of up to 12.5 dBA. Exterior noise levels would range from 56.1 to 78.3 dBA (L_{eq}) during Phase 1B of development, which would be an increase of up to 22.0 dBA (L_{eq}). Exterior noise levels would range from 56.0 to 67.0 dBA (L_{eq}) during Phase 2A of development, which would be an increase of up to 10.3 dBA (L_{eq}). Exterior levels would range from 56.0 to 65.9 dBA (L_{eq}) during Phase 2B/2C of development, which would be an increase of up to 9.1 dBA (L_{eq}).

Based on street-level field observations, this building has insulated glass windows and through-wall air-conditioning, which would be expected to provide 25 dBA window/wall attenuation.

Interior construction noise levels would be up to 46.9 (L_{10}) during Phase 1A, up to 56.3 dBA (L_{10}) during Phase 1B, up to 45.0 dBA (~~L_{eq}~~L_{10}) during Phase 2A, and up to 43.9 dBA (L_{10}) during 2B/2C. Interior noise levels would exceed the interior noise criterion for residential spaces (45 dBA L_{10}) by up to 1.9 dBA during Phase 1A, up to 11.3 dBA during Phase 1B, and meets the interior noise criterion during Phase 2B/2C.

Increases in exterior noise of 20 dBA or more for three or more months and interior noise levels exceeding 45 dBA (L_{10}) would occur at one façade (R57). Increases in exterior noise of 15 to 20 dBA or more for 12 months or more would not occur at façades on the building located at 1 Vandalia Avenue. Therefore, based on the predicted magnitude and duration of noise increases and consideration of interior noise levels above the acceptable range, construction noise associated with the proposed actions at 1 Vandalia Avenue would have the potential to result in significant adverse construction noise impact. These receptors are discussed further in **Chapter 20, Mitigation**.

Figure 19-7 to **Figure 19-10** show the noise level contour maps at a height of 5 feet above ground for the loudest month during each of the construction phases as well as the location of noise receptors.

Figure 19-7 Construction Noise Contours – Phase 1A, Foundation Installation

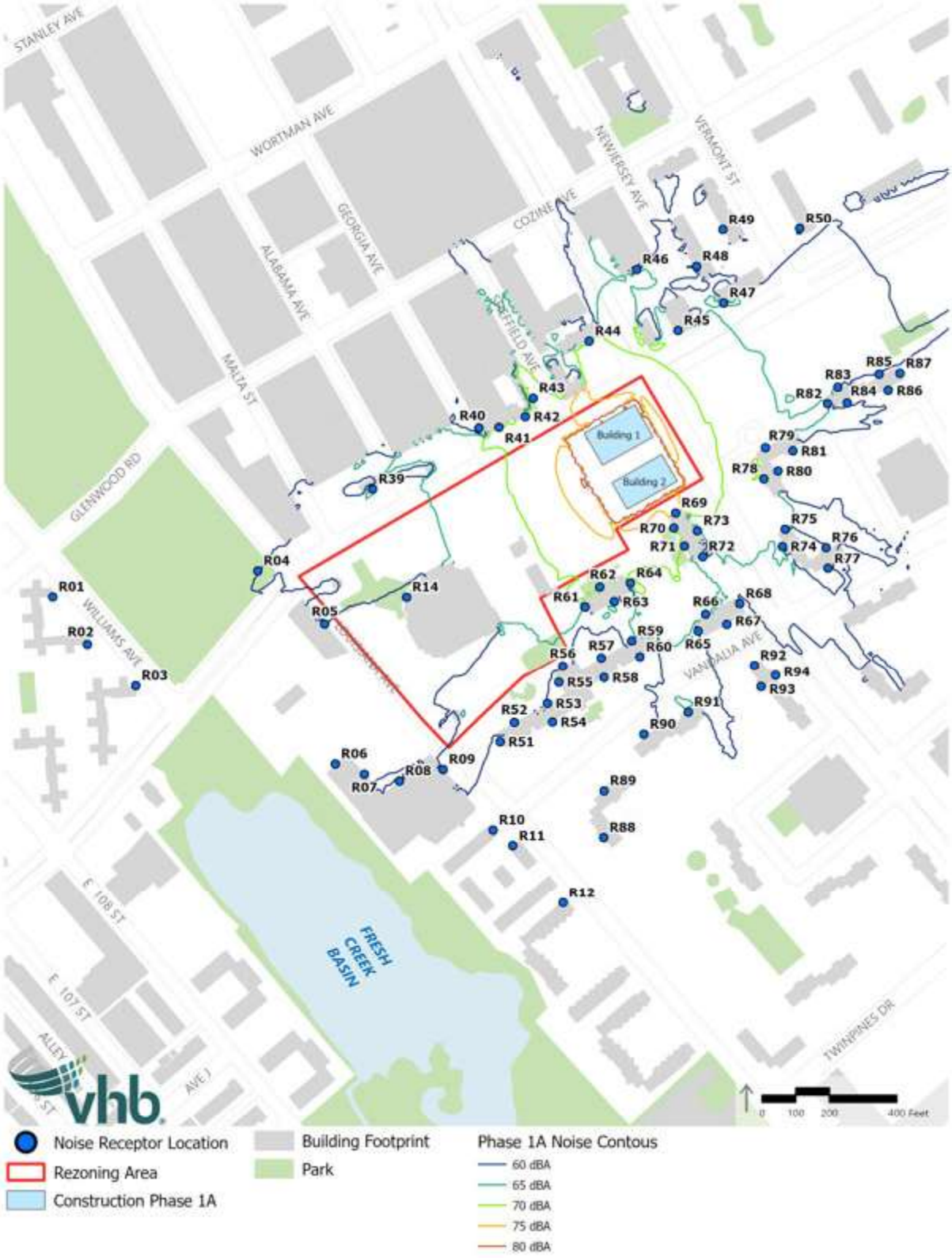


Figure 19-8 Construction Noise Contours – Phase 1B, Foundation Installation

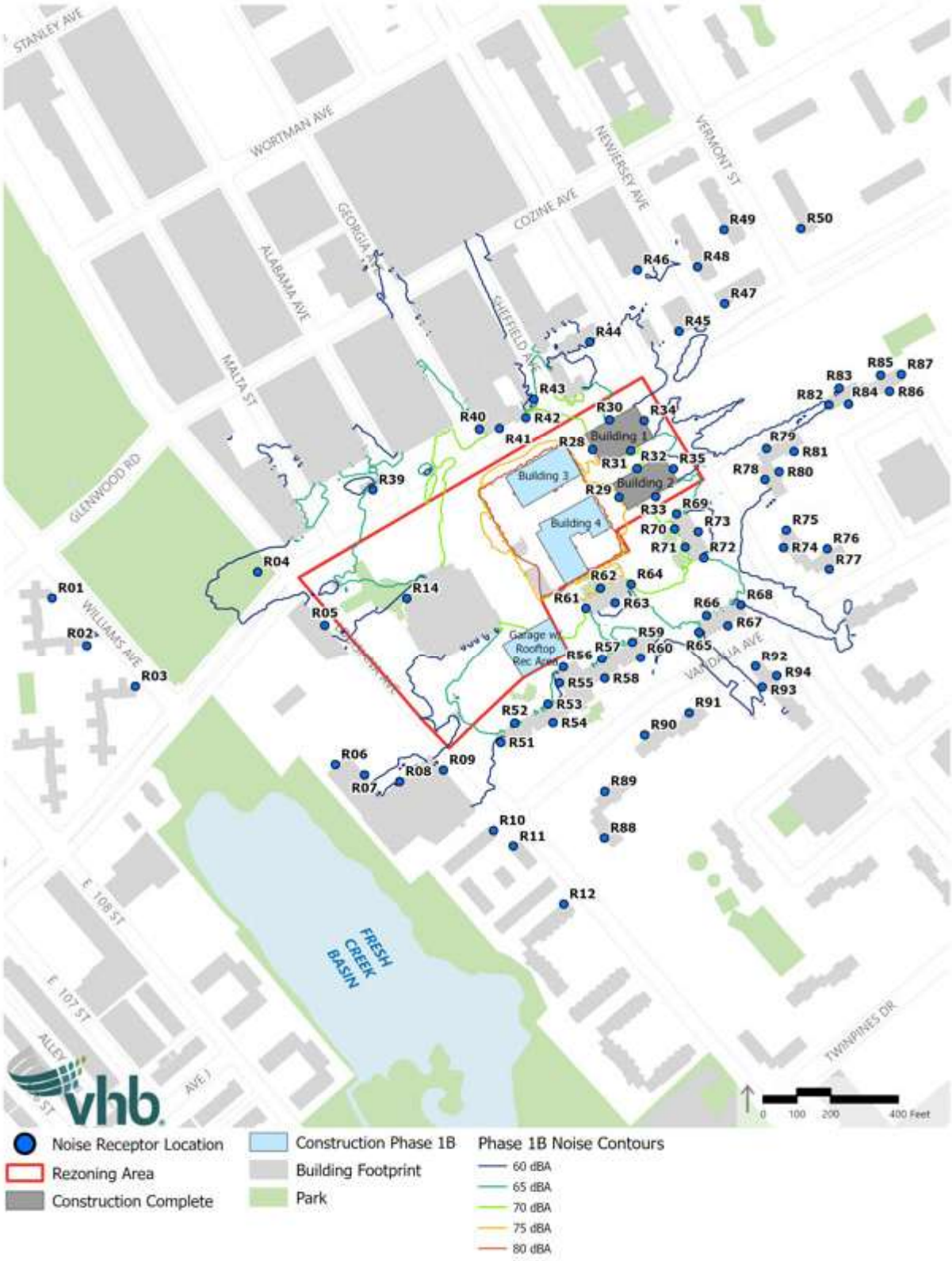


Figure 19-9 Construction Noise Contours – Phase 2A, Foundation Installation

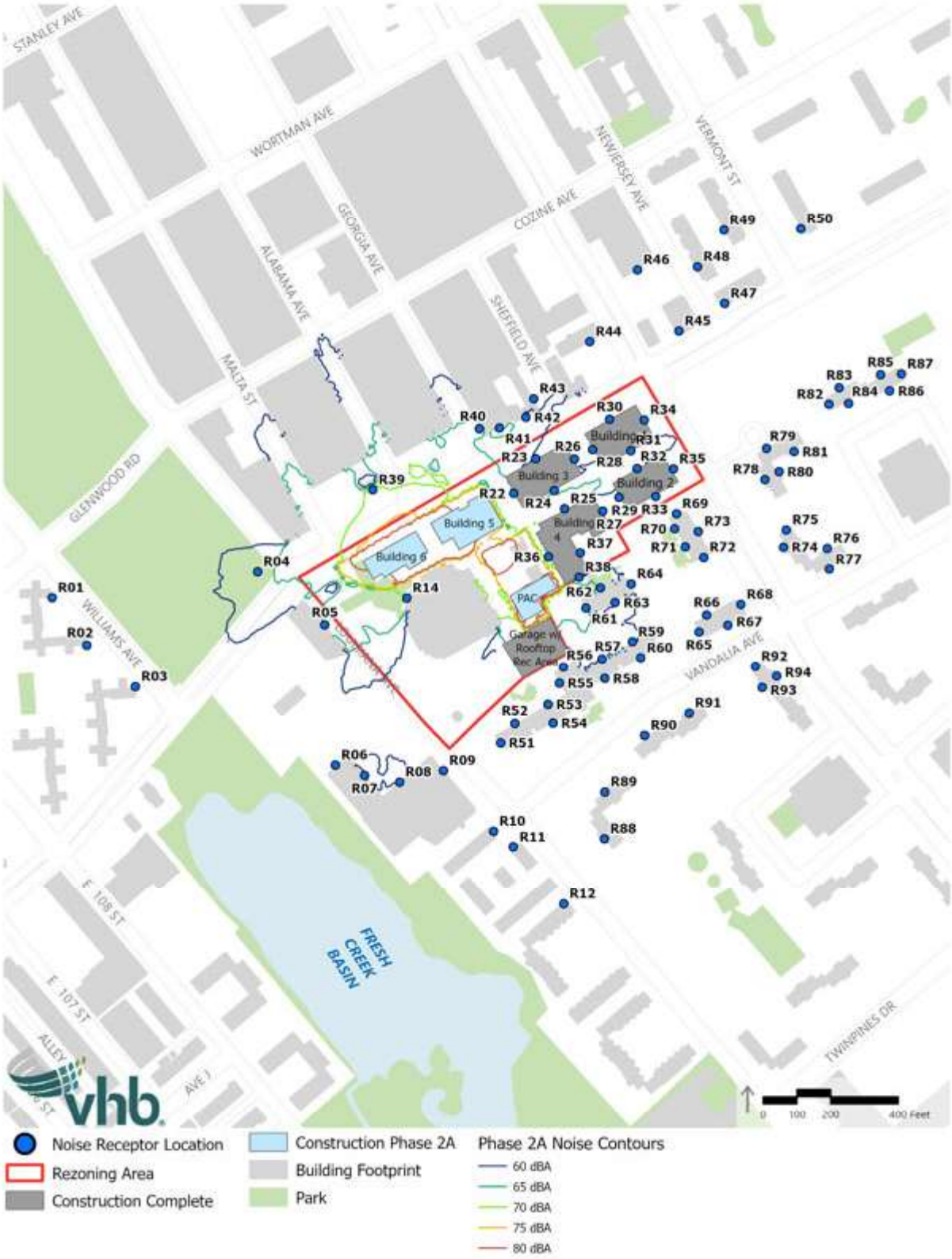
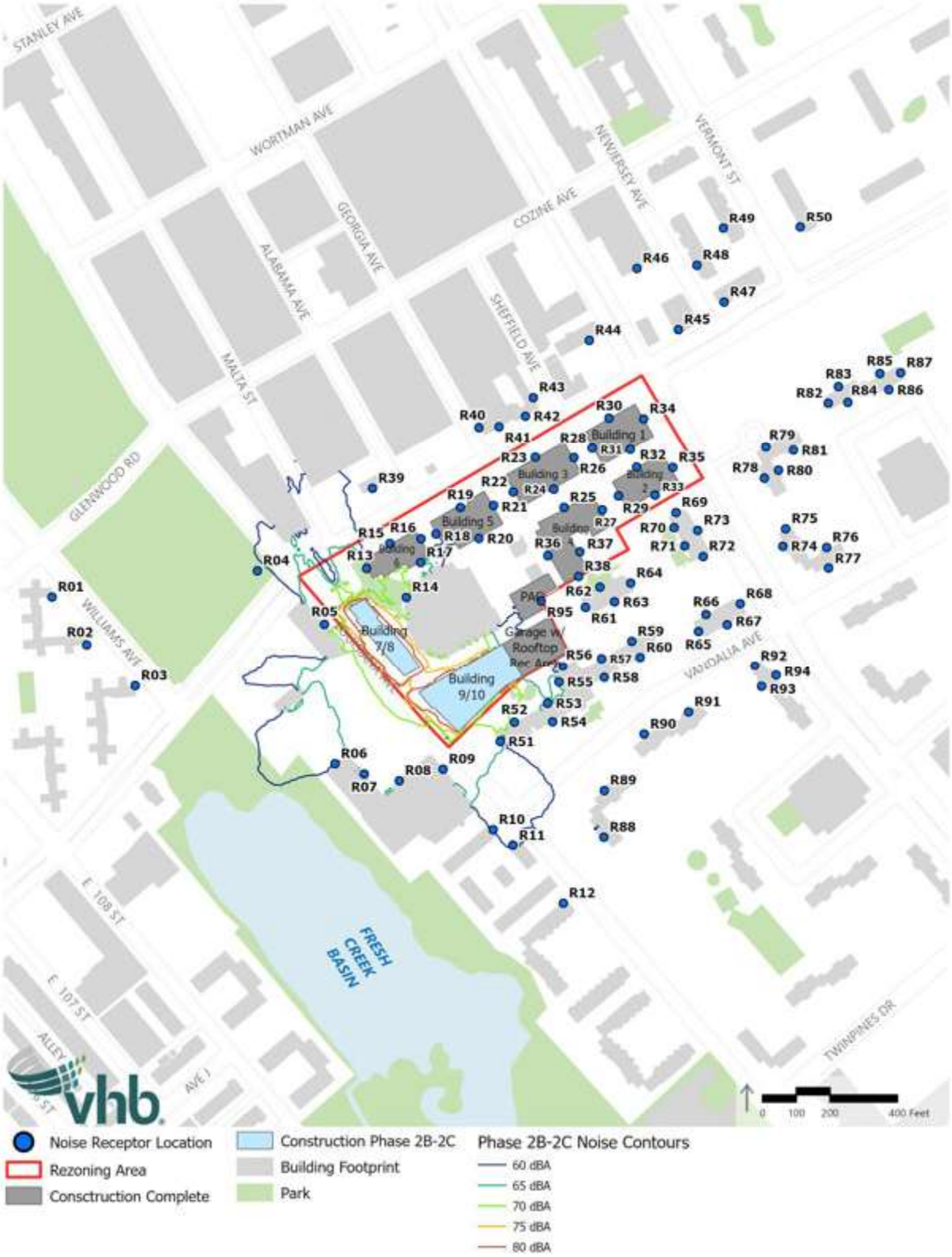


Figure 19-10 Construction Noise Contours – Phase 2B/2C, Foundation Installation



Conclusion

Since construction noise levels would exceed the thresholds for exterior increase in noise and considering the interior noise levels above the acceptable range, there would be potential for the project to result in significant adverse construction noise impacts. All construction noise impacts would be at new buildings that would be introduced with the phased development or at existing residential buildings located immediately south of the Development Site. Interior noise levels would exceed the interior impact criterion for residential receptors during certain phases of construction.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot construction noise barrier, construction noise would be reduced but would still exceed the thresholds for significant construction noise impact prior to mitigation.

The primary sources of construction noise causing impact include drills during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction. Since residential buildings where there would be noise impact are 10 to 15 stories tall, increasing the height of the perimeter wall would provide limited benefit compared to the standard 8-foot wall.

Concrete mixer trucks would be located either within the Development Site or along Flatlands Avenue depending on the specific phase of construction. When the concrete trucks are within the Development Site, it would not be feasible to construct noise barriers interior to the site to reduce noise due to the need for the concrete trucks to mobilize within the site. When the concrete trucks are on Flatlands Avenue, they are relatively far from the noise impact locations south of the Development Site and it would not be feasible to introduce a noise barrier between Flatlands Avenue and the Development Site. See **Chapter 20, Mitigation** for further information on the construction noise control measures that will be included with the Proposed Actions.

Therefore, the Proposed Actions would have the potential to result in a significant adverse noise impact that would remain unmitigated. See **Chapter 21, Unavoidable Adverse Impacts**.

Vibration

Construction activities have the potential to generate ground-borne vibration that can potentially cause structural or architectural damage or annoy people in nearby vibration-sensitive spaces, such as residences. The most substantial sources of construction vibration are equipment associated with the excavation and foundation phase, such as pile drivers, drill rigs, bulldozers, and jack hammers.

There are no buildings within the Project Area listed by the New York City Landmarks Preservation Commission (LPC) or the State and/or National Register of Historic Places (S/NR) which would require special protections from potential damage due to vibration. There is the potential for construction vibration from some construction equipment, such as pile drivers, to cause annoyance in nearby residences. However, these construction activities would only occur for limited periods of time at any particular location and there would be no significant adverse impact as a result of construction vibration.

Natural Resources

In order to protect the nearby water resources outlined in **Chapter 9, Natural Resources**, the Proposed Project will require a State Pollutant Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001, January 2020) from the New York State Department of Environmental Conservation (NYSDEC). This permit establishes the criteria by which construction projects are regulated and are allowed to discharge stormwater.

Furthermore, the Applicant will be required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that meets criteria set forth by NYSDEC under the SPDES General Permit for Stormwater Discharges from Construction Activity. The SWPPP will be reviewed and approved by NYSDEC and address erosion and sediment control, stormwater management, and pollution prevention practices during the construction process. No project work or equipment and materials storage will occur within or adjacent to wetlands. Various project erosion and silt controls will be installed and maintained pursuant to the New York State Standards and Specifications for Erosion and Sediment Control (2016).

With the implementation of a SWPPP there will be no impacts to water resources due to construction.

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Mitigation

In accordance with the *2021 City Environmental Quality Review (CEQR) Technical Manual*, where significant adverse impacts are identified, mitigation measures to reduce or eliminate the impacts to the fullest extent practicable are to be developed and evaluated.

Introduction

As detailed in the preceding chapters, upon completion, the Proposed Project has the potential to result in significant adverse impacts to community facilities, transportation, noise, and construction. The Proposed Project also has the potential to result in a temporary indirect adverse impact to active open space. Mitigation measures have been identified to address those impacts where feasible and/or practicable. As discussed below in more detail, partial mitigation is proposed for some of the significant adverse impacts of the Proposed Project. If no mitigation has been identified, an unavoidable significant adverse impact may result.

Principal Conclusions

In accordance with the *CEQR Technical Manual*, where significant adverse impacts are identified, mitigation to reduce or eliminate the impacts to the fullest extent practicable is developed and evaluated. Where potential significant adverse impacts have been identified—in the areas of transportation, community facilities (indirect impacts on early childhood programs and libraries), noise and construction—measures are examined to mitigate the anticipated impacts. As described below, the potential open space impact would be

temporary due to the sequencing of construction and there would be no open space impact at full buildout of the project.

In connection with approval of the Proposed Actions, a Restrictive Declaration would be recorded on the Development Site, subject to CPC approval. The Restrictive Declaration would codify commitments made in the FEIS related to the environmental review to ensure that project components related to the environment and mitigation measures are implemented.

Community Facilities

Early Childhood Programs

As the Proposed Project would be developed sequentially, the significant adverse impact would occur when the Proposed Project completed construction of approximately 530 non-senior, affordable units, which would introduce approximately 95 children eligible for publicly funded early childhood programs. Based on the proposed phasing schedule, it is therefore anticipated that the significant adverse impact to early childhood programs could first occur at Phase 1B of the Proposed Project's construction (to commence in 2025), and would increase as other phases are constructed and occupied.

Required mitigation measures to address the identified significant adverse impact to publicly funded early childhood programs ~~are being~~were explored in consultation with the New York City Department of Education ~~("the~~ (DOE~~") and will be refined~~) between the DEIS and FEIS. Such measures may include, but are not limited to, the provision of suitable space on-site for an early childhood program, provision of a suitable location off-site and within a reasonable distance, or funding or making program or physical improvements to support additional capacity. If it is deemed appropriate by the DOE, the Proposed Project could include space that could be used for early childhood programming within certain building groups. In this case, the Proposed Project has allocated approximately 12,320-gsf for a childcare facility within the Project Area. ~~As discussed above,~~Approximately 128 childcare slots (or approximately 6,350 sf ~~feet~~assuming 50 sf per child) could be designated for publicly funded early childhood programming, which would fully mitigate the significant adverse impact if the designated spaces are tenanted by early childhood providers in consultation with DOE. If mitigation measures are not fully effective in addressing the significant adverse impact to early childhood programs, then the Proposed Actions would result in an unavoidable adverse impact to early childhood programs. The implementation of the mitigation measures would rely upon the direction of the DOE and the ongoing monitoring that the DOE must undertake to determine the appropriate mitigation measures.

Libraries

As the Proposed Project would be developed sequentially, the significant adverse impact first would occur (pass the threshold of a 5 percent increase in the catchment area population) when the Proposed Project completes construction of approximately 1,487 of the 2,050 units, which would introduce a population of approximately 3,480 residents to the catchment area. Based on the proposed phasing schedule, it is therefore anticipated that the significant adverse impact to public libraries would first occur during Phase 2A of the Proposed Project's construction, which is anticipated to commence in 2027.

Required mitigation measures to address the identified significant adverse impact to Libraries ~~are under development~~have been developed in consultation with the Brooklyn Public Library (BPL). ~~The~~In order to address a significant adverse impact to library services resulting from the Large-Scale Development Project, the Applicant ~~is proposing to~~ shall provide ~~project residents with~~a computer ~~labs that have free internet access within lounge spaces~~lab space in each residential building ~~within the Proposed Project~~and shall include free Wi-Fi service in the main lounge areas in each residential building. Furthermore, space within the PAC would be provided for use by BPL for programming and additional outdoor space within the Central Quad would be made available for BPL programming. The full range of mitigation measures ultimately implemented would rely upon input from BPL, which would undertake ongoing monitoring to determine the appropriate mitigation measures as the Proposed Project is occupied. The Applicant would consult and coordinate with BPL prior to the design of Phase 2A, when the significant adverse impact to public libraries is first expected to occur, to determine the need, practicality, and feasibility for the proposed mitigations described above. If mitigation measures are not fully effective in addressing the significant adverse impact to libraries, then the Proposed Actions would result in an unavoidable adverse impact to ~~Libraries~~libraries.

Open Space

Required mitigation measures to address the identified temporary indirect active open space impact ~~are being~~were explored with DCP and NYC Parks between the DEIS and FEIS. ~~If~~As no mitigation measures ~~are not~~were fully effective in addressing the temporary adverse impact to active open space, the Proposed Actions would result in an unavoidable temporary adverse impact to active open space. During construction, it is anticipated that the active open space ratio (OSR) would exceed a 3 percent change (which is the relevant *CEQR Technical Manual* percent change threshold for active open space ratio) once the first 425 units are constructed and occupied (approximately 997 residents are anticipated) during Phase IA, the first phase of construction. With the Central Quad and the Entry Plaza and walkways constructed in the later phases of the project (within thirty-six months of the closing on the required financing and building permits for both Buildings 5 and 6), a temporary indirect active open space impact would result. As such, it is anticipated that up to approximately six years could elapse between the impact threshold and the full build-out of all of the proposed on-site open spaces.

Transportation

Traffic

Of the 13 intersections analyzed, the Proposed Project would result in significant adverse traffic impacts at nine intersections during the weekday AM peak hour, seven intersections during the weekday midday peak hour, nine intersections during the weekday PM peak hour, and seven intersections during the Saturday peak hour. A subset of seven intersections was analyzed during the Sunday peak hour and significant traffic impacts were identified at four of these intersections during this peak hour. The majority of the intersections analyzed would either not be significantly impacted or could be fully mitigated with readily implementable traffic improvement measures described below in this chapter. Six of the 13 intersections would remain unmitigated during the weekday AM peak hour, two

intersections during the weekday midday peak hour, five intersections during the weekday PM peak hour (three of the five intersections could be partially mitigated), and four intersections during the Saturday peak hour. During the Sunday peak hour, four of the seven intersections would remain unmitigated. Mitigation measures identified later in the chapter, such as signal timing changes, parking regulation changes to gain a travel lane at key intersections, and lane restriping, are standard traffic capacity improvements that are typically implemented by the New York City Department of Transportation (NYC DOT).

Subway

Subway station elements at the Rockaway Parkway L subway station were analyzed during the AM and PM commuter peak hours and significant impacts were identified at the Glenwood Avenue fare control area during the AM peak hour. ~~There would be no significant impacts on subways during the PM peak hour. Measures to mitigate this impact could potentially include the installation of additional turnstiles. The practicability of implementing this measure, as well as measures to prevent prevalent fare evasion at this fare control area, will be evaluated in consultation with New York City Transit (NYCT) between the Draft EIS and Final EIS.~~There would be no significant impacts on subways during the PM peak hour. As part of the recent station renovations, there is no fence or barrier behind the Glenwood Road fare control and the majority of subway riders were observed to evade the fare control. The subway station analysis assumed that all subway riders would use the fare control and not evade the fare. The analysis at this fare control, which consists of one high entry/exit turnstile (HEET) and one high exit turnstile (HXT), determined that the fare control would operate at over-capacity conditions during the AM peak hour under existing conditions and any small increase in subway riders would result in a significant impact. Between the Draft EIS and the Final EIS, mitigation measures were studied in conjunction with NYCT and it was determined that this impact could be mitigated with the installation of an additional HEET at this fare control. As a practical matter, the additional HEET would not be implemented in the absence of any measures taken by NYCT to deter the ongoing fare evasion. Therefore, until any measures are taken by NYCT to deter fare evasion at this location, the significant impact would be unmitigated. Thereafter, the significant impact would be fully mitigated upon the implementation of one additional HEET.

Buses

The Proposed Project would result in a capacity shortfall for the B82 bus route during the AM peak hour (93 spaces in the westbound direction), B82 SBS bus route during the AM peak hour (two spaces in the westbound direction) and PM peak hour (56 spaces in the eastbound direction), and B83 bus route during the AM peak hour (107 spaces in the northbound direction, 12 spaces in the southbound direction) and PM peak hour (64 spaces in the northbound direction, 75 spaces in the southbound direction).

Impacts to the B82 bus route could be mitigated with the addition of two standard buses in the westbound direction during the AM peak hour. Impacts to the B82 SBS bus route could be mitigated with the addition of one standard bus in the westbound direction during the AM peak hour, and two standard buses in the eastbound direction during the PM peak hour. Impacts to the B83 bus route could be mitigated with the addition of three standard buses in the northbound direction and one standard bus in the southbound direction during the AM peak hour, and two standard buses in each direction during the PM peak hour. The general

policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

Pedestrians

Of the 36 pedestrian elements analyzed, the Proposed Project would result in significant adverse pedestrian impacts at one pedestrian element (one ~~crosswalks~~crosswalk) during the weekday AM and midday peak hours, two pedestrian elements (two crosswalks) during the weekday PM peak hour, and four pedestrian elements (three crosswalks and one sidewalk) during the Saturday peak hour. A subset of 14 pedestrian elements along the Development Site frontages was analyzed for the Sunday peak hour. Twelve pedestrian elements (five crosswalks, three sidewalks, and four corners) would be impacted during this peak hour. Potential improvements that could mitigate the significant impacts were reviewed and it was determined that the pedestrian impacts could not be mitigated with typical improvement measures.

Noise

As described below, the Proposed Actions would result in the potential for significant adverse impacts to one existing residential building, located at 1180 Pennsylvania Avenue, due to the introduction of new stationary and mobile noise sources. As described in **Chapter 16, Noise**, With-Action sound levels would range from 59.4 to 67.7 dBA (Leq), an increase of up to 6.5 dBA from the No-Action condition. While the detailed noise analysis concluded that the Proposed Actions could result in noise levels exceeding noise impact criteria for greater than 5 dBA, primarily resulting from the proposed childcare facility playground at proposed Building 4, there would be significant adverse noise impacts at 1180 Pennsylvania Avenue due to the Proposed Action. The ~~introduction of a solid~~ existing window and through-wall ~~along~~air conditioners used by the ~~southern perimeter of the daycare playground facility~~adjacent buildings would ~~be expected to~~ provide ~~5 dBA of~~enough attenuation to maintain an interior noise ~~reduction, thereby mitigating~~level of 45 dBA or below. Therefore, interior noise ~~to~~would be at an acceptable level and would result in a finding of no unavoidable significant adverse noise impacts at this location.

With the inclusion of (E) Designations for new buildings on the Development Site which specify window-wall attenuation requirements, the project would not result in any on-site noise impacts requiring mitigation.

Construction

Construction Noise

Since noise levels during construction would exceed the thresholds for exterior increases in noise, there would be potential for the project to result in significant adverse construction noise impacts at new buildings that would be introduced with the phased development and at existing residential buildings located immediately south of the Development Site. As described in **Chapter 19, Construction**, interior noise levels would exceed the interior impact criterion for residential receptors during certain phases of construction.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot-tall construction noise barrier, construction noise would be reduced but would still exceed the thresholds for significant construction noise impact prior to mitigation.

As discussed below, no feasible mitigation measures were identified to mitigate the potential construction noise impact. While additional mitigation measures ~~will be~~were explored in consultation with the lead agency between Draft EIS and Final EIS, no feasible mitigation measures were identified and, as such, the Proposed Actions ~~have the potential to~~would result in a significant adverse noise impact that would remain unmitigated. See **Chapter 22, Unavoidable Adverse Impacts**.

Construction Transportation

As discussed in **Chapter 19, Construction**, seven intersections were analyzed for potential significant traffic impacts during the AM construction traffic peak hour and twelve intersections were analyzed during the PM construction traffic peak hour. Significant impacts were identified at two analysis intersections during the AM peak hour and at nine intersections during the PM peak hour. Where impacts during construction may occur, measures similar to the ones recommended in the operational traffic analysis could be implemented early to aid in alleviating congested traffic conditions. The two intersections that would be impacted during the AM peak hour could be fully mitigated with typical traffic improvement measures (i.e., signal timing modification and changing parking regulations to provide an additional travel lane). Significant impacts at the intersections of Pennsylvania Avenue with Flatlands Avenue, Stanley Avenue and Linden Boulevard, and Flatlands Avenue with Louisiana Avenue, East 108th Street, and Rockaway Parkway could not be fully mitigated during the PM peak hour. The PM construction peak hour findings are similar to operational With-Action conditions except for the intersections of Pennsylvania Avenue with Stanley Avenue, and the intersection of Flatlands Avenue and East 108th Street which could be mitigated under the operational With-Action conditions.

Community Facilities

Early Childhood Programs

As described in **Chapter 4, Community Facilities and Services**, the Proposed Actions would result in a significant adverse impact on publicly funded childcare and Head Start Centers according to the thresholds set forth by the *CEQR Technical Manual*.

There are 20 publicly funded early childhood programs within the 1.5-mile radius study area. These early childhood programs have a total capacity of 1,610 seats and have 167 available seats or a collective utilization of 89.63 percent. In the No-Action condition, there are seven planned or proposed developments which would introduce a total of 3,334 affordable units and 671 childcare-eligible children resulting in a utilization rate of 126.49 percent. In the With-Action condition, the Proposed Actions would introduce 1,338 non-senior affordable units resulting in an increment of 238 additional childcare-eligible children. This would increase the projected enrollment to 2,275 children, and early childhood program facilities would operate with a capacity at 141.3 percent utilization. The Proposed Actions would

decrease the total available slots and change the utilization by 14.8 percent, which exceeds the five percent threshold set by the *CEQR Technical Manual* or a significant adverse impact on early childhood programs.

One of the planned ~~proposed~~ developments within the 1.5-mile radius study area, the Brooklyn Developmental Center, identified a need for mitigation measures to avoid significant adverse impacts to childcare services. The suggested mitigation strategy for the Brooklyn ~~Development~~Developmental Center as proposed in the FEIS – would be to introduce 290 childcare slots to the study area for a total capacity of 1,900 slots.[1] The Brooklyn Developmental Center FEIS states that the DOE will determine the appropriate mitigation measures and therefore the extent of the mitigation and effects on study area capacity cannot be determined. With this mitigation under the No-Action condition, and agreement from the DOE that the slots would be publicly funded, the study area would only operate at a deficit of 375 slots and the study area utilization rate would be 107.2 percent. The change in utilization for the Proposed Actions would be 12.5 percent.

According to the *CEQR Technical Manual*, significant adverse impacts to publicly funded early childhood programs may occur with a proposed project that would result in a collective utilization rate greater than 100 percent, and a utilization rate that is at least 5 percent greater than the utilization rate without the Proposed Project. As such, a significant adverse impact on publicly funded early childhood programs could occur with the Proposed Project. Therefore, per the guidance of the *CEQR Technical Manual*, mitigation measures would be warranted for the significant adverse impact to publicly funded early childhood programs that would be attributable to the Proposed Project.

As the Proposed Project would be developed sequentially, the significant adverse impact would occur when the Proposed Project completed construction of approximately 530 non-senior, affordable units, which would introduce approximately 95 children eligible for publicly funded early childhood programs. Based on the proposed phasing schedule, it is therefore anticipated that the significant adverse impact to early childhood programs could first occur at Phase 1B of the Proposed Project's construction (to commence in 2025), and would increase as other phases are constructed and occupied. Accounting for mitigation by the Brooklyn ~~Development~~Developmental Center for its childcare impacts, the Proposed Project could provide 128 childcare slots within the Proposed Project (to reduce the change in utilization to 5 percent) or pay for them to be provided offsite. If it is deemed appropriate by the DOE, the Proposed Project could include space that could be used for publicly funded early childhood programming. To satisfy the need for seats, an approximately 6,350 sf publicly funded facility would be provided on site conservatively assuming 50 sf per child. The childcare facility would be constructed in Phase 1B. Consideration of providing additional childcare facility capacity and/or other measures ~~is being~~was explored in consultation with the DOE ~~and will be further explored~~ between the DEIS and FEIS and no additional measures were identified.

~~Possible mitigation measures for this significant adverse impact will be developed in consultation with the DOE and may include provision of suitable space on-site for a childcare center, provision of a suitable location off-site and within a reasonable distance (at a rate affordable to the DOE providers), or funding or making program or physical improvements~~

[1] https://esd.ny.gov/brooklyn-developmental-center-mixed-use-project-draft-environmental-impact-statement-deis

~~to support adding capacity to existing facilities if determined feasible through consultation with the DOE's Division of Early Childhood Education, or providing new early childhood programs within or near the project sites. As a City agency, the DOE does not directly provide new childcare facilities, instead it contracts with providers in areas of need. The DOE is also working to create public/private partnerships to facilitate the development of new early childhood programs where there is an area of need. As part of that initiative, the DOE may be able to contribute capital funding, if it is available, towards such projects to facilitate the provision of new programs.~~

~~If it is deemed appropriate by the DOE, the Proposed Project could include space that could be used for publicly funded early childhood programming within certain building areas designated for commercial use. In this case, the Proposed Project has allocated 12,320-gsf for a childcare facility within the Project Area. As discussed above, approximately 6,350 sf feet could be designated for publicly funded early childhood programming, which would fully mitigate the significant adverse impact if the designated spaces are tenanted by early childhood providers in consultation with the DOE.~~

In order to address a significant adverse impact to early childhood services resulting from the Land Use Actions, the Applicant shall provide, at the direction of the DOE, a minimum of 6,350 sf of space in Building 4 (i.e., core and shell), as shown on the Large-Scale Plans that accompany the Uniform Land Use Review Procedure (ULURP) application, for publicly funded daycare services at rents affordable to DOE providers. Upon the construction of 530 non-senior, affordable units within the Development Site, the Applicant shall contact DOE to confirm that the mitigation measure is needed. Upon DOE 's confirmation of a mitigation measure, the Applicant shall act with due diligence to obtain necessary approvals, permits, and licenses to allow such services to be provided. Notwithstanding the foregoing, in the event either (i) the DOE, the Department of Health, or other Governmental Authority does not issue a required approval, permit, or license, or (ii) DOE determines based on subsequent monitoring that sufficient early childhood services have been developed in proximity to the Development Site, this Mitigation Measure shall not be required and the Applicant shall have no further obligation with respect to such Mitigation Measure.

As noted in **Chapter 4, Community Facilities**, several factors may reduce the number of children in need of slots for publicly funded early childhood programs slots in DOE-contracted early childhood facilities. Families in the study area could make use of alternatives to publicly funded early childhood programs. There are slots at homes licensed to provide family-based early childhood programs that families of eligible children could elect to use instead of public early childhood programs. As noted above, these facilities provide additional slots in the study area but are not included in the quantitative analysis. Parents of eligible children are also not restricted to enrolling their children in childcare facilities in a specific geographical area and could use public early childhood programs outside of the study area. Parents of eligible children may also use DOE vouchers to finance care at private early childhood programs in the study area. Finally, the voucher system could spur the development of new early childhood programs to meet the need of eligible children that would result from the increase in the low-income and low- to moderate-income housing units in the area in the future with the Proposed Actions.

It should also be noted that the DOE's "3-K for All" and "Pre-K for All" programs were established in 2014. Since then, the City has made significant investments to provide free,

full-day early childhood education through "Pre-K for All" and "3-K for All," as part of a broader effort to create a continuum of high-quality early care and education programs for New York City children from birth to five years old.[2] There are numerous "3-K for All" program centers located within the study area. According to the DOE, there will be a 3-K seat for every three-year-old in school district 19 starting Fall 2021.[3] However, consistent with the methodologies outlined in the *CEQR Technical Manual*, these facilities have not been included in the quantitative analysis. In addition, the DOE issued a new Request for Proposals ("RFP") to meet new needs for early childhood services in certain areas of the city that have arisen since the onset of the pandemic and give providers another funding opportunity for the 2021-22 school year and beyond.[4] This RFP allowed proposers to offer "3-K for All" and "Pre-K for All" services within several zip codes, including those which make up the 1.5-mile study area from the Project Area. Therefore, the total number of existing and potential early childhood educational facilities in the study area is greater than that reflected in the quantitative analysis, and for this reason the DOE may determine that space within the Proposed Project is not needed at the time consultation occurs.

If mitigation measures are not fully effective in addressing the significant adverse impact to early childhood programs, then there may be a potentially unavoidable adverse impact (see **Chapter 22, Unavoidable Adverse Impacts**). The implementation of the mitigation measures would rely upon the direction of the ~~NYCDOE~~DOE and the ongoing monitoring that the ~~NYCDOE~~DOE must undertake to determine the appropriate mitigation measures.

Libraries

As described in **Chapter 4, Community Facilities and Services**, the Proposed Actions would result in a significant adverse impact on public libraries. The Proposed Actions would result in an incremental increase of approximately 4,797 new residents (an approximately 6.9-percent increase over the No-Action catchment area population). With the Proposed Actions, the holdings-per-resident ratio for the Spring Creek Library catchment area would decrease from 0.0714 to 0.0668 (a decrease of approximately 0.005 holdings per resident).

Per the guidance of the *CEQR Technical Manual*, a proposed project may result in a significant adverse impact to public libraries if the Proposed Project would increase a library catchment area population by 5 percent or more, compared to the conditions in the future without the Proposed Actions, and if this increase would be expected to impair the delivery of library services in the study area. Therefore, since the Spring Creek Library's catchment area population is projected to increase by approximately 6.9 percent, exceeding the 5 percent threshold cited in the *CEQR Technical Manual*, and the Proposed Project could impair the delivery of library services. However, as discussed in **Chapter 4, Community Facilities and Services**, there are other nearby libraries, including the Jamaica Bay Library, Canarsie Library, and New Lots Library, people in the study area have access to the entire BPL and NYPL system through the interlibrary loan system, and there are thousands of online resources available to card holders throughout the system. Although the Proposed

[2] Office of the Mayor. "Mayor de Blasio Announces 3-K for All." https://www1.nyc.gov/office-of-the-mayor/news/258- 17/mayor-de-blasio-3-k-all#/0 Accessed April 19, 2021

[3] New York City Department of Education. "3-K" https://www.schools.nyc.gov/enrollment/enroll-grade-by-grade/3k Accessed April 19, 2021.

[4] New York City Department of Education. "New RFP Opportunity in Targeted Zip Codes" https://infohub.nyced.org/workingwith-the-doe/early-childhood/provide-nyc-pre-k Accessed April 19, 2021.

Project may not affect the study area population's access to holdings due to widespread availability, it could affect computer resources, because the Branch has a limited number of computers and tablets available for public use. Furthermore, since the Proposed Project would increase the catchment area population, it could alter the demographics such that the Spring Creek Library's programming space and staffing could be impaired.

Therefore, per the guidance of the *CEQR Technical Manual*, mitigation measures would be warranted for the significant adverse impact to public libraries that would be attributable to the Proposed Project.

As the Proposed Project would be developed sequentially, the significant adverse impact first would occur (pass the threshold of a 5 percent increase in the catchment area population) when the Proposed Project completes construction of approximately 1,487 of the 2,050 units, which would introduce a population of approximately 3,480 residents to the catchment area. Based on the proposed phasing schedule, it is therefore anticipated that the significant adverse impact to public libraries would first occur during Phase 2A of the Proposed Project's construction, which is anticipated to commence in 2027.

Required mitigation measures to address the identified significant adverse impact to public libraries ~~are under development~~were identified in consultation with the BPL and ~~will be~~were refined between the DEIS and FEIS. The Applicant ~~is proposing to~~shall provide project residents with free internet access within lounge spaces and computer lab areas within all residential buildings of the Proposed Project. Furthermore, space within the PAC would be provided for use by BPL for programming and additional outdoor space within the Central Quad would be made available for BPL programming. The full range of mitigation measures ultimately implemented would rely upon input from BPL, which would undertake ongoing monitoring to determine the appropriate mitigation measures as the Proposed Project is occupied. The Applicant would consult and coordinate with BPL prior to the design of Phase 2A, when the significant adverse impact to public libraries is first expected to occur, to determine the need, practicality, and feasibility for the proposed mitigations described above.

As discussed in **Chapter 4, Community Facilities**, residents of the Spring Creek Library catchment area also reside in catchment areas for other nearby libraries, including the Jamaica Bay Library, Canarsie Library and New Lots Library as described above, and therefore would also be served by these libraries. Both the current and projected populations would also have access to the entire BPL and NYPL system through the interlibrary loan system and could have resources delivered to their nearest library branch. Finally, there are thousands of online resources available to card holders throughout the system.

If mitigation measures are not fully effective in addressing the significant adverse impact to libraries, there may be a potentially unavoidable adverse impact (see **Chapter 22, Unavoidable Adverse Impacts**). Mitigation measures would rely upon the direction of BPL and the ongoing monitoring BPL must undertake to determine the appropriate mitigation measures.

Open Space

As detailed in **Chapter 5, Open Space**, in the future with and without the Proposed Actions, the total and active ~~open space ratios~~OSRs in the study area would remain below the City's planning goals. The projected reductions in active, passive and total OSRs would decrease by

more than three, five and four percent, respectively, as a result of the Proposed Actions, exceeding the respective *CEQR Technical Manual* thresholds. It is expected that a combination of the new open spaces provided on-site as well as the qualitative factors would sufficiently provide access to the study area population by the proposed build year. However, there would be a temporary active open space impact during the construction period, since a substantial residential population would be introduced before the new open spaces are constructed later in the construction phasing. During construction, it is anticipated that the active OSR would exceed a 3 percent change (which is the relevant *CEQR Technical Manual* percent change threshold for active open space ratio) once the first 425 units are constructed and occupied (approximately 997 residents are anticipated) during Phase IA, the first phase of construction. With the Central Quad and the Entry Plaza and walkways constructed in the later phases of the project (within thirty-six months of the closing on the required financing and building permits for both Buildings 5 and 6), a temporary indirect active open space impact would result. As such, it is anticipated that up to approximately six years could elapse between the impact threshold and the full build-out of all of the proposed on-site open spaces. While there would be a temporary active open space impact, there would not be a permanent active open space impact given the new open spaces that would be provided on-site during later phases of construction.

The *CEQR Technical Manual* lists potential mitigation measures for open space impacts. These measures include, but are not limited to, creating new open space within the study area; funding for improvements, renovation, or maintenance at existing local parks; or improving existing open spaces to increase their utility or capacity to meet identified open space needs in the area, such as through the provision of additional active open space facilities. Mitigation for the identified open space impact ~~is being~~was explored by the Applicant, DCP, and NYC Parks ~~and will be refined~~ between the DEIS and FEIS~~. If~~ and it was determined that the temporary impact ~~cannot~~could not be fully mitigated. As such, the Proposed Actions would result in an unmitigated temporary adverse impact on active open space.

Transportation

As discussed in **Chapter 13, Transportation**, the Proposed Project would result in significant adverse traffic, transit and pedestrian impacts at a number of locations in the study area. This section describes the mitigation measures that could reduce or eliminate significant impacts and indicates where impacts would remain unmitigated.

Traffic

Of the 13 intersections analyzed, the Proposed Project would result in significant adverse traffic impacts at nine intersections (at 15 movements) during the weekday AM peak hour, seven intersections (at 11 movements) during the weekday midday peak hour, nine intersections (at 22 movements) during the weekday PM peak hour, and seven intersections (at 15 movements) during the Saturday peak hour. A subset of seven intersections was analyzed during the Sunday peak hour and traffic impacts were identified at four intersections (eight movements) during this peak hour. **Table 20-1** summarizes the number of traffic impacts and whether they could be fully mitigated or partially mitigated, and **Table 20-2** summarizes the significantly impacted

traffic movements. Details of the intersection capacity analyses, and all traffic mitigation measures are summarized in **Table 20-3** through **Table 20-6**.

Table 20-1 Traffic Impact Mitigation Summary

Intersections	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
No significant impact	4	6	4	6	3
Fully mitigated impact	3	5	4	3	0
Partially mitigated impact	0	0	3	0	0
Unmitigated impact	6	2	2	4	4

Note: Does not include three new proposed driveways – along Pennsylvania Avenue, Louisiana Avenue, and at the intersection of Flatlands Avenue and Sheffield Avenue – which would not be significantly impacted. Includes 12 signalized intersections and 1 unsignalized intersection for the weekday and Saturday peak hours. For the Sunday peak hour, the Mitigation condition analysis includes 7 signalized intersections and no unsignalized intersections.

Table 20-2 Summary of Significantly Impacted Traffic Movements

Intersection	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Sunday Peak Hour
Pennsylvania Avenue and Seaview Avenue	EB-R				
Pennsylvania Avenue and Twin Pines Drive					NB-L
Pennsylvania Avenue and Vandalia Avenue	WB-LTR NB-L	WB-LTR NB-L	WB-LTR NB-L		NB-L
Pennsylvania Avenue and Flatlands Avenue	EB-L NB-L	EB-L	EB-L EB-T WB-L	EB-L NB-L	EB-L SB-L SB-R
Pennsylvania Avenue and Cozine Avenue	EB-LTR SB-L	EB-LTR	EB-LTR	EB-LTR WB-LTR	*
Pennsylvania Avenue and Wortman Avenue			EB-LTR		*
Pennsylvania Avenue and Stanley Avenue	EB-LTR	EB-LTR	EB-LTR WB-LTR	WB-LTR	*
Pennsylvania Avenue and Linden Boulevard	WB-L NB-L NB-T	WB-L NB-L SB-L	NB-L SB-L SB-TR	NB-L	*
Louisiana Avenue and Flatlands Avenue	EB-R NB-L	EB-R NB-L	EB-R WB-L NB-L NB-TR	EB-R WB-TR NB-L NB-TR	EB-R WB-L SB-TR
Flatlands Avenue and East 108th Street	NB-LTR	NB-LTR	WB-L NB-LTR SB-LTR	WB-L NB-LTR	*
Flatlands Avenue and Rockaway Parkway	SB-LT		EB-TR WB-TR SB-LT	EB-TR WB-TR SB-LT	*
Number of impacted traffic movements	15	11	22	15	8
Number of unmitigated traffic movements	11	5	11	10	8

Notes: EB=Eastbound; WB=Westbound; NB=Northbound; SB=Southbound; L=Left turn; T=Through; R=Right turn
* = Intersection was not analyzed for the Sunday peak hour

As shown in **Table 20-1**, six of the 13 intersections would remain unmitigated during the weekday AM peak hour, two intersections would remain unmitigated during the weekday midday peak hour, five intersections would remain unmitigated during the weekday PM peak hour (three of the five intersections could be partially mitigated), and four intersections

would remain unmitigated during the Saturday peak hour. During the Sunday peak hour, four of the seven intersections would remain unmitigated.

The overall finding of the traffic mitigation analysis indicates that the majority of the 13 intersections analyzed would either not be significantly impacted or could be fully mitigated with readily implementable traffic improvement measures, including signal timing changes, parking regulation changes to gain a travel lane at key intersections, and/or lane restriping. These measures represent some of the standard traffic capacity improvements that are typically implemented by NYC DOT.

Table 20-3 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
SIGNALIZED INTERSECTIONS														
Pennsylvania Avenue and Seaview Avenue														
Seaview Avenue	EB	LT	0.27	41.1	D	LT	0.27	46.5	D	LT	0.27	45.6	D	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 57 sec to 56 sec. EB/WB green time shifts from 40 sec to 41 sec.]
		R	0.67	51.8	D	R	0.69	57.4	E	R	0.67	56.0	E	
	WB	LTR	0.58	39.3	D	LTR	0.58	39.3	D	LTR	0.57	38.0	D	
Pennsylvania Avenue	NB	L	0.58	62.6	E	L	0.58	62.6	E	L	0.58	62.6	E	
		T	0.81	35.0	C	T	0.81	35.0	C	T	0.83	36.7	D	
	SB	L	0.22	76.7	E	L	0.22	74.5	E	L	0.22	72.9	E	
		TR	0.61	29.5	C	TR	0.67	29.9	C	TR	0.68	29.6	C	
Shore Parkway Westbound Off-Ramp	NB	TR	0.68	26.7	C	TR	0.70	27.5	C	TR	0.72	28.5	C	
Overall Intersection[2]		-	-	**33.7**	**C**	-	-	**34.5**	**C**	-	-	**34.8**	**C**	
Pennsylvania Avenue and Twin Pines Drive														
Twin Pines Drive	EB	LR	0.34	36.0	D	LR	0.36	36.5	D	LR	0.36	36.5	D	-Mitigation not required.
Pennsylvania Avenue	NB	L	0.51	15.3	B	L	0.59	25.8	C	L	0.59	26.0	C	[Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	0.75	8.0	A	T	0.77	8.3	A	T	0.77	8.2	A	
	SB	T	0.48	27.6	C	T	0.53	24.9	C	T	0.53	23.2	C	
		R	0.19	24.1	C	R	0.19	21.1	C	R	0.19	19.7	B	
Overall Intersection[2]		-	-	**16.2**	**B**	-	-	**16.5**	**B**	-	-	**15.9**	**B**	

Table 20-3 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Pennsylvania Avenue and Vandalia Avenue														
Vandalia Avenue	EB	LTR	0.28	38.3	D	LTR	0.33	44.5	D	LTR	0.32	42.8	D	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to NBL/SBL phase and shift 2 sec of green time from NB/SB to EB/WB. [NB/SB green time shifts from 60 sec to 57 sec. NBL/SBL green time shifts from 8 sec to 9 sec. EB/WB green time shifts from 37 sec to 39 sec.]
	WB	LTR	0.71	48.6	D	LTR	0.82	60.8	E	LTR	0.77	52.6	D	
Pennsylvania Avenue	NB	L	0.43	46.1	D	L	0.73	60.2	E	L	0.67	51.8	D	
		T	0.90	12.4	B	T	0.91	13.2	B	T	0.95	19.0	B	
		R	0.18	3.6	A	R	0.20	4.1	A	R	0.21	5.2	A	
	SB	L	0.20	33.4	C	L	0.18	37.8	D	L	0.17	38.2	D	
		T	0.45	19.2	B	T	0.50	21.1	C	T	0.52	23.6	C	
		R	0.08	16.8	B	R	0.19	18.5	B	R	0.21	20.9	C	
Overall Intersection[2]		-	-	**19.1**	**B**	-	-	**22.2**	**C**	-	-	**24.9**	**C**	
Pennsylvania Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.54	43.5	D	L	0.95	74.5	E	L	0.95	74.5	E	**-Unmitigable.** [Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	0.51	39.6	D	T	0.55	34.2	C	T	0.55	34.2	C	
		R	0.12	26.3	C	R	0.36	24.2	C	R	0.36	24.2	C	
	WB	L	0.26	34.3	C	L	0.33	37.3	D	L	0.33	37.3	D	
		T	0.57	41.4	D	T	0.58	41.6	D	T	0.58	41.6	D	
		R	0.41	31.4	C	R	0.42	31.9	C	R	0.42	31.9	C	
Pennsylvania Avenue	NB	L	0.94	47.4	D	L	1.01	64.9	E	L	1.01	62.6	E	
		T	0.97	27.3	C	T	0.97	27.9	C	T	0.97	24.6	C	
		R	0.20	9.6	A	R	0.22	10.1	B	R	0.22	8.4	A	
	SB	L	0.83	66.5	E	L	0.83	65.6	E	L	0.83	65.6	E	
		T	0.59	40.3	D	T	0.64	38.7	D	T	0.64	38.7	D	
		R	0.36	37.5	D	R	0.44	37.6	D	R	0.44	37.6	D	

Table 20-3 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday AM Peak Hour

		2031 No-Action				2031 With-Action				2031 Mitigation				
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mitigation Measures**
Overall Intersection[2]		-	-	**36.3**	**D**	-	-	**39.0**	**D**	-	-	**37.9**	**D**	
Pennsylvania Avenue and Cozine Avenue														
Cozine Avenue	EB	LTR	1.05	102.2	F	LTR	1.11	121.4	F	LTR	1.11	121.4	F	-**Unmitigable.**
	WB	LTR	0.56	38.2	D	LTR	0.58	39.1	D	LTR	0.58	39.1	D	
Pennsylvania Avenue	NB	L	0.52	14.3	B	L	0.58	18.0	B	L	0.58	18.0	B	
		TR	0.87	19.1	B	TR	0.93	24.9	C	TR	0.93	24.9	C	
	SB	L	0.63	42.4	D	L	0.83	82.0	F	L	0.83	82.0	F	
		TR	0.65	14.1	B	TR	0.69	15.3	B	TR	0.69	15.3	B	
Overall Intersection[2]		-	-	**29.5**	**C**	-	-	**35.0**	**D**	-	-	**35.0**	**D**	
Pennsylvania Avenue and Wortman Avenue														
Wortman Avenue	EB	LTR	0.68	44.9	D	LTR	0.72	47.0	D	LTR	0.72	47.0	D	-Mitigation not required.
	WB	LTR	0.43	36.2	D	LTR	0.45	36.8	D	LTR	0.45	36.8	D	
Pennsylvania Avenue	NB	L	0.61	79.4	E	L	0.61	77.0	E	L	0.61	77.0	E	
		TR	0.99	22.8	C	TR	1.06	44.3	D	TR	1.06	44.3	D	
	SB	L	0.41	54.4	D	L	0.41	54.4	D	L	0.41	54.4	D	
		TR	0.63	19.0	B	TR	0.67	20.4	C	TR	0.67	20.4	C	
Overall Intersection[2]		-	-	**26.5**	**C**	-	-	**37.9**	**D**	-	-	**37.9**	**D**	

Table 20-3 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Pennsylvania Avenue and Stanley Avenue														
Stanley Avenue	EB	LTR	0.89	76.6	E	LTR	1.06	119.9	F	LTR	1.06	119.9	F	-**Unmitigable.**
	WB	LTR	0.85	67.6	E	LTR	0.87	71.1	E	LTR	0.87	71.1	E	
Pennsylvania Avenue	NB	L	0.73	82.2	F	L	0.73	78.8	E	L	0.73	78.8	E	
		TR	0.86	8.3	A	TR	0.93	8.7	A	TR	0.93	8.7	A	
	SB	L	0.25	40.6	D	L	0.25	40.2	D	L	0.25	40.2	D	
		TR	0.63	34.4	C	TR	0.67	35.2	D	TR	0.67	35.2	D	
Overall Intersection[2]		-	-	**31.0**	**C**	-	-	**34.8**	**C**	-	-	**34.8**	**C**	
Pennsylvania Avenue and Linden Boulevard														
Linden Boulevard Main Line	EB	L	0.68	77.1	E	L	0.68	77.1	E	L	0.68	77.1	E	**-Unmitigable.**
		T	0.56	37.2	D	T	0.56	37.2	D	T	0.56	37.2	D	
	WB	L	0.86	106.3	F	L	0.91	115.0	F	L	0.91	115.0	F	
		T	0.96	55.4	E	T	0.96	55.4	E	T	0.96	55.4	E	
Pennsylvania Avenue	NB	L	1.23	149.5	F	L	1.32	188.2	F	L	1.32	188.2	F	
		T	1.11	107.4	F	T	1.25	167.8	F	T	1.25	167.8	F	
		R	0.22	47.2	D	R	0.24	47.3	D	R	0.24	47.3	D	
	SB	L	0.94	98.0	F	L	0.94	100.5	F	L	0.94	100.5	F	
		TR	0.80	45.6	D	TR	0.87	50.3	D	TR	0.87	50.3	D	
Linden Boulevard Eastbound Service Rd	EB	T	0.56	40.2	D	T	0.56	40.2	D	T	0.56	40.2	D	
		R	0.39	28.3	C	R	0.39	28.3	C	R	0.39	28.3	C	
Linden Boulevard Westbound Service Rd	WB	TR	0.96	76.4	E	TR	0.96	76.4	E	TR	0.96	76.4	E	
Overall Intersection[2]		-	-	**68.9**	**E**	-	-	**83.7**	**F**	-	-	**83.7**	**F**	

Table 20-3 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Louisiana Avenue and Vandalia Avenue														
Vandalia Avenue	WB	LR	0.33	16.9	B	LR	0.45	16.0	B	LR	0.45	16.2	B	-Mitigation not required.
Louisiana Avenue	NB	TR	0.32	12.8	B	TR	0.35	12.6	B	TR	0.35	12.8	B	[Intersection delays change as a result of signal timing changes at nearby intersections.]
	SB	LT	0.49	11.5	B	LT	0.53	16.5	B	LT	0.53	16.5	B	
Overall Intersection[2]		-	-	**12.9**	**B**	-	-	**15.1**	**B**	-	-	**15.2**	**B**	
Louisiana Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.04	22.0	C	L	0.05	24.1	C	L	0.05	24.1	C	**-Unmitigable**
		T	0.46	23.5	C	T	0.50	24.3	C	T	0.50	24.3	C	[Intersection delays change as a result of signal timing changes at nearby intersections.]
		R	0.37	23.2	C	R	0.89	64.6	E	R	0.89	64.6	E	
	WB	L	0.26	23.5	C	L	0.36	27.4	C	L	0.36	27.4	C	
		TR	0.56	25.4	C	TR	0.64	27.2	C	TR	0.64	27.2	C	
Louisiana Avenue	NB	L	0.64	43.5	D	L	0.94	78.0	E	L	0.94	78.2[3]	E	
		TR	0.26	36.9	D	TR	0.67	52.9	D	TR	0.67	53.0	D	
	SB	L	0.04	28.9	C	L	0.18	36.1	D	L	0.18	36.1	D	
		TR	0.16	35.4	D	TR	0.20	36.2	D	TR	0.20	36.2	D	
Overall Intersection[2]		-	-	**27.6**	**C**	-	-	**38.3**	**D**	-	-	**38.4**	**D**	

Table 20-3 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Flatlands Avenue and East 108th Street														
Flatlands Avenue	EB	L	0.13	13.0	B	L	0.15	14.9	B	L	0.15	14.9	B	-Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane. -Restripe the NB approach from one 20-foot wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane.
		TR	0.42	15.5	B	TR	0.45	16.1	B	TR	0.45	16.1	B	
	WB	L	0.35	16.8	B	L	0.40	19.0	B	L	0.40	19.0	B	
		TR	0.46	16.2	B	TR	0.54	17.7	B	TR	0.54	17.7	B	
East 108th Street	NB	LTR	0.99	91.8	F	LTR	1.03	100.7	F	LT	0.51	44.7	D	
		-	-	-	-	-	-	-	-	R	0.60	49.0	D	
	SB	LTR	0.55	46.2	D	LTR	0.58	48.0	D	LTR	0.49	43.7	D	
Overall Intersection[2]		-	-	**31.3**	**C**	-	-	**32.9**	**C**	-	-	**23.9**	**C**	
Flatlands Avenue and Rockaway Parkway														
Flatlands Avenue	EB	L	0.26	39.1	D	L	0.31	43.7	D	L	0.31	43.7	D	**-Unmitigable.**
		TR	0.66	36.8	D	TR	0.70	38.5	D	TR	0.70	38.5	D	
	WB	L	0.12	32.1	C	L	0.12	33.1	C	L	0.12	33.1	C	
		TR	0.77	40.9	D	TR	0.90	50.8	D	TR	0.90	50.8	D	
Rockaway Parkway	NB	L	0.46	29.9	C	L	0.48	30.9	C	L	0.48	30.9	C	
		TR	0.68	33.3	C	TR	0.68	33.3	C	TR	0.68	33.3	C	
	SB	LT	0.91	64.9	E	LT	1.04	97.7	F	LT	1.04	97.7	F	
		R	0.36	35.4	D	R	0.36	35.4	D	R	0.36	35.4	D	
Overall Intersection[2]		-	-	**41.4**	**D**	-	-	**50.3**	**D**	-	-	**50.3**	**D**	

Table 20-3 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday AM Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
UNSIGNALIZED INTERSECTIONS														
Flatlands Avenue and Georgia Avenue						(SIGNALIZED)				(SIGNALIZED)				
Flatlands Avenue	EB	~~LT~~LTR	-	1.4	A	~~LT~~L	0.~~39~~21	10.~~4~~6	B	~~LT~~L	0.~~39~~21	10.~~4~~6	B	-Mitigation not required
		-	-	-	-	TR	0.39	10.4	B	TR	0.39	10.4	B	
	WB	L	-	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A	
		TR	-	0.0	A	TR	0.55	5.4	A	TR	0.55	5.4	A	
Georgia Access	NB	-	-	-	-	LTR	0.56	44.1	D	LTR	0.56	44.1	D	
Overall Intersection[2]		-	-	**0.3**	**A**	-	-	**11.3**	**B**	-	-	**11.3**	**B**	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] Impact worsened due to signal timing changes at nearby intersection

Denotes a significantly impacted movement

Table 20-4 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
SIGNALIZED INTERSECTIONS														
Pennsylvania Avenue and Seaview Avenue														
Seaview Avenue	EB	LT	0.19	29.4	C	LT	0.19	36.5	D	LT	0.19	36.4	D	-Mitigation not required.
		R	0.47	34.0	C	R	0.48	42.6	D	R	0.48	42.4	D	[Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	LTR	0.48	35.8	D	LTR	0.48	35.8	D	LTR	0.48	35.8	D	
Pennsylvania Avenue	NB	L	0.42	56.9	E	L	0.42	56.9	E	L	0.42	56.9	E	
		T	0.46	22.5	C	T	0.46	22.5	C	T	0.46	22.5	C	
	SB	L	0.23	67.8	E	L	0.23	70.1	E	L	0.23	66.6	E	
		TR	0.62	27.5	C	TR	0.65	28.5	C	TR	0.65	25.7	C	
Shore Parkway Westbound Off-Ramp	NB	TR	0.35	20.1	C	TR	0.38	20.6	C	TR	0.38	20.6	C	
Overall Intersection[2]		-	-	**27.3**	**C**	-	-	**28.6**	**C**	-	-	**27.4**	**C**	
Pennsylvania Avenue and Twin Pines Drive														
Twin Pines Drive	EB	LR	0.77	51.4	D	LR	0.79	52.7	D	LR	0.79	52.7	D	-Mitigation not required.
Pennsylvania Avenue	NB	L	0.41	13.7	B	L	0.48	16.5	B	L	0.48	16.5	B	[Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	0.41	9.4	A	T	0.43	8.3	A	T	0.43	8.3	A	
	SB	T	0.50	9.9	A	T	0.52	9.5	A	T	0.52	8.2	A	
		R	0.29	7.9	A	R	0.29	7.7	A	R	0.29	7.8	A	
Overall Intersection[2]		-	-	**15.9**	**B**	-	-	**15.6**	**B**	-	-	**15.1**	**B**	
Pennsylvania Avenue and Vandalia Avenue														
Vandalia Avenue	EB	LTR	0.42	42.5	D	LTR	0.50	35.1	D	LTR	0.46	30.4	C	
	WB	LTR	0.74	50.8	D	LTR	0.85	64.8	E	LTR	0.77	52.0	D	

Table 20-4 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Pennsylvania Avenue	NB	L	0.94	117.3	F	L	1.46	302.0	F	L	0.98	115.1	F	-Modify signal timing: Shift 3 sec of green time from NB/SB phase to NBL/SBL phase and shift 3 sec of green time from NB/SB to EB/WB. [NB/SB green time shifts from 65 sec to 59 sec. NBL/SBL green time shifts from 6 sec to 9 sec. EB/WB green time shifts from 34 sec to 37 sec.]
		T	0.48	6.8	A	T	0.48	7.3	A	T	0.53	9.1	A	
		R	0.21	6.2	A	R	0.24	7.0	A	R	0.27	8.6	A	
	SB	L	0.38	64.2	E	L	0.38	61.5	E	L	0.25	49.6	D	
		T	0.48	35.9	D	T	0.50	33.4	C	T	0.55	38.1	D	
		R	0.08	27.3	C	R	0.17	27.2	C	R	0.20	31.4	C	
Overall Intersection[2]		-	-	**29.1**	**C**	-	-	**39.9**	**D**	-	-	**31.5**	**C**	
Pennsylvania Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.66	50.8	D	L	0.93	65.1	E	L	0.86	53.6	D	-Modify signal timing: Shift 4 sec of green time from EB/WB phase to EBL/WBL phase. [EB/WB green time shifts from 36 sec to 32 sec. EBL/WBL green time shifts from 10 sec to 14 sec.]
		T	0.70	41.6	D	T	0.73	33.8	C	T	0.82	42.8	D	
		R	0.32	28.4	C	R	0.51	27.5	C	R	0.56	34.0	C	
	WB	L	0.44	44.1	D	L	0.54	49.2	D	L	0.49	46.3	D	
		T	0.58	38.2	D	T	0.58	38.4	D	T	0.66	43.3	D	
		R	0.44	30.9	C	R	0.46	31.5	C	R	0.51	35.5	D	
Pennsylvania Avenue	NB	L	0.55	49.5	D	L	0.59	53.6	D	L	0.59	52.0	D	
		T	0.57	28.4	C	T	0.57	27.7	C	T	0.57	25.6	C	
		R	0.30	23.3	C	R	0.33	23.4	C	R	0.33	21.0	C	
	SB	L	0.80	49.2	D	L	0.80	46.4	D	L	0.80	46.8	D	
		T	0.64	16.5	B	T	0.69	16.1	B	T	0.69	16.2	B	
		R	0.41	13.1	B	R	0.51	14.4	B	R	0.51	14.4	B	
Overall Intersection[2]		-	-	**32.4**	**C**	-	-	**32.1**	**C**	-	-	**33.5**	**C**	
Pennsylvania Avenue and Cozine Avenue														
Cozine Avenue	EB	LTR	1.05	98.2	F	LTR	1.07	105.6	F	LTR	1.03	93.4	F	

Table 20-4 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
	WB	LTR	0.68	45.0	D	LTR	0.70	46.6	D	LTR	0.68	44.4	D	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 63 sec to 62 sec. EB/WB green time shifts from 37 sec to 38 sec.]
Pennsylvania Avenue	NB	L	0.39	15.3	B	L	0.45	16.6	B	L	0.46	18.4	B	
		TR	0.65	12.6	B	TR	0.69	12.2	B	TR	0.70	12.9	B	
	SB	L	0.34	9.0	A	L	0.37	9.5	A	L	0.39	10.7	B	
		TR	0.70	11.7	B	TR	0.75	11.1	B	TR	0.76	12.0	B	
Overall Intersection[2]		-	-	**28.0**	**C**	-	-	**28.3**	**C**	-	-	**27.0**	**C**	
Pennsylvania Avenue and Wortman Avenue														
Wortman Avenue	EB	LTR	0.70	46.3	D	LTR	0.73	47.8	D	LTR	0.73	47.8	D	-Mitigation not required. [Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	LTR	0.42	35.7	D	LTR	0.44	36.3	D	LTR	0.44	36.3	D	
Pennsylvania Avenue	NB	L	0.56	62.4	E	L	0.56	63.5	E	L	0.56	63.6	E	
		TR	0.77	31.6	C	TR	0.81	31.6	C	TR	0.81	31.0	C	
	SB	L	0.44	70.4	E	L	0.44	67.9	E	L	0.44	67.2	E	
		TR	0.70	11.5	B	TR	0.75	13.2	B	TR	0.75	13.1	B	
Overall Intersection[2]		-	-	**27.3**	**C**	-	-	**27.9**	**C**	-	-	**27.6**	**C**	
Pennsylvania Avenue and Stanley Avenue														
Stanley Avenue	EB	LTR	0.75	56.1	E	LTR	0.81	62.7	E	LTR	0.78	57.7	E	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 65 sec to 64 sec. EB/WB green time shifts from 28 sec to 29 sec.]
	WB	LTR	0.82	61.5	E	LTR	0.85	64.3	E	LTR	0.81	59.4	E	
Pennsylvania Avenue	NB	L	0.56	73.6	E	L	0.56	74.1	E	L	0.56	75.2	E	
		TR	0.65	6.1	A	TR	0.68	6.1	A	TR	0.69	6.5	A	
	SB	L	0.48	43.9	D	L	0.48	40.6	D	L	0.48	38.6	D	

Table 20-4 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
		TR	0.57	25.3	C	TR	0.61	27.9	C	TR	0.62	29.1	C	
Overall Intersection[2]		-	-	**25.6**	**C**	-	-	**27.1**	**C**	-	-	**26.7**	**C**	
Pennsylvania Avenue and Linden Boulevard														
Linden Boulevard Main Line	EB	L	0.99	128.7	F	L	0.99	128.7	F	L	0.99	128.7	F	**-Unmitigable**
		T	0.70	40.3	D	T	0.70	40.3	D	T	0.70	40.3	D	[Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	L	0.91	113.3	F	L	0.95	122.3	F	L	0.95	122.3	F	
		T	0.77	42.5	D	T	0.77	42.5	D	T	0.77	42.5	D	
Pennsylvania Avenue	NB	L	1.14	122.4	F	L	1.22	152.4	F	L	1.22	152.1	F	
		T	0.88	34.8	C	T	0.95	43.1	D	T	0.95	42.7	D	
		R	0.40	21.5	C	R	0.41	23.0	C	R	0.41	22.6	C	
	SB	L	0.79	64.2	E	L	0.84	73.6	E	L	0.84	73.6	E	
		TR	0.69	40.7	D	TR	0.75	43.0	D	TR	0.75	43.0	D	
Linden Boulevard Eastbound Service Rd	EB	T	0.58	40.3	D	T	0.58	40.3	D	T	0.58	40.3	D	
		R	0.46	29.6	C	R	0.46	29.6	C	R	0.46	29.6	C	
Linden Boulevard Westbound Service Rd	WB	T	1.06	100.7	F	T	1.06	100.7	F	T	1.06	100.7	F	
		R	0.20	32.5	C	R	0.20	32.5	C	R	0.20	32.5	C	
Overall Intersection[2]		-	-	**54.1**	**D**	-	-	**57.5**	**E**	-	-	**57.4**	**E**	
Louisiana Avenue and Vandalia Avenue														
Vandalia Avenue	WB	LR	0.37	23.0	C	LR	0.49	26.8	C	LR	0.49	28.0	C	-Mitigation not required
Louisiana Avenue	NB	TR	0.28	7.5	A	TR	0.31	8.2	A	TR	0.31	8.2	A	[Intersection delays change as a result of signal timing changes at nearby intersections.]
	SB	LT	0.53	12.2	B	LT	0.57	18.5	B	LT	0.57	18.5	B	

Table 20-4 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Overall Intersection[2]		-	-	**13.2**	**B**	-	-	**17.6**	**B**	-	-	**17.9**	**B**	
Louisiana Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.09	21.2	C	L	0.10	22.5	C	L	0.10	22.5	C	**-Unmitigable** [Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	0.63	26.9	C	T	0.67	28.2	C	T	0.67	28.2	C	
		R	0.46	25.1	C	R	1.15	139.4	F	R	1.15	139.4	F	
	WB	L	0.38	31.5	C	L	0.52	39.2	D	L	0.52	39.2	D	
		TR	0.46	23.4	C	TR	0.51	24.3	C	TR	0.51	24.3	C	
Louisiana Avenue	NB	L	0.69	45.4	D	L	0.97	84.6	F	L	0.97	83.8	F	
		TR	0.29	37.3	D	TR	0.67	51.3	D	TR	0.67	50.5	D	
	SB	L	0.02	29.2	C	L	0.17	35.9	D	L	0.17	35.9	D	
		TR	0.13	34.8	C	TR	0.16	35.4	D	TR	0.16	35.4	D	
Overall Intersection[2]		-	-	**28.9**	**C**	-	-	**47.6**	**D**	-	-	**47.4**	**D**	
Flatlands Avenue and East 108th Street														
Flatlands Avenue	EB	L	0.18	14.9	B	L	0.20	16.3	B	L	0.20	16.3	B	-Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane. -Restripe the NB approach from one 20-foot wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane.
		TR	0.58	19.3	B	TR	0.63	20.4	C	TR	0.63	20.4	C	
	WB	L	0.50	27.3	C	L	0.57	33.1	C	L	0.57	33.1	C	
		TR	0.44	16.9	B	TR	0.49	17.7	B	TR	0.49	17.7	B	
East 108th Street	NB	LTR	0.96	85.1	F	LTR	1.00	94.5	F	LT	0.32	40.1	D	
		-	-	-	-	-	-	-	-	R	0.65	55.8	E	
	SB	LTR	0.65	50.2	D	LTR	0.69	52.9	D	LTR	0.55	45.0	D	
Overall Intersection[2]		-	-	**30.7**	**C**	-	-	**32.8**	**C**	-	-	**26.3**	**C**	
Flatlands Avenue and Rockaway Parkway														

Table 20-4 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday Midday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Flatlands Avenue	EB	L	0.28	36.6	D	L	0.30	38.8	D	L	0.30	38.8	D	-Mitigation not required.
		TR	0.85	44.2	D	TR	0.89	47.4	D	TR	0.89	47.4	D	
	WB	L	0.19	37.6	D	L	0.20	39.0	D	L	0.20	39.0	D	
		TR	0.67	35.5	D	TR	0.73	37.4	D	TR	0.73	37.4	D	
Rockaway Parkway	NB	L	0.46	29.5	C	L	0.49	30.7	C	L	0.49	30.7	C	
		TR	0.47	28.3	C	TR	0.47	28.3	C	TR	0.47	28.3	C	
	SB	LT	0.69	45.4	D	LT	0.80	52.7	D	LT	0.80	52.7	D	
		R	0.29	34.7	C	R	0.29	34.7	C	R	0.29	34.7	C	
Overall Intersection[2]		-	-	**38.3**	**D**	-	-	**41.1**	**D**	-	-	**41.1**	**D**	
UNSIGNALIZED INTERSECTIONS														
Flatlands Avenue and Georgia Avenue						**(SIGNALIZED)**				**(SIGNALIZED)**				
Flatlands Avenue	EB	~~LT~~LTR	-	1.2	A	~~LT~~L	0.5~~7~~18	~~14.5~~11.0	B	~~LT~~L	0.5~~7~~18	~~14.5~~11.0	B	-Mitigation not required
		-	-	-	-	TR	0.57	14.5	B	TR	0.57	14.5	B	
	WB	L	-	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A	
		TR	-	0.0	A	TR	0.49	10.7	B	TR	0.49	10.7	B	
Georgia Access	NB	-	-	-	-	LTR	0.29	34.5	C	LTR	0.29	34.5	C	
Overall Intersection[2]		-	-	**0.3**	**A**	-	-	**14.0**	**B**	-	-	**14.0**	**B**	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Denotes a significantly impacted movement

Table 20-5 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
SIGNALIZED INTERSECTIONS														
Pennsylvania Avenue and Seaview Avenue														
Seaview Avenue	EB	LT	0.23	36.0	D	LT	0.23	31.7	C	LT	0.23	31.9	C	-Mitigation not required.
		R	0.87	60.3	E	R	0.88	55.1	E	R	0.88	55.2	E	[Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	LTR	0.52	36.8	D	LTR	0.52	36.8	D	LTR	0.52	36.8	D	
Pennsylvania Avenue	NB	L	0.31	55.8	E	L	0.31	55.8	E	L	0.31	55.8	E	
		T	0.43	21.7	C	T	0.43	21.7	C	T	0.43	21.7	C	
	SB	L	0.21	50.3	D	L	0.21	51.6	D	L	0.21	49.4	D	
		TR	0.72	14.3	B	TR	0.75	16.1	B	TR	0.75	15.3	B	
Shore Parkway Westbound Off-Ramp	NB	TR	0.38	20.5	C	TR	0.44	21.3	C	TR	0.44	21.3	C	
Overall Intersection[2]		-	-	**26.0**	**C**	-	-	**25.8**	**C**	-	-	**25.5**	**C**	
Pennsylvania Avenue and Twin Pines Drive														
Twin Pines Drive	EB	LR	0.84	57.9	E	LR	0.86	60.2	D	LR	0.86	60.2	E	-Mitigation not required.
Pennsylvania Avenue	NB	L	0.51	30.1	C	L	0.64	36.0	E	L	0.64	36.0	D	[Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	0.37	22.7	C	T	0.40	21.8	C	T	0.40	21.8	C	
	SB	T	0.56	10.0	A	T	0.59	10.2	B	T	0.59	8.1	A	
		R	0.30	7.7	A	R	0.30	8.0	A	R	0.30	7.0	A	
Overall Intersection[2]		-	-	**22.4**	**C**	-	-	**22.9**	**C**	-	-	**22.0**	**C**	

Table 20-5 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Pennsylvania Avenue and Vandalia Avenue														
Vandalia Avenue	EB	LTR	0.40	42.9	D	LTR	0.49	42.9	D	LTR	0.44	35.7	D	**-Partially mitigated** -Modify signal timing: Shift 3 sec of green time from NB/SB phase to NBL/SBL phase. Shift 4 sec of green time from NB/SB to EB/WB. [NB/SB green time shifts from 60 sec to 53 sec. NBL/SBL green time shifts from 9 sec to 12 sec. EB/WB green time shifts from 36 sec to 40 sec.]
	WB	LTR	0.81	58.6	E	LTR	0.97	89.6	F	LTR	0.85	61.6	E	
Pennsylvania Avenue	NB	L	0.45	46.7	D	L	0.92	97.2	F	L	0.73	59.4	E	
		T	0.53	6.2	A	T	0.56	6.5	A	T	0.63	9.3	A	
		R	0.20	5.3	A	R	0.25	6.1	A	R	0.29	8.3	A	
	SB	L	0.53	41.5	D	L	0.48	41.2	D	L	0.38	38.0	D	
		T	0.59	18.1	B	T	0.63	17.3	B	T	0.70	18.4	B	
		R	0.06	12.8	B	R	0.18	12.7	B	R	0.21	13.5	B	
Overall Intersection[2]		-	-	**20.2**	**C**	-	-	**25.6**	**C**	-	-	**22.3**	**C**	
Pennsylvania Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.55	49.7	D	L	0.81	84.1	F	L	0.75	76.8	E	**-Partially mitigated** -Modify signal timing: Shift 2 sec of green time from NB/SB phase to NBL/SBL phase. Shift 1 sec of green time from NB/SB phase to EB/WB phase. Shift 1 sec of green time from NB/SB phase to EBL/WBL phase. [NB/SB green time shifts from 45 sec to 41 sec. NBL/SBL green time shifts from 11 sec to 13 sec. EB/WB green time shifts from 33 sec to 34 sec. EBL/WBL green time shifts from 11 sec to 12 sec.]
		T	0.95	63.9	E	T	0.99	76.4	E	T	0.96	68.3	E	
		R	0.37	29.9	C	R	0.61	43.1	D	R	0.57	38.5	D	
	WB	L	0.49	53.6	D	L	0.64	60.8	E	L	0.60	56.7	E	
		T	0.72	44.6	D	T	0.73	45.0	D	T	0.71	43.4	D	
		R	0.31	28.7	C	R	0.33	29.2	C	R	0.31	26.8	C	
Pennsylvania Avenue	NB	L	0.78	39.4	D	L	0.87	53.1	D	L	0.85	48.1	D	
		T	0.55	13.2	B	T	0.55	15.3	B	T	0.60	20.8	C	
		R	0.35	13.0	B	R	0.39	16.1	B	R	0.44	22.5	C	
	SB	L	0.75	28.1	C	L	0.75	25.6	C	L	0.75	26.2	C	
		T	0.72	15.0	B	T	0.79	18.1	B	T	0.87	25.6	C	
		R	0.52	14.3	B	R	0.68	19.9	B	R	0.76	28.2	C	

Table 20-5 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Overall Intersection[2]		-	-	**32.9**	**C**	-	-	**39.5**	**D**	-	-	**39.9**	**D**	
Pennsylvania Avenue and Cozine Avenue														
Cozine Avenue	EB	LTR	1.10	113.9	F	LTR	1.14	126.8	F	LTR	1.09	110.8	F	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 64 sec to 63 sec. EB/WB green time shifts from 39 sec to 40 sec.]
	WB	LTR	0.73	45.5	D	LTR	0.77	48.3	D	LTR	0.74	45.7	D	
Pennsylvania Avenue	NB	L	0.36	17.2	B	L	0.45	21.3	C	L	0.47	21.7	C	
		TR	0.57	12.9	B	TR	0.61	12.9	B	TR	0.62	11.7	B	
	SB	L	0.35	9.8	A	L	0.39	9.8	A	L	0.40	10.1	B	
		TR	0.74	16.8	B	TR	0.81	16.7	B	TR	0.82	17.0	B	
Overall Intersection[2]		-	-	**33.7**	**C**	-	-	**35.2**	**D**	-	-	**32.3**	**C**	
Pennsylvania Avenue and Wortman Avenue														
Wortman Avenue	EB	LTR	0.88	62.1	E	LTR	0.92	67.8	E	LTR	0.89	61.9	E	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 56 sec to 55 sec. EB/WB green time shifts from 37 sec to 38 sec.]
	WB	LTR	0.63	42.7	D	LTR	0.68	45.5	D	LTR	0.66	43.4	D	
Pennsylvania Avenue	NB	L	0.57	60.4	E	L	0.57	62.0	E	L	0.57	61.2	E	
		TR	0.64	27.2	C	TR	0.69	23.6	C	TR	0.70	25.8	C	
	SB	L	0.55	73.8	E	L	0.55	75.7	E	L	0.55	76.6	E	
		TR	0.75	13.5	B	TR	0.82	15.3	B	TR	0.83	16.2	B	
Overall Intersection[2]		-	-	**29.3**	**C**	-	-	**29.4**	**C**	-	-	**29.6**	**C**	

Table 20-5 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Pennsylvania Avenue and Stanley Avenue														
Stanley Avenue	EB	LTR	0.75	55.0	D	LTR	0.81	60.7	E	LTR	0.77	56.2	E	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 65 sec to 64 sec. EB/WB green time shifts from 28 sec to 29 sec.]
	WB	LTR	0.89	72.4	E	LTR	0.92	79.4	E	LTR	0.88	70.8	E	
Pennsylvania Avenue	NB	L	0.57	57.5	E	L	0.57	57.8	E	L	0.57	58.1	E	
		TR	0.55	12.2	B	TR	0.58	13.0	B	TR	0.59	13.0	B	
	SB	L	0.50	62.6	E	L	0.50	65.1	E	L	0.50	64.0	E	
		TR	0.69	13.7	B	TR	0.74	13.5	B	TR	0.76	15.9	B	
Overall Intersection[2]		-	-	**25.0**	**C**	-	-	**26.0**	**C**	-	-	**25.8**	**C**	
Pennsylvania Avenue and Linden Boulevard														
Linden Boulevard Main Line	EB	L	0.75	82.3	F	L	0.75	82.3	F	L	0.75	82.3	F	**-Unmitigable** -Modify offset from 44 sec to 46 sec. Signal timing changes needed to accommodate measures identified at nearby intersections. [Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	1.02	70.8	E	T	1.02	70.8	E	T	1.02	70.8	E	
	WB	L	0.87	101.6	F	L	0.87	101.6	F	L	0.87	101.6	F	
		T	0.58	37.4	D	T	0.58	37.4	D	T	0.58	37.4	D	
Pennsylvania Avenue	NB	L	1.13	142.3	F	L	1.27	199.1	F	L	1.27	198.2	F	
		T	0.71	48.9	D	T	0.77	52.3	D	T	0.77	53.4	D	
		R	0.33	41.9	D	R	0.33	41.6	D	R	0.33	42.7	D	
	SB	L	0.72	55.3	E	L	0.77	62.4	E	L	0.77	62.4	E	
		TR	0.84	47.2	D	TR	0.94	58.0	E	TR	0.94	58.0	E	
Linden Boulevard Eastbound Service Rd	EB	T	0.80	50.6	D	T	0.80	50.6	D	T	0.80	50.6	D	
		R	0.54	31.6	C	R	0.54	31.6	C	R	0.54	31.6	C	
Linden Boulevard Westbound Service Rd	WB	T	1.09	107.9	F	T	1.09	107.9	F	T	1.09	107.9	F	
		R	0.18	32.1	C	R	0.18	32.1	C	R	0.18	32.1	C	

Table 20-5 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Overall Intersection[2]		-	-	**63.4**	**E**	-	-	**67.9**	**E**	-	-	**68.0**	**E**	
Louisiana Avenue and Vandalia Avenue														
Vandalia Avenue	WB	LR	0.30	16.0	B	LR	0.48	19.4	B	LR	0.48	18.9	B	-Mitigation not required.
Louisiana Avenue	NB	TR	0.28	9.3	A	TR	0.33	9.3	A	TR	0.33	9.4	A	[Intersection delays change as a result of signal timing changes at nearby intersections.]
	SB	LT	0.75	17.4	B	LT	0.79	15.5	B	LT	0.79	15.5	B	
Overall Intersection[2]		-	-	**15.2**	**B**	-	-	**14.7**	**B**	-	-	**14.7**	**B**	
Louisiana Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.34	34.6	C	L	0.38	38.9	D	L	0.38	38.9	D	**-Unmitigable**
		T	0.72	29.7	C	T	0.79	32.5	C	T	0.79	32.5	C	[Intersection delays change as a result of signal timing changes at nearby intersections.]
		R	0.36	23.0	C	R	1.14	141.3	F	R	1.14	141.3	F	
	WB	L	0.46	39.9	D	L	0.69	56.4	E	L	0.69	56.4	E	
		TR	0.64	27.1	C	TR	0.71	28.9	C	TR	0.71	28.9	C	
Louisiana Avenue	NB	L	0.93	80.8	F	L	1.18	158.6	F	L	1.18	157.9	F	
		TR	0.35	38.5	D	TR	0.86	63.5	E	TR	0.86	62.9	E	
	SB	L	0.08	31.6	C	L	0.37	44.8	D	L	0.37	44.8	D	
		TR	0.65	47.7	D	TR	0.71	51.3	D	TR	0.71	51.3	D	
Overall Intersection[2]		-	-	**35.4**	**D**	-	-	**54.6**	**D**	-	-	**54.5**	**D**	

Table 20-5 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Flatlands Avenue and East 108th Street														
Flatlands Avenue	EB	L	0.20	18.1	B	L	0.22	20.5	C	L	0.19	20.5	C	-Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane. -Restripe the NB approach from one 20-foot wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane. -Modify signal timing: Shift 4 sec of green time from EB/WB phase to EBL/WBL phase and 1 sec of green time from NB/SB to EBL/WBL. [EB/WB green time shifts from 67 sec to 63 sec. NB/SB green time shifts from 29 sec to 28 sec. EBL/WBL green time shifts from 9 sec to 14 sec.]
		TR	0.69	21.5	C	TR	0.76	23.9	C	TR	0.81	28.5	C	
	WB	L	0.87	59.4	E	L	1.04	100.5	F	L	0.88	62.1	E	
		TR	0.56	18.4	B	TR	0.62	19.6	B	TR	0.66	22.9	C	
East 108th Street	NB	LTR	0.87	68.2	E	LTR	0.91	74.4	E	LT	0.35	41.3	D	
		-	-	-	-	-	-	-	-	R	0.68	53.8	D	
	SB	LTR	0.88	70.9	E	LTR	0.93	81.1	F	LTR	0.74	54.9	D	
Overall Intersection[2]		-	-	**33.1**	**C**	-	-	**39.0**	**D**	-	-	**33.7**	**C**	
Flatlands Avenue and Rockaway Parkway														
Flatlands Avenue	EB	L	0.36	47.6	D	L	0.37	49.5	D	L	0.38	49.8	D	**-Partially mitigated** -Modify signal timing: Shift 2 sec of green time from EBL/WBL phase to EB/WB phase. [EBL/WBL green time shifts from 9 sec to 7 sec. EB/WB green time shifts from 38 sec to 40 sec.]
		TR	1.02	72.5	E	TR	1.07	89.5	F	TR	1.06	85.5	F	
	WB	L	0.18	44.7	D	L	0.18	46.5	D	L	0.19	46.5	D	
		TR	0.89	48.0	D	TR	0.95	56.2	E	TR	0.94	54.2	D	
Rockaway Parkway	NB	L	0.51	29.8	C	L	0.56	32.4	C	L	0.56	32.4	C	
		TR	0.44	26.4	C	TR	0.44	26.4	C	TR	0.44	26.4	C	
	SB	LT	0.72	44.9	D	LT	0.87	58.8	E	LT	0.87	58.8	E	
		R	0.37	35.4	D	R	0.37	35.4	D	R	0.37	35.4	D	

Table 20-5 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Weekday PM Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Overall Intersection[2]		-	-	52.2	D	-	-	62.7	E	-	-	60.7	E	
UNSIGNALIZED INTERSECTIONS														
Flatlands Avenue and Georgia Avenue						(SIGNALIZED)				(SIGNALIZED)				
Flatlands Avenue	EB	~~LT~~LTR	-	1.8	A	~~LT~~L	0.~~68~~23	9.6~~13~~.2	~~B~~A	~~LT~~L	0.~~68~~23	9.6~~13~~.2	~~B~~A	-Mitigation not required
		-	-	-	-	TR	0.68	13.2	B	TR	0.68	13.2	B	[Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	L	-	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A	
		TR	-	0.0	A	TR	0.50	18.0	B	TR	0.50	18.3	B	
Georgia Access	NB	-	-	-	-	LTR	0.70	54.3	D	LTR	0.70	54.3	D	
Overall Intersection[2]		-	-	0.5	A	-	-	18.~~5~~4	B	-	-	18.~~7~~5	B	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Denotes a significantly impacted movement

Table 20-6 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
SIGNALIZED INTERSECTIONS														
Pennsylvania Avenue and Seaview Avenue														
Seaview Avenue	EB	LT	0.16	17.4	B	LT	0.16	17.4	B	LT	0.16	17.4	B	-Mitigation not required.
		R	0.60	25.5	C	R	0.61	25.9	C	R	0.61	25.9	C	
	WB	LTR	0.57	24.8	C	LTR	0.57	24.8	C	LTR	0.57	24.8	C	
Pennsylvania Avenue	NB	L	0.38	40.4	D	L	0.38	40.4	D	L	0.38	40.4	D	
		T	0.60	29.1	C	T	0.60	29.1	C	T	0.60	29.1	C	
	SB	L	0.13	54.5	D	L	0.13	54.5	D	L	0.13	54.5	D	
		TR	0.76	33.6	C	TR	0.81	35.9	D	TR	0.81	35.9	D	
Shore Parkway Westbound Off-Ramp	NB	TR	0.61	27.7	C	TR	0.68	29.5	C	TR	0.68	29.5	C	
Overall Intersection[2]		-	-	**29.4**	**C**	-	-	**30.7**	**C**	-	-	**30.7**	**C**	
Pennsylvania Avenue and Twin Pines Drive														
Twin Pines Drive	EB	LR	0.56	25.8	C	LR	0.58	26.2	C	LR	0.58	26.2	C	-Mitigation not required.
Pennsylvania Avenue	NB	L	0.51	37.8	D	L	0.63	45.9	D	L	0.63	45.9	D	
		T	0.54	23.2	C	T	0.57	25.8	C	T	0.57	25.8	C	
	SB	T	0.59	8.8	A	T	0.65	9.0	A	T	0.65	9.0	A	
		R	0.52	9.4	A	R	0.52	9.3	A	R	0.52	9.3	A	
Overall Intersection[2]		-	-	**18.6**	**B**	-	-	**20.3**	**C**	-	-	**20.3**	**C**	

Table 20-6 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Pennsylvania Avenue and Vandalia Avenue														
Vandalia Avenue	EB	LTR	0.39	25.4	C	LTR	0.47	27.4	C	LTR	0.47	27.4	C	-Mitigation not required.
	WB	LTR	0.62	32.3	C	LTR	0.74	40.4	D	LTR	0.74	40.4	D	
Pennsylvania Avenue	NB	L	0.40	38.8	D	L	0.74	51.4	D	L	0.74	51.4	D	
		T	0.69	20.3	C	T	0.71	22.3	C	T	0.71	22.3	C	
		R	0.24	15.2	B	R	0.35	19.3	B	R	0.35	19.3	B	
	SB	L	0.26	44.9	D	L	0.23	43.6	D	L	0.23	43.6	D	
		T	0.59	36.8	D	T	0.65	35.2	D	T	0.65	35.2	D	
		R	0.08	29.6	C	R	0.25	31.1	C	R	0.25	31.1	C	
Overall Intersection[2]		-	-	**28.3**	**C**	-	-	**30.6**	**C**	-	-	**30.6**	**C**	
Pennsylvania Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.70	50.6	D	L	1.13	121.8	F	L	1.13	121.8	F	**-Unmitigable** [Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	0.75	32.1	C	T	0.78	32.3	C	T	0.78	32.3	C	
		R	0.19	18.9	B	R	0.42	25.6	C	R	0.42	25.6	C	
	WB	L	0.51	40.6	D	L	0.69	50.9	D	L	0.69	50.9	D	
		T	0.79	33.8	C	T	0.80	34.1	C	T	0.80	34.1	C	
		R	0.35	21.2	C	R	0.38	21.7	C	R	0.38	21.7	C	
Pennsylvania Avenue	NB	L	1.01	81.7	F	L	1.14	127.4	F	L	1.14	127.4	F	
		T	0.60	16.5	B	T	0.60	16.6	B	T	0.60	16.6	B	
		R	0.38	13.7	B	R	0.45	15.8	B	R	0.45	15.8	B	
	SB	L	1.15	109.4	F	L	1.17	111.1	F	L	1.17	110.7	F	
		T	0.68	13.1	B	T	0.76	15.6	B	T	0.76	15.4	B	
		R	0.68	17.5	B	R	0.91	35.4	D	R	0.91	34.9	C	

Table 20-6 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Overall Intersection[2]		-	-	**33.5**	**C**	-	-	**41.1**	**D**	-	-	**41.0**	**D**	
Pennsylvania Avenue and Cozine Avenue														
Cozine Avenue	EB	LTR	1.29	185.0	F	LTR	1.35	207.2	F	LTR	1.27	172.4	F	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 46 sec to 45 sec. EB/WB green time shifts from 24 sec to 25 sec.]
	WB	LTR	1.01	79.9	E	LTR	1.06	95.4	F	LTR	1.01	78.6	E	
Pennsylvania Avenue	NB	L	0.59	25.5	C	L	0.72	36.1	D	L	0.77	43.6	D	
		TR	0.58	9.0	A	TR	0.63	8.6	A	TR	0.65	9.4	A	
	SB	L	0.37	9.5	A	L	0.43	10.8	B	L	0.44	11.7	B	
		TR	0.74	13.6	B	TR	0.80	14.7	B	TR	0.82	15.3	B	
Overall Intersection[2]		-	-	**46.0**	**D**	-	-	**50.1**	**D**	-	-	**43.9**	**D**	
Pennsylvania Avenue and Wortman Avenue														
Wortman Avenue	EB	LTR	0.66	33.6	C	LTR	0.69	35.0	C	LTR	0.69	35.0	C	-Mitigation not required. [Intersection delays change as a result of signal timing changes at nearby intersections.]
	WB	LTR	0.55	29.5	C	LTR	0.59	30.8	C	LTR	0.59	30.8	C	
Pennsylvania Avenue	NB	L	0.51	36.7	D	L	0.51	36.4	D	L	0.51	37.0	D	
		TR	0.75	25.7	C	TR	0.81	29.4	C	TR	0.81	29.8	C	
	SB	L	0.59	42.6	D	L	0.59	41.3	D	L	0.59	41.1	D	
		TR	0.81	28.3	C	TR	0.88	32.6	C	TR	0.88	32.6	C	
Overall Intersection[2]		-	-	**28.6**	**C**	-	-	**31.8**	**C**	-	-	**32.0**	**C**	

Table 20-6 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Pennsylvania Avenue and Stanley Avenue														
Stanley Avenue	EB	LTR	0.76	39.8	D	LTR	0.84	47.4	D	LTR	0.80	42.6	D	-Modify signal timing: Shift 1 sec of green time from NB/SB phase to EB/WB phase. [NB/SB green time shifts from 38 sec to 37 sec. EB/WB green time shifts from 28 sec to 29 sec.]
	WB	LTR	0.96	65.4	E	LTR	1.00	75.1	E	LTR	0.96	63.1	E	
Pennsylvania Avenue	NB	L	0.53	64.1	E	L	0.53	64.3	E	L	0.53	64.3	E	
		TR	0.69	10.4	B	TR	0.75	11.2	B	TR	0.76	11.7	B	
	SB	L	0.45	25.9	C	L	0.45	25.1	C	L	0.45	25.1	C	
		TR	0.76	37.5	D	TR	0.82	40.6	D	TR	0.84	42.0	D	
Overall Intersection[2]		-	-	**33.1**	**C**	-	-	**36.4**	**D**	-	-	**34.8**	**C**	
Pennsylvania Avenue and Linden Boulevard														
Linden Boulevard Main Line	EB	L	0.79	84.0	F	L	0.79	84.0	F	L	0.79	84.0	F	**-Unmitigable** [Intersection delays change as a result of signal timing changes at nearby intersections.]
		T	0.76	33.8	C	T	0.76	33.8	C	T	0.76	33.8	C	
	WB	L	0.95	115.8	F	L	0.96	118.0	F	L	0.96	118.0	F	
		T	0.73	32.8	C	T	0.73	32.8	C	T	0.73	32.8	C	
Pennsylvania Avenue	NB	L	1.14	116.5	F	L	1.26	166.3	F	L	1.26	166.0	F	
		T	0.71	47.5	D	T	0.81	50.9	D	T	0.81	50.9	D	
		R	0.36	45.0	D	R	0.36	45.2	D	R	0.36	45.4	D	
	SB	L	0.68	42.0	D	L	0.75	48.9	D	L	0.75	48.9	D	
		TR	0.82	38.1	D	TR	0.91	46.1	D	TR	0.91	46.1	D	
Linden Boulevard Eastbound Service Rd	EB	T	0.62	34.2	C	T	0.62	34.2	C	T	0.62	34.2	C	
		R	0.47	24.5	C	R	0.47	24.5	C	R	0.47	24.5	C	
Linden Boulevard Westbound Service Rd	WB	TR	0.82	46.2	D	TR	0.82	46.2	D	TR	0.82	46.2	D	
Overall Intersection[2]		-	-	**44.6**	**D**	-	-	**49.6**	**D**	-	-	**49.6**	**D**	

Table 20-6 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Louisiana Avenue and Vandalia Avenue														
Vandalia Avenue	WB	LR	0.36	17.9	B	LR	0.54	21.1	C	LR	0.54	21.1	C	-Mitigation not required
Louisiana Avenue	NB	TR	0.31	9.2	A	TR	0.35	9.6	A	TR	0.35	9.6	A	
	SB	LT	0.69	15.6	B	LT	0.74	17.2	B	LT	0.74	17.2	B	
Overall Intersection[2]		-	-	**14.3**	**B**	-	-	**16.0**	**B**	-	-	**16.0**	**B**	
Louisiana Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.28	37.6	D	L	0.28	39.3	D	L	0.28	39.3	D	**-Unmitigable**
		T	0.79	32.6	C	T	0.88	37.8	D	T	0.88	37.8	D	
		R	0.40	25.2	C	R	1.48	283.9	F	R	1.48	283.9	F	
	WB	L	0.48	37.7	D	L	0.68	49.4	D	L	0.68	49.4	D	
		TR	0.97	50.2	D	TR	1.07	77.1	E	TR	1.07	77.1	E	
Louisiana Avenue	NB	L	0.88	56.4	E	L	1.10	111.3	F	L	1.10	111.3	F	
		TR	0.40	29.0	C	TR	0.90	59.7	E	TR	0.90	59.7	E	
	SB	L	0.13	21.9	C	L	0.35	31.1	C	L	0.35	31.1	C	
		TR	0.67	36.9	D	TR	0.72	39.5	D	TR	0.72	39.5	D	
Overall Intersection[2]		-	-	**41.1**	**D**	-	-	**73.3**	**E**	-	-	**73.3**	**E**	

Table 20-6 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Flatlands Avenue and East 108th Street														
Flatlands Avenue	EB	L	0.30	29.3	C	L	0.33	33.5	C	L	0.27	30.0	C	Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane. -Restripe the NB approach from one 20-foot wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane. -Modify signal timing: Shift 2 sec of green time from NB/SB phase to EBL/WBL phase. Shift 1 sec of green time from EB/WB phase to EBL/WBL phase. [NB/SB green time shifts from 29 sec to 27 sec. EB/WB green time shifts from 37 sec to 36 sec. EBL/WBL green time shifts from 9 sec to 12 sec.]
		TR	0.74	26.3	C	TR	0.84	30.7	C	TR	0.86	33.0	C	
	WB	L	1.11	115.5	F	L	1.32	197.5	F	L	1.12	116.3	F	
		TR	0.82	29.5	C	TR	0.93	38.1	D	TR	0.95	42.8	D	
East 108th Street	NB	LTR	0.98	68.1	E	LTR	1.02	78.7	E	LT	0.36	27.1	C	
		-	-	-	-	-	-	-	-	R	0.83	48.1	D	
	SB	LTR	0.62	31.9	C	LTR	0.65	33.2	C	LTR	0.58	31.7	C	
Overall Intersection[2]		-	-	**43.2**	**D**	-	-	**57.0**	**E**	-	-	**45.7**	**D**	

Table 20-6 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Saturday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Flatlands Avenue and Rockaway Parkway														
Flatlands Avenue	EB	L	0.28	37.7	D	L	0.28	37.7	D	L	0.28	37.7	D	- **Unmitigable.**
		TR	1.12	101.5	F	TR	1.18	125.1	F	TR	1.18	125.1	F	
	WB	L	0.16	35.2	D	L	0.16	36.6	D	L	0.16	36.6	D	
		TR	1.05	76.4	E	TR	1.15	114.1	F	TR	1.15	114.1	F	
Rockaway Parkway	NB	L	0.67	32.2	C	L	0.74	38.2	D	L	0.74	38.2	D	
		TR	0.53	22.7	C	TR	0.53	22.7	C	TR	0.53	22.7	C	
	SB	LT	0.99	75.3	E	LT	1.15	126.9	F	LT	1.15	126.9	F	
		R	0.20	27.0	C	R	0.20	27.0	C	R	0.20	27.0	C	
Overall Intersection[2]		-	-	**72.8**	**E**	-	-	**100.8**	**F**	-	-	**100.8**	**F**	
UNSIGNALIZED INTERSECTIONS														
Flatlands Avenue and Georgia Avenue						(SIGNALIZED)				(SIGNALIZED)				
Flatlands Avenue	EB	~~LT~~LTR	-	1.2	A	~~LT~~L	0.~~66~~28	12.3~~13.2~~	B	~~LT~~L	0.~~66~~28	12.3~~13.2~~	B	-Mitigation not required.
		-	-	-	-	TR	0.66	13.2	B	TR	0.66	13.2	B	
	WB	L	-	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A	
		TR	-	0.0	A	TR	0.63	11.7	B	TR	0.63	11.7	B	
Georgia Access	NB	-	-	-	-	LTR	0.86	53.2	D	LTR	0.86	53.2	D	
Overall Intersection[2]		-	-	**0.3**	**A**	-	-	**16.9~~8~~**	**B**	-	-	**16.9~~8~~**	**B**	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Denotes a significantly impacted movement

Table 20-7 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
SIGNALIZED INTERSECTIONS														
Pennsylvania Avenue and Seaview Avenue														
Seaview Avenue	EB	LT	0.07	16.4	B	LT	0.07	16.4	B	LT	0.07	16.4	B	-Mitigation not required.
		R	0.42	21.3	C	R	0.44	21.7	C	R	0.44	21.7	C	
	WB	LTR	0.29	19.1	B	LTR	0.30	19.2	B	LTR	0.30	19.2	B	
Pennsylvania Avenue	NB	L	0.30	40.0	D	L	0.30	40.0	D	L	0.30	40.0	D	
		T	1.04	75.5	E	T	1.04	75.5	E	T	1.04	75.5	E	
	SB	L	0.07	54.9	D	L	0.07	56.6	E	L	0.07	56.6	E	
		TR	0.95	47.3	D	TR	0.99	53.7	D	TR	0.99	53.7	D	
Shore Parkway Westbound Off-Ramp	NB	TR	0.44	24.6	C	TR	0.51	25.6	C	TR	0.51	25.6	C	
Overall Intersection[2]		-	-	**46.0**	**D**	-	-	**48.1**	**D**	-	-	**48.1**	**D**	
Pennsylvania Avenue and Twin Pines Drive														
Twin Pines Drive	EB	LR	0.36	21.8	C	LR	0.37	22.0	C	LR	0.37	22.0	C	**-Unmitigable**
Pennsylvania Avenue	NB	L	0.96	90.4	F	L	1.33	220.6	F	L	1.33	220.6	F	
		T	0.69	30.6	C	T	0.69	30.8	C	T	0.69	30.8	C	
	SB	T	0.75	9.2	A	T	0.79	11.1	B	T	0.79	11.1	B	
		R	0.36	6.7	A	R	0.34	7.6	A	R	0.34	7.6	A	
Overall Intersection[2]		-	-	**26.0**	**C**	-	-	**43.0**	**D**	-	-	**43.0**	**D**	

Table 20-7 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
Pennsylvania Avenue and Vandalia Avenue														
Vandalia Avenue	EB	LTR	0.24	22.9	C	LTR	0.30	24.0	C	LTR	0.30	24.0	C	**-Unmitigable**
	WB	LTR	0.42	26.5	C	LTR	0.54	30.4	C	LTR	0.54	30.4	C	
Pennsylvania Avenue	NB	L	1.01	101.2	F	L	1.69	364.3	F	L	1.69	364.3	F	
		T	0.70	26.5	C	T	0.64	25.6	C	T	0.64	25.6	C	
		R	0.19	21.2	C	R	0.26	22.5	C	R	0.26	22.5	C	
	SB	L	0.12	39.5	D	L	0.12	40.9	D	L	0.12	40.9	D	
		T	0.71	29.5	C	T	0.73	32.0	C	T	0.73	32.0	C	
		R	0.39	25.1	C	R	0.46	30.7	C	R	0.46	30.7	C	
Overall Intersection[2]		-	-	**31.9**	**C**	-	-	**63.6**	**E**	-	-	**63.6**	**E**	
Pennsylvania Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	1.15	123.4	F	L	1.34	186.5	F	L	1.34	186.5	F	**-Unmitigable**
		T	0.80	34.9	C	T	0.85	36.1	D	T	0.85	36.1	D	
		R	0.93	53.0	D	R	0.84	38.1	D	R	0.84	38.1	D	
	WB	L	0.46	36.8	D	L	0.69	49.1	D	L	0.69	49.1	D	
		T	0.43	25.4	C	T	0.45	25.7	C	T	0.45	25.7	C	
		R	0.31	20.8	C	R	0.39	22.5	C	R	0.39	22.5	C	
Pennsylvania Avenue	NB	L	1.06	92.7	F	L	0.77	52.4	D	L	0.77	52.4	D	
		T	0.64	15.1	B	T	0.64	28.9	C	T	0.64	28.9	C	
		R	0.29	10.4	B	R	0.40	27.6	C	R	0.40	27.6	C	
	SB	L	0.96	81.0	F	L	1.02	94.9	F	L	1.02	94.9	F	
		T	0.60	28.3	C	T	0.71	30.9	C	T	0.71	30.9	C	
		R	0.60	35.4	D	R	1.00	92.1	F	R	1.00	92.1	F	

Table 20-7 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		2031 No-Action				2031 With-Action				2031 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Overall Intersection[2]		-	-	**45.1**	**D**	-	-	**54.3**	**D**	-	-	**54.3**	**D**	
Louisiana Avenue and Vandalia Avenue														
Vandalia Avenue	WB	LR	0.75	28.9	C	LR	0.78	30.9	C	LR	0.78	30.9	C	-Mitigation not required
Louisiana Avenue	NB	TR	0.39	10.1	B	TR	0.48	11.2	B	TR	0.48	11.2	B	
	SB	LT	0.50	11.6	B	LT	0.55	12.5	B	LT	0.55	12.5	B	
Overall Intersection[2]		-	-	**16.5**	**B**	-	-	**17.4**	**B**	-	-	**17.4**	**B**	
Louisiana Avenue and Flatlands Avenue														
Flatlands Avenue	EB	L	0.11	22.3	C	L	0.15	28.7	C	L	0.15	28.7	C	**-Unmitigable**
		T	0.91	41.3	D	T	0.91	41.7	D	T	0.91	41.7	D	
		R	0.80	57.3	E	R	1.32	202.9	F	R	1.32	202.9	F	
	WB	L	0.62	45.0	D	L	1.27	186.1	F	L	1.27	186.1	F	
		TR	0.61	27.0	C	TR	0.85	36.2	D	TR	0.85	36.2	D	
Louisiana Avenue	NB	L	0.90	61.2	E	L	0.75	51.0	D	L	0.75	51.0	D	
		TR	1.30	184.3	F	TR	0.99	75.1	E	TR	0.99	75.1	E	
	SB	L	1.54	296.5	F	L	0.63	40.5	D	L	0.63	40.5	D	
		TR	0.73	40.9	D	TR	1.00	79.6	E	TR	1.00	79.6	E	
Overall Intersection[2]		-	-	**91.9**	**F**	-	-	**71.2**	**E**	-	-	**71.2**	**E**	

Table 20-7 Year 2031 No-Action vs. With-Action vs Mitigation Traffic Levels of Service – Sunday Peak Hour

Intersection & Approach		2031 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 With-Action Mvt	V/C	Ctrl Delay[1]	LOS	2031 Mitigation Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measures
UNSIGNALIZED INTERSECTIONS														
Flatlands Avenue and Georgia Avenue						(SIGNALIZED)				(SIGNALIZED)				
Flatlands Avenue	EB	~~LT~~LTR	-	4.7	A	~~LT~~L	0.~~90~~77	~~32~~47.9	~~C~~D	~~LT~~L	0.~~90~~77	~~32~~47.9	~~C~~D	-Mitigation not required.
		-	-	-	-	TR	0.90	32.9	C	TR	0.90	32.9	C	
	WB	L	-	0.0	A	L	~~0.62~~-	~~18.5~~0.0	~~B~~A	L	~~0.62~~-	~~18.5~~0.0	~~B~~A	
		TR	-	0.0	A	TR	0.62	18.5	B	TR	0.62	18.5	B	
Georgia Access	NB	LTR	-	138.4	F	LT	0.71	27.7	C	LT	0.71	27.7	C	
		-	-	-	-	R	0.95	54.8	D	R	0.95	54.8	D	
Overall Intersection[2]		-	-	**16.9**	**C**	-	-	~~28.6~~32.2	**C**	-	-	~~28.6~~32.2	**C**	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Denotes a significantly impacted movement

Pennsylvania Avenue Corridor

Six of the eight intersections analyzed along Pennsylvania Avenue would be significantly impacted during the weekday AM and PM peak hours, five intersections would be significantly impacted during the weekday midday peak hour, and four intersections would be significantly impacted during the Saturday peak hour. Three of the four intersections analyzed along Pennsylvania Avenue during the Sunday peak hour would be significantly impacted. Of the eight intersections along Pennsylvania Avenue that would be significantly impacted during at least one peak hour, three intersections could be fully mitigated during each of the peak hours analyzed. The following intersections could not be fully mitigated:

- Pennsylvania Avenue and Twin Pines Drive could not be mitigated during the Sunday peak hour;
- Pennsylvania Avenue and Vandalia Avenue could not be mitigated during the Sunday peak hour and could only be partially mitigated during the weekday PM peak hour;
- Pennsylvania Avenue and Flatlands Avenue could not be mitigated during the weekday AM, Saturday, and Sunday peak hours and could only be partially mitigated during the weekday PM peak hour;
- Pennsylvania Avenue and Cozine Avenue could not be mitigated during the weekday AM peak hour;
- Pennsylvania Avenue and Stanley Avenue could not be mitigated during the weekday AM peak hour;
- Pennsylvania Avenue and Linden Boulevard could not be mitigated during the weekday AM, midday, PM, and Saturday peak hours.

Pennsylvania Avenue and Seaview Avenue

This intersection would be significantly impacted during the weekday AM peak hour (the eastbound right turn movement would be impacted) and could be mitigated with signal timing modifications.

Pennsylvania Avenue and Twin Pines Drive

This intersection would be significantly impacted during the Sunday peak hour (the northbound left turn movement would be impacted). This impact could not be mitigated.

Pennsylvania Avenue and Vandalia Avenue

Significant impacts would occur at this intersection during the weekday AM, midday, PM, and, and Sunday peak hours. These impacts could be fully mitigated with signal timing modifications during the weekday AM and midday peak hours. During the weekday PM peak hour the westbound approach could be mitigated with signal timing modifications. During both the weekday PM and Sunday peak hours the northbound left turn movement impact could not be mitigated.

Pennsylvania Avenue and Flatlands Avenue

Significant impacts would occur at this intersection during all five peak hours; significant impacts during the weekday midday peak hour could be fully mitigated and weekday PM

peak hour impacts could be partially mitigated with signal timing modifications. Significant impacts could not be mitigated during the weekday AM, Saturday, and Sunday peak hours.

Pennsylvania Avenue and Cozine Avenue

Significant impacts at this intersection would occur during the weekday AM, midday, PM, and Saturday peak hours and could be fully mitigated during the weekday midday, PM, and Saturday peak hours with signal timing modifications. Impacts during the weekday AM peak hour could not be mitigated.

Pennsylvania Avenue and Wortman Avenue

Significant impacts at this intersection would occur along the eastbound approach during the weekday PM peak hour and could be fully mitigated with signal timing modifications.

Pennsylvania Avenue and Stanley Avenue

This intersection would be significantly impacted during the weekday AM, midday, PM, and Saturday peak hours and could be fully mitigated during the weekday midday, PM, and Saturday peak hours with signal timing modifications. Impacts during the weekday AM peak hour could not be mitigated.

Pennsylvania Avenue and Linden Boulevard

Significant impacts would occur at this intersection during the weekday AM, midday, PM, and Saturday peak hours and could not be mitigated. Signal timing offsets would be needed during the weekday PM peak hour to accommodate proposed measures at nearby intersections.

Louisiana Avenue Corridor

Two intersections were analyzed along Louisiana Avenue – at its intersection with Flatlands Avenue and with Vandalia Avenue. The intersection of Louisiana Avenue and Flatlands Avenue would be significantly impacted during all five peak hours analyzed and could not be mitigated. The intersection of Louisiana Avenue and Vandalia Avenue would not be significantly impacted during any of the five analysis peak hours.

Flatlands Avenue Corridor

Two of the three intersections analyzed along Flatlands Avenue (not including the previously discussed intersections of Flatlands Avenue with Pennsylvania Avenue and with Louisiana Avenue) would be significantly impacted during at least one peak hour. The intersection of Flatlands Avenue and Georgia Avenue would not be impacted.

Flatlands Avenue and East 108th Street

This intersection would be significantly impacted during the weekday AM, midday, PM, and Saturday peak hours and could be mitigated with the following measures:

› Install "No Standing Anytime" regulations along the east curb of the northbound East 108th Street approach for 75 feet from the intersection to provide an additional travel

lane (no parking spaces would be lost);

- Restripe the northbound East 108th Street approach from one 20-foot wide travel lane with parking to one 10-foot wide shared left-through lane and one 10-foot wide right turn lane;
- Modify signal timing during the weekday PM and Saturday peak hours.

Flatlands Avenue and Rockaway Parkway

Significant impacts at this intersection would occur during the weekday AM, PM, and Saturday peak hours. Significant impacts during the weekday PM peak hour could be partially mitigated with signal timing modifications. Significant impacts during the weekday AM and Saturday peak hours could not be mitigated.

Implementation

~~Each~~The Applicant is responsible for all costs associated with the design and implementation of the ~~traffic capacity~~project improvements ~~described above fall within the jurisdiction~~and mitigation measures, with the exception of signal timing modifications which would be implemented by NYC DOT ~~for implementation~~. The implementation of these measures would not result in the loss of any parking or "standing" spaces. If, prior to implementation, NYC DOT determines that ~~an~~any of the identified mitigation ~~measure is~~measures are infeasible, ~~an~~and no other alternative and equivalent mitigation ~~measure will~~measures could be ~~evaluated, if possible.~~ advanced, then the impacts would remain unmitigated.

Subway

As discussed in **Chapter 13, Transportation,** subway station elements at the Rockaway Parkway L subway station were analyzed during the AM and PM commuter peak hours and significant impacts were identified at the Glenwood Avenue fare control area during the AM peak hour. ~~Measures to mitigate this impact could potentially include the installation of additional turnstiles. The practicability of implementing this measure, as well as measures to prevent prevalent fare evasion at this fare control area, will be evaluated in consultation with New York City Transit between the Draft EIS and Final EIS~~As part of the recent station renovations, there is no fence or barrier behind the Glenwood Road fare control and the majority of subway riders were observed to evade the fare control. The subway station analysis assumed that all subway riders would use the fare control and not evade the fare. The analysis at this fare control, which consists of one HEET and one HXT, determined that the fare control would operate at over-capacity conditions during the AM peak hour under existing conditions and a minimal increase in subway riders would result in a significant impact. Between the Draft EIS and the Final EIS, mitigation measures were studied in conjunction with NYCT and it was determined that this impact could be mitigated with the installation of an additional HEET at this fare control. As a practical matter, the additional HEET would not be implemented in the absence of any measures taken by NYCT to deter the ongoing fare evasion. Therefore, until any measures are taken by NYCT to deter fare evasion at this location, the significant adverse impact would be unmitigated. Thereafter, the significant impact would be fully mitigated upon the implementation of one additional HEET.

Bus

As discussed in **Chapter 13, Transportation,** the Proposed Project would result in a capacity shortfall for the B82 bus route during the AM peak hour (93 spaces in the westbound direction), B82 SBS bus route during the AM peak hour (two spaces in the westbound direction) and PM peak hour (56 spaces in the eastbound direction), and the B83 bus route during the AM peak hour (107 spaces in the northbound direction, 12 spaces in the southbound direction) and PM peak hour (64 spaces in the northbound direction, 75 spaces in the southbound direction).

As detailed in **Table 20-8**, impacts to the B82 bus route could be mitigated with the addition of two standard buses in the westbound direction during the AM peak hour. Impacts to the B82 SBS bus route could be mitigated with the addition of one standard bus in the westbound direction during the AM peak hour, and two standard buses in the eastbound direction during the PM peak hour. Impacts to the B83 bus route could be mitigated with the addition of three standard buses in the northbound direction and one standard bus in the southbound direction during the AM peak hour, and two standard buses in each direction during the PM peak hour. The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

Table 20-8 With-Action with Mitigation Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point	Peak Hour Buses[1]	Project Increment	With-Action Available Capacity	Additional Peak Hour Buses Needed to Accommodate Project-Generated Demand	Available Capacity With Mitigation
AM	B82	EB	Glenwood Rd & Rockaway Pkwy	6	153	91	0	91
		WB	Glenwood Rd & E 102 St	7	334	-93	2	15
	B82 SBS	EB	Glenwood Rd & Rockaway Pkwy	10	99	208	0	208
		WB	Flatlands Av & E 105 St	9	215	-2	1	52
	B83	NB	Van Siclen Ave & Hegeman Ave	17	124	-107	3	55
		SB	Pennsylvania Av & Livonia Av	7	56	-12	1	42
PM	B82	EB	Glenwood Rd & Rockaway Pkwy	8	279	4	0	4
		WB	Glenwood Rd & E 102 St	6	215	16	0	16
	B82 SBS	EB	Glenwood Rd & Rockaway Pkwy	6	180	-56	2	52
		WB	Flatlands Av & E 105 St	5	139	34	0	34
	B83	NB	Van Siclen Ave & Hegeman Ave	7	80	-64	2	44
		SB	New Lots Av & Pennsylvania Av	19	103	-75	2	33

Pedestrians

As discussed in **Chapter 13, Transportation,** the Proposed Project would result in significant impacts at one pedestrian element (one crosswalk) during the weekday AM and midday peak hours, two pedestrian elements (two crosswalks) during the weekday PM peak hour, four pedestrian elements (three crosswalks and one sidewalk) during the Saturday peak hour, and 12 pedestrian elements (five crosswalks, three sidewalks, and four corners) during the Sunday peak hour. A total of 36 pedestrian elements were analyzed for the weekday AM, midday, PM, and Saturday peak hours, and 14 pedestrian elements along the Development Site frontages were analyzed for the Sunday peak hour. Potential improvements that could mitigate the significant impacts were reviewed and determined that the pedestrian impacts could not be mitigated with typical improvement measures.

Table 20-9 summarizes the significantly impacted pedestrian elements and whether they could be mitigated. Detailed pedestrian levels of service and mitigation measures are summarized in **Table 20-10, Table 20-11,** and **Table 20-12**. As described above, traffic mitigation measures such as signal timing modifications were identified at study area locations that would change pedestrian operations. A review of the effect of these measures on the pedestrian analysis showed that the traffic mitigation measures would not result in changes to the pedestrian mitigation findings and would not result in additional significant pedestrian impacts.

Table 20-9 Summary of Elements with Significant Adverse Pedestrian Impacts

Peak Hour	Elements Analyzed	Elements with No Significant Impacts	Elements with Significant Impacts	Unmitigated Elements
Sidewalks				
Weekday AM	9	9	0	0
Weekday Midday	9	9	0	0
Weekday PM	9	9	0	0
Saturday	9	8	1	1
Sunday	3	0	3	3
Crosswalks				
Weekday AM	14	13	1	1
Weekday Midday	14	13	1	1
Weekday PM	14	12	2	2
Saturday	14	11	3	3
Sunday	6	1	5	5
Corners				
Weekday AM	13	13	0	0
Weekday Midday	13	13	0	0
Weekday PM	13	13	0	0
Saturday	13	13	0	0
Sunday	5	1	4	4

Table 20-10 Sidewalk Impact Mitigation Summary

Intersection	No-Action		With-Action		Mitigation		Mitigation Measures
	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	
Saturday Peak Hour							
Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue (west side)	514.6	B	38.8	D	38.8	D	**Unmitigable Impact**
Sunday Peak Hour							
Flatlands Avenue between Pennsylvania Avenue and Louisiana Avenue (south side)	58.6	C	34.6	D	34.6	D	**Unmitigable Impact**
Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue (west side)	222.8	B	33.0	D	33.0	D	**Unmitigable Impact**
Louisiana Avenue between Flatlands Avenue and Vandalia Avenue (east side)	36.0	D	17.2	E	17.2	E	**Unmitigable Impact**

Denotes significantly impacted pedestrian element

Table 20-11 Crosswalk Impact Mitigation Summary

Intersection	Crosswalk	No-Action Avg Ped Space, SF/P	No-Action LOS	With-Action Avg Ped Space, SF/P	With-Action LOS	Mitigation Avg Ped Space, SF/P	Mitigation LOS	Mitigation Measures
Weekday AM Peak Hour								
Flatlands Avenue and Louisiana Avenue	East	1,178.1	A	12.8	E	12.8	E	**Unmitigable Impact**
Pennsylvania Avenue and Vandalia Avenue	North	403.5	A	76.1	A	85.3	A	- Modify signal timing: shift 1 sec from east and west crosswalks walk time to NBL/SBL phase and 2 secs from east and west crosswalk walk time to the north and south crosswalk walk time. This is needed for mitigation of traffic impacts at this intersection.
	South	185.8	A	45.4	B	51.1	B	
	West	612.1	A	119.9	A	112.5	A	
Weekday Midday Peak Hour								
Flatlands Avenue and Louisiana Avenue	West	398.6	A	21.5	D	21.5	D	**Unmitigable Impact**
Pennsylvania Avenue and Vandalia Avenue	North	369.5	A	53.4	B	65.3	A	- Modify signal timing: shift 3 sec from east and west crosswalks walk time to NBL/SBL phase and 3 secs from east and west crosswalk walk time to the north and south crosswalk walk time. This is needed for mitigation of traffic impacts at this intersection.
	South	177.7	A	46.8	B	58.2	B	
	West	675.7	A	146.0	A	129.6	A	
Pennsylvania Avenue and Flatlands Avenue	South	603.7	A	72.4	A	51.9	B	- Modify signal timing: shift 4 sec from north and south crosswalks walk time to EBL/WBL phase. This is needed for mitigation of traffic impacts at this intersection.
	West	311.6	A	147.4	A	147.4	A	

Table 20-11 Crosswalk Impact Mitigation Summary

		No-Action		With-Action		Mitigation		
Intersection	Crosswalk	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Mitigation Measures
Weekday PM Peak Hour								
Flatlands Avenue and Louisiana Avenue	East	816.4	A	15.2	D	15.2	D	**Unmitigable Impact**
	West	400.7	A	12.2	E	12.2	E	**Unmitigable Impact**
Pennsylvania Avenue and Vandalia Avenue	North	531.6	A	46.5	B	58.6	B	- Modify signal timing: shift 3 sec from east and west crosswalks walk time to NBL/SBL phase. This is needed for mitigation of traffic impacts at this intersection.
	South	228.6	A	47.4	B	60.5	A	
	West	785.8	A	96.6	A	82.7	A	
Pennsylvania Avenue and Flatlands Avenue	South	453.3	A	46.1	B	50.6	B	- Modify signal timing: shift 2 sec from east and west crosswalks walk time to NBL/SBL phase and 1 sec from east and west crosswalk walk time to the north and south crosswalk walk time. This is needed for mitigation of traffic impacts at this intersection.
	West	334.8	A	101.9	A	81.9	A	
Flatlands Avenue and East 108th Street	North	821.1	A	131.6	A	121.3	A	- Modify signal timing: shift 4 sec from north and south crosswalks walk time to EBL/WBL phase and 1 secs from east and west crosswalk walk time to the EBL/WBL phase. This is needed for mitigation of traffic impacts at this intersection.
	South	597.1	A	165.8	A	150.8	A	

Table 20-11 Crosswalk Impact Mitigation Summary

		No-Action		With-Action		Mitigation		
Intersection	Crosswalk	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Mitigation Measures
Saturday Peak Hour								
Flatlands Avenue and Louisiana Avenue	East	780.9	A	11.8	E	11.8	E	**Unmitigable Impact**
	South	608.2	A	21.5	D	21.5	D	**Unmitigable Impact**
	West	380.6	A	13.4	E	13.4	E	**Unmitigable Impact**
Pennsylvania Avenue and Vandalia Avenue	North	226.4	A	27.1	C	27.1	C	- Modify signal timing: shift 2 sec from east and west crosswalks walk time to NBL/SBL phase. This is needed for mitigation of traffic impacts at this intersection.
	South	221.3	A	34.8	C	34.8	C	
	West	404.4	A	56.6	B	52.3	B	
Flatlands Avenue and East 108th Street	North	783.3	A	84.6	A	81.0	A	**-** Modify signal timing: Shift 2 sec of green time from NB/SB phase to EBL/WBL phase. Shift 1 sec of green time from EB/WB phase to EBL/WBL phase. This is needed for mitigation of traffic impacts at this intersection.
	South	218.3	A	55.6	B	52.0	B	
Sunday Peak Hour								
Flatlands Avenue and Louisiana Avenue	North	58.6	B	16.9	D	16.9	D	**Unmitigable Impact**
	South	26.6	C	6.0	F	6.0	F	**Unmitigable Impact**
	West	17.9	D	6.4	F	6.4	F	**Unmitigable Impact**
Pennsylvania Avenue and Flatlands Avenue	South	42.0	B	16.3	D	16.3	D	**Unmitigable Impact**
	West	15.3	D	7.8	F	7.8	F	**Unmitigable Impact**

Denotes significantly impacted pedestrian element

Table 20-12 Corners Impact Mitigation Summary

		No-Action		With-Action		Mitigation		
Intersection	Corner	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Mitigation Measures
Sunday Peak Hour								
Flatlands Avenue and Louisiana Avenue	Northeast	32.7	C	6.3	F	6.3	F	**Unmitigable Impact**
	Southeast	5.3	F	*	F	*	F	**Unmitigable Impact**
	Southwest	70.2	A	19.0	D	19.0	D	**Unmitigable Impact**
	Northwest	62.3	A	8.0	E	8.0	E	**Unmitigable Impact**

Denotes significantly impacted pedestrian element

***** The available corner area would not be sufficient to accommodate all pedestrians; some pedestrians would need to wait on the adjacent sidewalk area instead of the corner reservoir to cross the street

Sidewalks

Pedestrian impacts were identified at the following locations:

- The west sidewalk of Pennsylvania Avenue between Flatlands Avenue and Vandalia Avenue during the Saturday and Sunday peak hours.
- The south sidewalk of Flatlands Avenue between Pennsylvania Avenue and Louisiana Avenue during the Sunday peak hour.
- The east sidewalk of Louisiana Avenue between Flatlands Avenue and Vandalia Avenue during the Sunday peak hour.

Typical measures to mitigate impacts to sidewalks include the relocation of obstructions along the narrowest point of the sidewalk. However, the obstructions along these sidewalks include grass strips and tree pits, and relocating these obstructions would be infeasible. Therefore, sidewalk impacts at these sidewalks could not be mitigated.

Crosswalks

Pedestrian impacts were identified at the crosswalks listed below. Impacts to these crosswalks could not be mitigated.

- The south and west crosswalks of Pennsylvania Avenue and Flatlands Avenue during the Sunday peak hour.
- Flatlands Avenue and Louisiana Avenue
  - The east crosswalk during the weekday AM, PM, and Saturday peak hours
  - The west crosswalk during the weekday midday, PM, Saturday, and Sunday peak hours

- The north crosswalk during the Sunday peak hour
- The south crosswalk during the Saturday and Sunday peak hours

Corners

Pedestrian impacts were identified at the northeast, southeast, southwest, and northwest corners of Flatlands Avenue and Louisiana Avenue during the Sunday peak hour. These impacts could not be mitigated.

Noise

The Proposed Actions would result in the potential for significant adverse impacts to one existing residential building, 1180 Pennsylvania Avenue, due to the introduction of new stationary and mobile noise sources. With-Action sound levels would range from 59.4 to 67.7 dBA (Leq), an increase of up to 6.5 dBA from the No-Action condition. Since With-Action noise levels including mobile and stationary sources would increase more than 5 dBA, primarily due to the proposed childcare facility playground to be located at the southern portion of Proposed Building 4, there would be significant adverse noise impact at 1180 Pennsylvania Avenue due to the Proposed Actions. Based on street-level field observations, this building has insulated glass windows and through-wall air-conditioning, which would be expected to provide 25 dBA window/wall attenuation, resulting in an interior noise level of up to 37.7 dBA (L10) during the peak hour with significant adverse noise increase. ~~Mitigation measures deemed practicable~~ However, the existing window and ~~feasible were explored to~~ through-wall air conditioners would provide ~~sufficient reduction or~~enough attenuation to ~~lower~~maintain an interior noise ~~levels to an acceptable range. The introduction~~ level of ~~a solid wall along the southern perimeter of the daycare playground facility would be expected to provide 5~~45 dBA ~~of~~or below. Therefore, interior noise ~~reduction, thereby mitigating noise to~~would be at an acceptable level and would result in a finding of no unavoidable significant adverse noise impacts at this location.

Construction

Construction Noise

Since noise levels during construction would exceed the thresholds for exterior increases in noise and acceptable interior noise levels, there would be potential for the project to result in significant adverse construction noise impacts at new buildings (proposed Buildings ~~1~~2-4) that would be introduced with the phased development and at existing residential buildings (1170 Pennsylvania Avenue, 1180 Pennsylvania Avenue, and 1 Vandalia Avenue) located immediately south of the Development Site as indicated in **Figure 19-46** (see **Chapter 19, Construction**). As described in **Chapter 19, Construction**, interior noise levels would exceed the interior impact criterion for residential receptors during certain phases of construction.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot-tall construction noise barrier, construction noise would be reduced but would still exceed the thresholds for significant construction noise impact prior to mitigation.

The primary sources of construction noise causing impact include drills during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction. Since residential buildings where there would be noise impact are 10 to 15 stories tall, increasing the height of the perimeter wall would provide limited benefit as compared to the standard 8-foot-tall wall.

Concrete mixer trucks would be located either within the Development Site or along Flatlands Avenue depending on the specific phase of construction. When the concrete trucks are making deliveries within the Development Site, it would not be feasible to construct noise barriers interior to the site to reduce noise due to the need for the concrete trucks to mobilize within the site. When the concrete trucks are on Flatlands Avenue, they are relatively far from the noise impact locations south of the Development Site and it would not be feasible to introduce a noise barrier between Flatlands Avenue and the Development Site.

At many of the buildings where significant adverse impacts are predicted to occur, field observations identified the presence of insulated glass windows and alternate means of ventilation (i.e., window air conditioning), which would be expected to provide at least 25 A-weighted decibels (dBA) of window/wall attenuation. These measures are in place at the residential buildings located at the following locations: 1170 Pennsylvania Avenue, 1180 Pennsylvania Avenue, and 1 Vandalia Avenue. Even with such measures, these locations would be expected to experience interior L_{10} noise levels during portions of construction that would exceed the 45 dBA guideline recommended for residential and community spaces according to CEQR noise exposure guidelines. Interior noise levels at these receptors would exceed the acceptable threshold level by up to 14 dBA as a result of construction of the Proposed Project. Consequently, significant adverse noise impacts predicted to occur at the above-mentioned receptors would be only partially mitigated and thus unavoidable as discussed in **Chapter 22. Unavoidable Adverse Impacts**.

As described in **Chapter 16, Noise**, receptors on ~~the north and east facing facades of proposed Building 1 and~~ the east façade of Building 2 require 35 dBA window/wall attenuation. For all new receptors within the footprint of the Proposed Development, minimum of 30 dBA window/wall attenuation is assumed as the newly constructed buildings would have insulated glass windows and central air-conditioning. ~~With such measures, interior noise levels at Proposed Building 1 and north façade of Proposed Building 2 would not exceed the 45 dBA guideline recommended for residential and community spaces for 12 or more consecutive months of objectionable noise increase (i.e., increase of 15 to 20 dBA) or for three or more consecutive months of very objectionable noise increase (i.e., increase of 20 dBA or more). Therefore, significant adverse noise impacts predicted to occur at Proposed Building 1 and the north façade of Proposed Building 2 would be fully mitigated. On the other hand, even~~Even with above-mentioned measures, west façades of proposed Buildings 2, 3, and 4 would be expected to experience interior L_{10} noise levels during portions of construction that would exceed the 45 dBA guideline recommended for residential and community spaces according to CEQR noise exposure guidelines. Interior noise levels at these west façade receptors would exceed the acceptable threshold level by up to 11.2 dBA as a result of construction of the Proposed Project. Consequently, significant adverse noise impacts predicted to occur at the west facades of Proposed Buildings 2, 3, and 4 would be only partially mitigated and thus unavoidable as discussed in **Chapter 22. Unavoidable Adverse Impacts**.

While additional mitigation measures ~~will be~~were explored in consultation with the lead agency between Draft EIS and Final EIS, no feasible mitigation measures were identified. As such, the Proposed Actions have the potential to result in significant adverse noise impact that would remain unmitigated. See **Chapter 22~~.~~, Unavoidable Adverse Impacts**.

Construction Transportation

As discussed in **Chapter 19, Construction**, seven intersections were analyzed for potential significant traffic impacts during the AM construction traffic peak hour and twelve intersections were analyzed during the PM construction traffic peak hour. Significant impacts were identified at two analysis intersections during the AM peak hour and at nine intersections during the PM peak hour. Where impacts during construction may occur, measures similar to the ones recommended in the operational traffic analysis could be implemented early to aid in alleviating congested traffic conditions. The two intersections that would be impacted during the AM peak hour could be fully mitigated with typical traffic improvement measures (i.e., signal timing modification and changing parking regulations to provide an additional travel lane). Significant impacts at the intersections of Pennsylvania Avenue with Flatlands Avenue, Stanley Avenue and Linden Boulevard, and Flatlands Avenue with Louisiana Avenue, East 108th Street, and Rockaway Parkway could not be fully mitigated during the PM peak hour. The PM construction peak hour findings are similar to operational With-Action conditions except for the intersections of Pennsylvania Avenue with Stanley Avenue, and the intersection of Flatlands Avenue and East 108th Street which could be mitigated under the operational With-Action conditions.

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Alternatives

As described in the *2021 CEQR Technical Manual*, alternatives selected for consideration in an environmental impact statement are generally those which are feasible and have the potential to reduce, eliminate, or avoid adverse impacts of a proposed action while meeting some or all of the goals and objectives of this action.

Introduction

As described in **Chapter 1, Project Description**, the Applicant is proposing a series of land use actions (collectively the Proposed Actions) to facilitate the development of the proposed large-scale development of a site located in East New York in Brooklyn. The mixed-use development would contain a mix of community facility, commercial, and residential uses anchored by the existing Christian Cultural Center (CCC) facility and surrounded by publicly accessible open space and street system.

This chapter considers the following ~~two~~ alternatives to the Proposed Actions:

- A No-Action Alternative, which is mandated by City Environmental Quality Review (CEQR) and the State Environmental Quality Review Act (SEQRA). The No-Action Alternative is intended to provide the lead and involved agencies with an assessment of the expected environmental conditions in 2031 (the "build year" for the Proposed Actions) in the absence of the Proposed Actions.
- A Modified Application Before the City Planning Commission that evaluates modifications to the Proposed Project, including landscaping and amenities for the

public access areas on the Development Site and changes to the maximum number of stories of four of the buildings.

› A No Unmitigated Significant Adverse Impacts Alternative, which would eliminate any unmitigated significant adverse impacts of the Proposed Actions.

Principal Conclusions

A summary of the principal conclusions for the ~~two~~three alternatives is described below.

No-Action Alternative

The No-Action Alternative examines future conditions in 2031 absent the Proposed Actions. In simplest terms, the No-Action Alternative is the No-Action condition identified, described, and assessed in the preceding chapters of this EIS. In the No-Action Alternative, the Development Site would remain in its existing condition, with only the existing CCC operational on the site (approximately 92,784-gross-square-foot (gsf) of community facility space and 385 striped accessory parking spaces).

As discussed in greater detail below, the significant adverse impacts associated with the Proposed Actions would not occur under the No-Action Alternative. However, the No-Action Alternative would not meet the project goals, and as compared to the Proposed Actions, the intended benefits—the introduction of affordable housing units and an array of community facility uses, economic activity introduced by local retail, and public open spaces—would be eliminated with the No-Action Alternative.

The No-Action Alternative would not result in any significant adverse impacts as no development would occur in the absence of the Proposed Actions.

Modified Application Before the City Planning Commission

Since issuance of the Draft EIS, the Proposed Development has been updated by the Applicant to refine the landscaping and amenities for the public access areas on the Development Site and to change the maximum number of stories of four of the buildings. The City Planning Commission is reviewing, and in some cases modifying, the Applicant-proposed modifications. In particular, changes to the public access areas include relocation of certain signs, consolidation and relocation of a number of trash receptacles, a decrease in the number of benches along certain portions of the public access areas, and the addition of new benches adjacent to the east of the Building 5 arcade. Building 1 has been reduced from 15 stories to 14 stories and Buildings 3, 5, and 6 have been reduced from 14 stories to 13 stories. Additionally, the maisonettes would be allowed to be located between the ground floor and second story of the primary portions of the buildings, including Buildings 1 and 3. The effect of these changes may be a loss of between 0 and 75 dwelling units. No change to the permitted heights of buildings or zoning floor area of the Proposed Development included in the Draft EIS would occur as a result of the Large-Scale General Development refinements. In addition, the location, intended use, and overall amount of public access area would be unchanged from that considered in the Draft EIS.

As these project modifications would not change overall building height or massing, none of the technical analyses related to building bulk or massing would have to be adjusted to

reflect the changes to the project. Similarly, as the density-based analyses evaluate a worst-case development scenario for the project, they represent a conservative analysis for the project and disclose the environmental impacts associated with the maximum number of dwelling units that could be constructed on-site. A reduction in the proposed number of dwelling units by up to 75 units would create a nominal reduction in demand for services, but would not substantively change the findings of the EIS related to socioeconomic conditions, community facilities and services, open space resources, water and sewer infrastructure, solid waste and sanitation services, transportation, air quality, greenhouse gas emissions and climate change, noise, public health, neighborhood character, construction, mitigation, or unavoidable significant adverse impacts. The significant adverse impacts and mitigation under this alternative would remain the same as under the Proposed Project, and the following technical areas would require mitigation under either alternative: community facilities, open space, transportation, noise, and construction (see **Chapter 20, Mitigation**).

No Unmitigated Significant Adverse Impacts Alternative

The No Unmitigated Significant Adverse Impacts Alternative examines a scenario in which the projected density increase and other components of the Proposed Actions are changed specifically to avoid the unmitigated significant adverse impacts associated with the Proposed Actions. The Proposed Actions would result in significant adverse impacts to community facilities, specifically early childhood programs and libraries, and transportation specifically to traffic, subway, and pedestrian conditions. A temporary impact to active open space would also occur during the construction period of the With-Action condition. ~~Sensitivity~~As discussed below, sensitivity analyses were conducted for those technical analyses that have the potential to result in significant adverse impacts and it was determined that ~~any new~~significant reductions in the proposed development ~~on the site~~program would be ~~expected~~required in order to result in no unmitigated significant adverse impacts~~. However, leaving~~, as follows:

- To avoid impacts to early childhood programs, the number of non-senior residential units would need to be reduced from 1,338 units to 530 units.
- To avoid impacts to libraries, the number of residential units would need to be reduced from 2,050 units to 1,486 units.
- To avoid the temporary open space impact, the on-site open spaces would need to be constructed during an earlier phase (i.e., after the completion of Phase IA); however, this would not be feasible due to the space requirements associated with construction phasing.
- To avoid unmitigated traffic impacts the development would need to be reduced to eight percent of the Proposed Project (165 residential units).
- A development of any size would result in unmitigable pedestrian impacts due to the effect of the 500-space parking garage on church-related traffic.
- To avoid unmitigated subway impacts the development would need to be reduced to nine percent of the Proposed Project (185 residential units)

In order to avoid impacts, the project either would have to be reduced below the thresholds described above or the site would remain in its existing condition. However, neither option

would ~~not~~ meet the project's goals of creating a sustainable, affordable neighborhood and address the economic, social, educational and cultural needs of the neighborhood.

The project is projected to result in unmitigated ~~traffic and noise impacts during construction.~~operational traffic, pedestrian, subway and construction noise impacts. As described below, mitigation has been identified for the community facilities (early childhood programs and libraries) that is expected to adequately mitigate the projected impacts. It was determined that any new construction on the Development Site would involve the use of construction equipment such as drill rigs and concrete mixer trucks and, as such, would be expected to result in unmitigated construction noise impacts. In order to avoid impacts to construction, the project would have to be reduced to such a degree that the proposal would not meet the goals and objectives of the Applicant's development program, which features a 100 percent affordable housing development, community facility, local retail, a trade school, a performing arts center (PAC), and publicly-accessible open spaces. Therefore, to avoid these impacts, construction would need to be avoided, and the project and the applicant's intended benefits would not be realized.

No-Action Alternative

Description of the No-Action Alternative

The No-Action Alternative examines future conditions absent approval of the Proposed Actions. Conditions under this alternative are described under the "Future without the Proposed Actions" in the preceding EIS chapters and summarized below. In the No-Action Alternative, the Development Site is assumed to mostly remain unchanged from existing conditions, with only the existing CCC operational on the site (approximately 92,784 gsf of community facility space and 385 accessory parking spaces).

Conditions under the No-Action Alternative in comparison to the future with the Proposed Actions are described below.

Land Use, Zoning, and Public Policy

In the No-Action Alternative, the Development Site is assumed to remain largely unchanged from existing conditions, which includes only the existing CCC and its accessory parking spaces. No new developments are anticipated within the quarter-mile study area under the future No-Action Alternative.

The No-Action Alternative would not include the infill development of residential, community facility, and commercial space on the Development Site in areas currently occupied by an overflow surface parking lot for CCC. In the No-Action Alternative, zoning and public policies affecting the study area are expected to remain unchanged from existing conditions. However, the No-Action Alternative would not make use of the zoning changes to map Mandatory Inclusionary Housing (MIH) or facilitate the public realm improvements that would be implemented as part of the Proposed Project which would support several public policies.

Overall, neither the No-Action Alternative nor the Proposed Actions would result in significant adverse impacts to land use, zoning, or public policy, though the No-Action

Alternative would not support the City's land-use policy to the extent that is supported by the Proposed Actions.

Socioeconomic Conditions

In the No-Action Alternative, no significant residential development is currently planned or in construction in the study area, therefore, the No-Action Alternative is assumed to be the same as the Existing Condition and would not affect socioeconomic conditions.

The current population of the socioeconomic study area is 33,636 per the 2020 Census, an increase of 3.1 percent over the 2010 population of 32,632 people. The population of both Brooklyn and New York City have increased over the same time period by 9.2 percent and 7.7 percent, respectively. As described in **Chapter 3, Socioeconomic Conditions**, while population within the study area has increased, wages have fallen as compared to 2010.

Neither the No-Action Alternative nor the Proposed Actions would be expected to have a significant adverse indirect residential displacement impact. Under the No-Action Alternative, there would be no on-site development and the church would continue to operate on-site. However, given the trends experienced in the neighborhoods surrounding the study area, it is likely that rents within the study area would continue to increase under the No-Action Alternative. Demand for housing in the study area is expected to continue to increase given its relative affordability compared to the surrounding areas and its relatively convenient location and proximity to transit. The anticipated socioeconomic benefits of the Proposed Actions, including promoting the development of permanently affordable housing, would not be realized under the No-Action Alternative. Through increasing the overall supply of affordable housing, it is anticipated that the Proposed Actions would help to relieve displacement pressures. Unlike the Proposed Actions, the No-Action Alternative would not introduce any affordable housing to the proposed Project Area, and therefore, would not further the City's goal of increasing affordable housing.

Community Facilities and Services

Public Schools

In the No-Action Alternative, enrollment projections and new development within the community facility study area would result in a total of 2,682 elementary students and 1,358 intermediate students. As described in the community facilities chapter, two planned capacity changes to elementary schools would result in 3,457 seats for elementary schools in the study area, while the intermediate school capacity would stay the same as existing at 2,373 students. Overall, elementary schools in CSD 19, Sub-district 3 would operate within capacity, with a 77.6 percent utilization rate and 775 available seats. Intermediate schools would operate within capacity, with a 57.2 percent utilization rate and a surplus of 1,015 seats.

Early Childhood Programs

In the No-Action Alternative, planned or proposed No-Action development projects in the early childhood programs study area will introduce approximately 3,334 new affordable housing units by the analysis year, with an estimated 671 publicly funded childcare-eligible

children. Therefore, under the No-Action Alternative, early childhood programs in the study area will operate at 126.~~49~~5 percent utilization with a deficit of 426 seats under the No-Action Alternative.

The Brooklyn Developmental Center Mixed-Use Project ~~DEIS~~FEIS identified the potential to result in significant adverse impacts on childcare services; potential mitigation measures, in the form of additional capacity, were identified. The provision of space for an estimated 290 slots within the site was identified as mitigation, but there are no known development plans or public funding commitments for publicly financed childcare slots in connection with the project at this time.

Libraries

Under the No-Action Alternative, the catchment area population would increase by 1,652 residents due to planned No-Action development, for a total population of 69,685. Assuming no increase in holdings in the No-Action condition, the holdings-per resident ratio for the library would decrease from 0.0731 in existing conditions to 0.0714 in the No-Action condition. The existing libraries will continue to serve the study area under this Alternative.

Open Space

Neither the No-Action Alternative nor the Proposed Actions would have any direct impacts on any open space resources as they would not physically alter or displace publicly accessible open space resources.

In the No-Action Alternative, no sizeable new development is anticipated in the study area that would result in a population increase, and no new publicly accessible open space planned. Therefore, the open space ratios would remain the same as under existing conditions, with 1.998 acres per 1,000 residents overall. In the No-Action Alternative the study area would be adequately served by passive open space, however there would be a deficit in active open space and total open space.

Compared with the Proposed Actions' residential study area ratios, the overall ratio under the No-Action Alternative would be slightly higher by 0.20 acres per 1,000 residents. However, the No-Action condition would not introduce 1.95 acres of new publicly accessible open space, approximately 36,000 sf (approximately 0.83 acres) of privately-owned passive open space, approximately 29,400 sf (approximately 0.67 acres) of privately-owned active open space including a playground for the childcare facility and residents and a recreational space to be located on top of the parking garage.

Shadows

No shadows would result from the No-Action Alternative as no new buildings would be constructed. As such, the No-Action Alternative would not have the potential to cast new shadows that would reach sunlight-sensitive open space resources.

Historic and Cultural Resources

The Landmarks Preservation Commission (LPC) has determined that the Development Site does not possess archaeological sensitivity. Therefore, like the Proposed Action, the No-

Action Alternative would not affect archaeological resources. LPC has also indicated that there are no buildings or structures within the 400-foot study area or on the Development Site that have architectural significance. Therefore, under both the No-Action Alternative and the Proposed Actions, there will be no impacts to architectural resources.

Urban Design and Visual Resources

Like the Proposed Actions, the No-Action Alternative would not result in significant adverse impacts on urban design, view corridors, or visual resources. Under the No-Action Alternative, the Development Site is assumed to remain largely unchanged from existing conditions, which includes only the existing CCC and its accessory parking lots. Overall, the No-Action Alternative would not alter the arrangement, appearance, or functionality of the Development Site or study area such that the alteration would negatively affect a pedestrian's experience of the area, and as a result, the No-Action Alternative would not have significant urban design adverse impacts. Neither the Proposed Action nor the No-Action Alternative would eliminate any significant publicly accessible view corridors or completely block public views to any visual resources.

Unlike the Proposed Actions, the No-Action Alternative would not provide new development on accessory surface parking lots, provide new publicly accessible open space, or improve the urban design of the Development Site.

Overall, neither the Proposed Actions nor the No-Action Alternative would have significant adverse impacts on urban design or completely block public views to any visual resources that are not currently impeded by existing structures.

Natural Resources

Under both the No-Action Alternative and the Proposed Actions, the Project Area would continue to be characterized by highly urbanized and developed conditions, with largely unvegetated impervious surfaces occupying the vast majority of land cover. Accordingly, under both scenarios, natural resources, as defined in Chapter 11 of the *CEQR Technical Manual*, would continue to be absent from the Project Area.

Hazardous Materials

Absent the Proposed Project, it is assumed that the Development Site would remain in its existing condition, with only the CCC operational in the Development Site, surrounded by accessory parking. Under the future No-Action Alternative, remedial action on Block 4434, Lot 10 would not be completed under the NYSDEC BCP. As such, confirmed contaminants on Block 4434, Lot 10 would go unmitigated and remain in-place. Furthermore, the Applicant would not pursue enrollment into the NYSDEC BCP or NYC OER programs for the remediation of the remaining non-BCP portions of the Development Site. Furthermore, an (E) Designation for hazardous materials would not be applied to non-BCP portions of the Development Site (Block 4430, Lot 1; Block 4434, Lot 1). As such, potential subsurface contamination within these portions of the Development Site would go unmitigated without regulatory oversight.

Water and Sewer Infrastructure

Under the No-Action Alternative stormwater runoff, water demand, and wastewater generation calculations would remain unchanged from Existing Conditions.

As under the Proposed Actions, the No-Action Alternative would not have a significant incremental demand for water or a significant incremental increase in sanitary sewage generation, and therefore would not result in a significant adverse impact on the City's water and sewer infrastructure. Incremental increases would be within the capacity of the City's systems, and the impacts would not be considered significant or adverse.

Solid Waste and Sanitation Services

Under the No-Action Alternative, it is assumed that the Development Site would remain in its existing condition with only the CCC operational on the site, surrounded by accessory non-attended surface parking and vacant land serving as overflow parking. Solid waste would remain unchanged under the No-Action Alternative with approximately 1,690 pounds of solid waste generated per week. All waste will continue to be handled by a private carter.

Transportation

Under the No-Action Alternative, traffic, transit, and pedestrian volumes would increase due to background growth and development within the Development Site and study area. Similar to the Proposed Project, the vast majority of traffic movements analyzed would operate at acceptable levels of service under the No-Action Alternative. However, unlike the Proposed Project, the No-Action Alternative would not exceed the CEQR thresholds for significant adverse traffic impacts at nine intersections of the 13 intersections analyzed during the weekday AM peak hour, seven intersections during the weekday midday peak hour, nine intersections during the weekday PM peak hour, and seven intersections during the Saturday peak hour. A subset of seven intersections was analyzed for the Sunday peak hour (coinciding with the Christian Cultural Center church services) and No-Action Alternative would not result in significant traffic impacts at four intersections during this peak hour.

The Proposed Project would result in significant adverse pedestrian impacts at one pedestrian element during the weekday AM and midday peak hours, two pedestrian elements during the weekday PM peak hour, four pedestrian elements during the Saturday peak hour, and 12 pedestrian elements during the Sunday peak hour which would not occur under the No-Action Alternative. For subways, the Proposed Actions would result in significant impacts at the Glenwood Road fare control at the Rockaway Parkway L subway station during the weekday AM peak hour which would not occur under the No-Action Alternative. For buses, the Proposed Action would result in significant impacts to the bus routes listed below which would not occur under the No-Action Alternative.

- The B82 bus route in the westbound direction during the AM peak hour
- The B82 SBS bus route in the westbound direction during the AM peak hour, and in the

eastbound direction during the PM peak hour

› The B83 bus route in both directions during both the AM and PM peak hours

Absent the Proposed Project, on-site parking supply and utilization would be similar to the existing conditions.

Air Quality

As described above, no development is expected to occur under the No-Action Alternative. As such, the No-Action Alternative would not result in a significant adverse mobile source or stationary source air quality impact. Furthermore, no industrial sources were found in a 400-foot radius of the Development Site and no large or major sources were identified within a 1,000-foot radius of the Development Site and therefore emissions from these sources are not anticipated in the No-Action Alternative.

Greenhouse Gas Emissions and Climate Change

As no new development would occur under the No-Action Alternative, there would be no significant changes to energy consumption and carbon dioxide equivalent (CO_2e) emissions per year. Neither the Proposed Project nor the No-Action Alternative would result in significant greenhouse gas emissions or climate change impacts.

Noise

Similar to the Proposed Actions, there would be an increase in background traffic under the No-Action condition which would result in an increase in ambient noise conditions. No-action noise conditions have been determined based on ambient noise measurements and proportional noise modeling. These increases in traffic would in general result in small changes in noise levels but, as outlined in **Chapter 16, Noise**, the maximum increase in L_{eq} noise levels would be 0.6 dBA compared to the existing condition. Changes of this magnitude would be barely perceptible. Absent the Proposed Actions, new noise-sensitive receptors would not be introduced at the Proposed Development Site. Therefore, the No-Action Alternative would not result in a significant adverse noise impact.

Public Health

Under the No-Action Alternative, there would be no new on-site development. As such, no unmitigated significant adverse impacts would occur in the areas of hazardous materials, air quality, noise, or construction, and thus there would be no significant adverse public health impacts associated under the No-Action Alternative.

Neighborhood Character

According to the *CEQR Technical Manual*, a proposed action could have a significant adverse neighborhood character impact if it would have the potential to affect the defining features of the neighborhood, either through the potential for a significant adverse impact in any relevant technical area, or through a combination of moderate effects in those technical areas. No new development would occur under the No-Action Alternative and the overall

neighborhood character of the area would remain substantially the same as it is under existing conditions.

However, under the No-Action Alternative, the beneficial aspects of the development introduced by the Proposed Project – introduction of affordable housing units, community facilities, local retail, and new publicly accessible open space on underutilized parking lots– integrated into the urban fabric would not be realized nor contribute to the neighborhood character of the area.

Construction

The No-Action Alternative would not involve new construction.

Modified Application Before the City Planning Commission

As described above, since issuance of the Draft EIS, the Proposed Development has been updated by the Applicant in response to feedback received throughout the public review process to refine the landscaping and amenities for the public access areas on the Development Site and to change the maximum number of stories of four of the buildings. The City Planning Commission is reviewing, and in some cases modifying, the Applicant-proposed modifications. In particular, changes to the public access areas include relocation of certain signs, consolidation and relocation of a number of trash receptacles, a decrease in the number of benches along certain portions of the public access areas, and the addition of new benches adjacent to the to the east of the Building 5 arcade. Building 1 has been reduced from 15 stories to 14 stories and Buildings 3, 5, and 6 have been reduced from 14 stories to 13 stories. Additionally, the maisonettes would be allowed to be located between the ground floor and second story of the primary portions of the buildings, including Buildings 1 and 3. The effect of these changes may be a loss of between 0 and 75 dwelling units. No change to the permitted heights of buildings or zoning floor area of the Proposed Development included in the Draft EIS would occur as a result of the refinements. In addition, the location, intended use, and overall amount of public access area would be unchanged from that considered in the Draft EIS.

As these project modifications would not change overall building height or massing, none of the technical analyses related to building bulk or massing would have to be adjusted to reflect the changes to the project. Similarly, as the density-based analyses evaluate a worst-case development scenario for the project, they represent a conservative analysis for the project and disclose the environmental impacts associated with the maximum number of dwelling units that could be constructed on-site. A reduction in the proposed number of dwelling units by up to 75 units would create a nominal reduction in demand for services, but would not substantively change the findings of the EIS related to socioeconomic conditions, community facilities and services, open space resources, water and sewer infrastructure, solid waste and sanitation services, transportation, air quality, greenhouse gas emissions and climate change, noise, public health, neighborhood character, construction, mitigation, or unavoidable significant adverse impacts. The significant adverse impacts and mitigation under this alternative would remain the same as under the Proposed Project, and

the following technical areas would require mitigation under either alternative: community facilities, open space, transportation, noise, and construction (see **Chapter 20, Mitigation**).

No Unmitigated Significant Adverse Impact Alternative

According to the *CEQR Technical Manual*, when Proposed Actions would result in unmitigated significant adverse impacts, it may be appropriate to include an assessment of an alternative to the project that would not result in unmitigated impacts.

The No Unmitigated Significant Adverse Impact Alternative identifies those modifications to the Proposed Actions that would be required to eliminate all of the Proposed Actions' unmitigated significant adverse impacts. In order to eliminate all unmitigated significant adverse impacts, the Proposed Actions would need to be so substantially modified that the project goals and objectives would not be realized or would be materially compromised.

Community Facilities and Services

Early Childhood Programs

As discussed in **Chapter 4, Community Facilities and Services**, the Proposed Actions would result in a significant adverse impact on publicly funded Early Childhood Programs according to the thresholds set forth by the *CEQR Technical Manual*. As discussed in **Chapter 20, Mitigation**, and **Chapter 22, Unavoidable Adverse Impacts** possible mitigation measures for this significant adverse impact will be developed as part of the Proposed Project in consultation with ~~DOE~~the New York City Department of Education (DOE) and may include provision of suitable space on-site for a child care center, provision of a suitable location off-site and within a reasonable distance (at a rate affordable to DOE providers), or funding or making program or physical improvements to support adding capacity to existing facilities if determined feasible through consultation with DOE's Division of Early Childhood Education, or providing new early childhood programs within or near the Development Site.

To avoid the identified significant adverse impact to early childhood programs, the number of affordable dwelling units that could be developed would have to be reduced from 1,338 to 530, a reduction of 808 affordable units.[1] A substantial reduction in the number of affordable housing units developed in the Development Site would be less supportive of the goals and objectives of the Proposed Actions. Alternatively, taking into account the proposed mitigation from other developments in the study area, the provision of 128 early childhood slots under this alternative would avoid the unmitigated significant adverse impact to early childhood programs. The Proposed Project has allocated 12,320-gsf for a childcare facility within the Project Area. ~~As discussed above, approximately~~Approximately 6,350 sf feet could be designated for publicly funded early childhood programming, which would fully mitigate the significant adverse impact if the designated spaces are tenanted by early childhood providers in consultation with ~~NYCDOE~~DOE.

[1] Note that this takes into account the Brooklyn Developmental Center Mitigation in the No-Action Condition. If the Brooklyn Developmental Center impact goes unmitigated, then the Proposed Project would have to reduce further to 450 units.

Libraries

As discussed in **Chapter 4, Community Facilities and Services**, the Proposed Actions would result in a significant adverse impact on libraries according to the thresholds set forth by the *CEQR Technical Manual*. As discussed in **Chapter 20, Mitigation**, and **Chapter 22, Unavoidable Adverse Impacts** possible mitigation measures for this significant adverse impact ~~will be developed in consultation with BPL and may~~were developed in consultation with BPL. The Applicant is proposing to provide project residents with computer labs that have free internet access within lounge spaces in each building within the Proposed Project. Furthermore, space within the PAC would be provided for use by BPL for programming and additional outdoor space within the Central Quad would be made available for BPL programming. and include providing project residents with free internet access within lounge spaces in each building and computer lab/reading areas within the Proposed Project. ~~Mitigation~~The full range of mitigation measures ultimately implemented would rely upon ~~the direction of~~ input from BPL, ~~and the~~ which would undertake ongoing monitoring ~~that BPL must undertake~~ to determine the appropriate mitigation measures as the Proposed Project is occupied.

To avoid the identified significant adverse impact to libraries, the number of dwelling units that could be developed would have to be reduced from 2,050 to 1,486 to remain below the 5 percent population increase threshold (a reduction of 564 units). A substantial reduction in the number of affordable housing units developed on the Development Site would be less supportive of the goals and objectives of the Proposed Actions. Alternatively, the ~~proposed project~~Proposed Project could provide the necessary mitigations to ensure the project does not impair the delivery of library services in the study area.

Open Space

The Proposed Project would result in a temporary adverse impact to active open space ratios~~.~~ during construction. Mitigation for the identified open space impact ~~is being~~was explored by the Applicant, DCP, and NYC Parks~~ and will be refined~~ between the DEIS and FEIS.

~~One of the goals of the Proposed Project is to advance the City's Housing New York 2.0 plan, which sets a goal of building or preserving 300,000 units of high-quality affordable housing in all five boroughs by 2026. An increment of up to 2,050 new housing units, all of which would be rent stabilized for a range of incomes 30 percent and 100 percent of the area median income (AMI), is anticipated to result from the Proposed Project. The Proposed Project would include approximately 200 units of affordable senior or supportive housing and up to 100 residential units offering affordable home ownership opportunities.~~ To eliminate the impact (by reducing the change in active open space ratios to less than three percent), the number of residential units would need to be reduced to approximately 425 units. Such a reduction would not facilitate the provision of a substantial amount of affordable housing. Therefore, no reasonable alternative could be developed to avoid temporary adverse active open space impacts without substantially compromising the Proposed Project's stated goals.

Transportation

As discussed in **Chapter 20, Mitigation,** the Proposed Project would result in significant impacts to traffic, pedestrian, and subway station elements that could not be fully mitigated. Sensitivity analyses was conducted for each of these travel modes to determine the level of reduction in the development program to eliminate unmitigated significant transportation impacts. The analyses determined that any development increment would be expected to result in unmitigated significant adverse transportation impacts and therefore would not meet the project's goals of creating a sustainable, affordable neighborhood and address the economic, social, educational and cultural needs of the neighborhood.

The specifics for each travel mode analyzed is detailed below.

Traffic

The Proposed Project would result in significant adverse traffic impacts which could not be fully mitigated with standard traffic capacity improvement measures at six of the 13 intersections during the weekday AM peak hour, two intersections during the weekday midday peak hour, five intersections during the weekday PM peak hour (three of the five intersections could be partially mitigated), and four intersections during the Saturday peak hour. During the Sunday peak hour, impacts identified at four of the seven intersections analyzed could not be fully mitigated. A modest increase in traffic and pedestrians above No-Action condition levels would be expected to result in traffic impacts that could not be mitigated. A sensitivity analysis was conducted at key intersections along Pennsylvania Avenue between Flatlands Avenue and Linden Boulevard and determined that during the weekday PM peak hour a vehicle increment of about eight percent of the Proposed Project (a development of no more than 165 residential units with no retail, community facility, or PAC) would result in a significant adverse traffic impact that could not be fully mitigated.

Pedestrians

The Proposed Project would result in significant pedestrian impacts that could not be mitigated at one pedestrian element during the weekday AM and midday peak hours, two pedestrian elements during the weekday PM peak hour, four pedestrian elements during the Saturday peak hour, and 12 pedestrian elements during the Sunday peak hour. As part of the Proposed Project, a 500-space parking garage would be constructed and replace the existing on-site surface parking, and some of the church-related trips that parked on-site would need to park on-street. Due to the prevailing church activities during the Sunday peak hour, the southeast corner of the intersection of Flatlands Avenue and Louisiana Avenue would operate at LOS F in the future absent the Proposed Actions and the increase in church-related pedestrian trips resulting from the changes in on-site parking conditions would result in unmitigated significant impacts at this corner. Therefore, any development increment would be expected to result in unmitigated significant adverse pedestrian impacts.

Subway

As discussed in **Chapter 20, Mitigation,** the Proposed Project would result in unmitigated significant adverse impacts at the Glenwood Road fare control element at the Rockaway Parkway L subway station during the AM peak hour. ~~Measures to mitigate this impact could~~

~~potentially include the construction of additional turnstiles. The practicability of implementing this measure, as well as measures to prevent prevalent fare evasion at this fare control area, will be evaluated in consultation with New York City Transit (NYCT) between the Draft EIS and Final EIS. Should measures to mitigate these impacts be determined to be impracticable, these significant impacts would be considered unmitigated in the Final EIS.~~ There would be no significant impacts on subways during the PM peak hour. As part of the recent station renovations, there is no fence or barrier behind the Glenwood Road fare control and the majority of subway riders were observed to evade the fare control. The subway station analysis assumed that all subway riders would use the fare control and not evade the fare. The analysis at this fare control, which consists of one high entry/exit turnstile (HEET) and one high exit turnstile (HXT), determined that the fare control would operate at over-capacity conditions during the AM peak hour under existing conditions and any small increase in subway riders would result in a significant impact. Between the Draft EIS and the Final EIS, mitigation measures were studied in conjunction with NYCT and it was determined that this impact could be mitigated with the installation of an additional HEET at this fare control. As a practical matter, the additional HEET would not be implemented in the absence of any measures taken by NYCT to deter the ongoing fare evasion Therefore, until any measures are taken by NYCT to deter fare evasion at this location, the significant impact would be unmitigated. Thereafter, the significant impact would be fully mitigated upon the implementation of one additional HEET.

A sensitivity analysis was conducted at the impacted subway station element and determined that the addition of six subway trips would result in a significant impact that could not be mitigated. The Proposed Actions' development increment would have to be reduced substantially – to approximately nine percent of the Proposed Project in order to reduce incremental trips to levels that would not result in significant adverse impacts at this subway station element.

Construction

Noise

As presented in **Chapter 20, Mitigation**, the Proposed Actions would result in significant adverse construction noise impacts which could not be fully mitigated at six buildings in the Project Area, including three existing buildings and three buildings that would be introduced by the Proposed Actions during the phased development.

Construction activities would adhere to the NYCDEP Noise Code in order to mitigate construction noise. Noise source and path control measures that would be implemented to the extent feasible, practical, and safe. With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot-tall construction noise barrier, construction noise would be reduced but would still exceed the thresholds for significant construction noise impact prior to mitigation. In order to eliminate all significant adverse noise impacts, use of the loudest construction equipment, such as drill rigs during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction, would have to be reduced or eliminated and other construction activities would need to be substantially limited so as to not occur adjacent to

existing noise sensitive receptors or to occur for substantially shorter durations. These limitations would severely limit the Proposed Actions' goals and objective for the project. Therefore, no reasonable alternative could be developed to avoid the temporary unmitigated construction-period noise impact without substantially compromising the proposed projects' stated goals.

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Unavoidable Significant Adverse Impacts

Unavoidable significant adverse impacts are those that would occur if a proposed project or action is implemented regardless of the mitigation employed, or if mitigation is impossible.

Introduction

This chapter summarizes unavoidable significant adverse impacts resulting from the With-Action condition. According to the *2021 CEQR Technical Manual*, unavoidable significant adverse impacts are those that would occur if a proposed project or action is implemented regardless of the mitigation employed, or if mitigation is impossible.

As described in **Chapter 20, Mitigation**, the Proposed Actions have the potential to result in significant adverse community facilities, transportation, and construction impacts. The Proposed Actions would also result in a temporary active open space impact during the construction period. To the extent practicable, mitigation has been proposed for these identified significant adverse impacts. However, in some instances no practicable mitigation has been identified to fully mitigate the significant adverse impacts, and there are no reasonable alternatives to the Proposed Actions that would meet the purpose and need, eliminate potential impacts, and not cause other or similar significant adverse impacts.

Community Facilities

Early Childhood Programs

As discussed in **Chapter 4, Community Facilities and Services**, the Proposed Actions would result in a significant adverse impact on publicly funded ~~child care and Head Start Centers~~early childhood programs according to the thresholds set forth by the *CEQR Technical Manual*.

As discussed in **Chapter 20, Mitigation**, a suggested mitigation strategy for one of the No-Action developments – the Brooklyn ~~Developmental~~Development Center – will be for that project to introduce 290 childcare slots to the study area for a total capacity of 1,900 slots. This is a commitment that was made in the EIS for the Brooklyn ~~Development~~Developmental Center. With this provision of childcare slots by the Brooklyn ~~Development~~Developmental Center under the No-Action condition, the study area would only operate at a deficit of 375 slots and the study area utilization rate would be 107.2 percent. The change in utilization for the Proposed Actions would be 12.5 percent.

Accounting for mitigation by the above development for its childhood program impacts, the Proposed Project could mitigate the childcare impact by providing 128 childcare slots within the Proposed Project (to reduce the change in utilization to 5 percent) or pay for them to be provided offsite. The Applicant will coordinate with the New York City Department of Education (DOE) in an effort to include space that could be used for publicly funded early childhood programming in the Proposed Project. To satisfy the need for seats, it is the Applicant's intention to provide a publicly funded facility of at least approximately 6,350 gsf on site (conservatively assuming 50 sf per child) to avoid the potential impact. The Proposed Project has allocated 12,320-gsf for a childcare facility within the Project Area. Consideration of providing additional childcare facility capacity and/or other measures ~~is being~~was explored in consultation with DOE ~~and will be further explored~~ between the DEIS and FEIS and no additional measures were identified.

There are 20 publicly funded early childhood programs within the 1.5-mile radius study area. These early childhood programs have a total capacity of 1,610 seats and have 167 available seats or a collective utilization of 89.63 percent. In the With-Action condition, the Proposed Actions would introduce 1,338 non-senior affordable units below 80 percent AMI resulting in an increment of 238 additional childcare-eligible children. To avoid the identified significant adverse impact to early childhood programs, the number of non-senior affordable dwelling units that could be developed would have to be reduced from 1,338 to 530, a reduction of 808 affordable units.[1] However, this is not a feasible alternative as a substantial reduction in the number of affordable housing units developed in the Development Site would be less supportive of the goals and objectives of the Proposed Actions. Alternatively, taking into account the proposed mitigation from other developments in the study area, the provision of 128 early childhood slots under this alternative would avoid the unmitigated significant adverse impact to early childhood programs.

[1] Note that this takes into account the Brooklyn Developmental Center Mitigation in the No-Action Condition. If the Brooklyn Developmental Center impact goes unmitigated, then the Proposed Project would have to reduce further to 450 units.

~~As indicated above, the Proposed Project would provide 12,320-gsf for~~ In order to address a ~~childcare facility within the Project Area.[2] A facility of approximately 6,350 sf feet would fully mitigate the~~ significant adverse impact ~~if the designated spaces are tenanted by~~ to early childhood ~~providers in consultation with NYCDOE. Therefore, the 12,320-gsf space proposed by~~services resulting from the Land Use Actions, the Applicant ~~would exceed the~~ shall provide, at the direction of the DOE, a minimum ~~mitigation required.~~

~~Possible mitigation measures for this significant adverse impact may include provision of suitable space on-site for a childcare center, provision of a suitable location off-site~~6,350 sf of space in Building 4 (i.e., core and ~~within a reasonable distance (at a rate~~shell), as shown on the Large-Scale Plans that accompany the Uniform Land Use Review Procedure (ULURP) application, for publicly funded daycare services at rents affordable to DOE providers~~), or funding or making program or physical improvements to support adding capacity to existing facilities if determined feasible through consultation with DOE's Division~~. Upon the construction of ~~Early Childhood Education, or providing new early childhood programs within or near the project sites. As stated above~~530 non-senior, affordable units within the Development Site, the Applicant ~~proposes to include an approximately 12,320-gsf space on-site for a childcare center.~~

~~As a City agency, DOE does not directly provide new childcare facilities, instead it contracts with providers in areas of need.~~shall contact DOE ~~is also working to create public/private partnerships to facilitate the development of new early childhood programs where there is an area of need. As part of that initiative, DOE may be able to contribute capital funding, if it is available, towards such projects to facilitate the provision of new programs.~~

~~At this time, it is not feasible to determine precise mitigation measures~~to confirm that ~~would be appropriate for~~the mitigation measure is needed. Upon DOE 's confirmation of a mitigation measure, the Applicant shall act with due diligence to obtain necessary approvals, permits, and licenses to allow such services to be provided. Notwithstanding the ~~study area. The childcare analysis is conservatively based on~~ foregoing, in the ~~existing inventory of publicly funded early childhood programs in~~ event either (i) the ~~area and does not reflect likely shifts in demand or~~DOE, the ~~creation of new childcare capacity.~~Department of Health, or other Governmental Authority does not issue a required approval, permit, or license, or (ii) DOE determines based on subsequent monitoring that sufficient early childhood services have been developed in proximity to the Development Site, this Mitigation Measure shall not be required and the Applicant shall have no further obligation with respect to such Mitigation Measure. . If no other alternative mitigation measures are identified to reduce the exceedance in capacity for existing programs in the Project Area, then this would be an ~~unmitigated~~unavoidable impact.

Libraries

As discussed in **Chapter 4, Community Facilities and Services** and **Chapter 20, Mitigation**, the Proposed Project would result in a significant adverse impact to public libraries.

[2] ~~Subject to DOE coordination and funding availability.~~

Possible mitigation measures to address the identified significant adverse impact to public libraries ~~will be~~were developed in consultation with the BPL. Such measures ~~should be~~were targeted to alleviate the impact created and ~~may~~would include providing project residents with computer lab/reading areas with free internet access within lounge spaces in each building and providing space within the PAC and additional space outdoors within the central Quad for use by BPL for programming.

There is no precise program delineating the mitigation measures; rather, the mitigation measures rely upon the direction of BPL. Therefore, absent certainty as to whether any measures would be practicable, there remains the potential that the predicted indirect impacts to public libraries may be unavoidable.

Open Space

As discussed in **Chapter 5, Open Space**, and **Chapter 20, Mitigation**, the Proposed Project would result in a temporary indirect adverse impact to active open space during construction as new residents would be introduced into the area prior to completion of the planned on-site open space resources.

Possible mitigation for the identified open space impact ~~is being~~was explored by the Applicant, DCP, and NYC Parks ~~and will be refined~~ between the DEIS and FEIS. ~~If~~As measures to partially or fully mitigate this impact ~~cannot be~~were not identified, the impact would remain unmitigated and would constitute an unavoidable temporary adverse impact of the Proposed Actions.

Transportation

Traffic

As discussed in **Chapter 13, Transportation**, and **Chapter 20, Mitigation**, the Proposed Project would result in significant adverse impacts which could not be fully mitigated with standard traffic capacity improvement measures at six of the 13 intersections during the weekday AM peak hour, two intersections during the weekday midday peak hour, five intersections during the weekday PM peak hour and four intersections during the Saturday peak hour. During the Sunday peak hour, four of the seven intersections analyzed would remain unmitigated. As discussed in **Chapter 21, Alternatives,** a sensitivity analysis conducted at key intersections determined that a modest increase in traffic and pedestrians (about eight percent of the Proposed Project, that is, no more than 165 residential units) above No-Action condition levels would be expected to result in traffic impacts that could not be mitigated.

The proposed mitigation measures are subject to review and approval by the New York City Department of Transportation (NYC DOT). If, prior to implementation, NYC DOT determines that any of the identified mitigation measures are ~~is~~ infeasible, and no other alternative and equivalent mitigation measures could be advanced, then the impacts would remain unmitigated.

If certain proposed mitigation measures are deemed infeasible by NYC DOT, practical alternative measures, if any, may be ~~analyzed and presented in the Final Environmental~~

~~Impact Statement (Final EIS).~~advanced. If no other alternative mitigation measures can be identified, those additionally impacted locations would be ~~unmitigated~~unavoidable.

Transit

As discussed in **Chapter 20, Mitigation,** the Proposed Project would result in unmitigated significant adverse impacts at the Glenwood Road fare control element at the Rockaway Parkway L subway station during the AM peak hour. As discussed in **Chapter 13, Transportation**, as part of recent station renovations, there is no fence or other barrier behind the Glenwood Road fare control and the ~~vast majority of subway riders were observed to evade the fare control. Per the direction provided by NYCT, the fare control was analyzed assuming all subway riders would use the fare control (no fare evasion) and thus this fare control would operate at over-capacity conditions during the AM peak hour under the existing and future No-Action and With-Action conditions. Measures to mitigate this impact could potentially include the construction of additional turnstiles. The practicability of implementing this measure, as well as measures to prevent prevalent fare evasion at this fare control area, will be evaluated in consultation with New York City Transit (NYCT) between the Draft EIS and Final EIS. Should measures to mitigate these impacts be determined to be impracticable, these significant impacts would be considered unmitigated in the Final EIS~~majority of subway riders were observed to evade the fare control.

Between the Draft EIS and the Final EIS, mitigation measures were studied in conjunction with NYCT and it was determined that this impact could be mitigated with the installation of an additional HEET at this fare control. As a practical matter the additional HEET would not be implemented in the absence of any measures taken by NYCT to-deter the ongoing fare evasion. Therefore, until any measures are taken by NYCT to deter fare evasion at this location, the significant impact would be unmitigated and unavoidable. Thereafter, the significant impact would be fully mitigated upon the implementation of one additional HEET.

Pedestrians

As discussed in **Chapter 13, Transportation**, and **Chapter 20, Mitigation,** a total of 36 pedestrian elements were analyzed for the weekday AM, midday, PM, and Saturday peak hours, and 14 pedestrian elements along the Development Site frontages were analyzed for the Sunday peak hour. The Proposed Project would result in significant impacts at one pedestrian element during the weekday AM and midday peak hours, two pedestrian elements during the weekday PM peak hour, and four pedestrian elements during the Saturday peak hour. Pedestrian impacts that could not be mitigated were identified at 12 pedestrian elements during the Sunday peak hour which conservatively analyzed the confluence of the Proposed Project's peak hour of pedestrian activities with the peak hour of church services (when church trips are leaving the 8 AM service and arriving for the 10:30 AM service). Potential improvements that could mitigate the significant impacts were reviewed and it was determined that the pedestrian impacts could not be mitigated with typical improvement measures. Therefore, the significant adverse pedestrian impacts would be unavoidable.

Construction

Traffic

As discussed in **Chapter 19, Construction**, construction activities would result in significant adverse impacts which could not be fully mitigated at six of the 12 intersections analyzed during the weekday PM construction peak hour; impacts identified at two of the seven intersections analyzed during the weekday AM construction peak hour could be fully mitigated. Significant traffic impacts at other intersections could be mitigated with measures similar to those proposed for the Proposed Project. The proposed mitigation measures are subject to review and approval by the New York City Department of Transportation (NYC DOT). If, prior to implementation, NYC DOT determines that any of the identified mitigation measures are infeasible, and no other-alternative and equivalent mitigation measures could be advanced, then the impacts would be unavoidable.

Noise

As presented in **Chapter 20, Mitigation**, the Proposed Actions would result in significant adverse construction noise impacts which could not be fully mitigated at six buildings in the Project Area, including three existing buildings and three buildings that would be introduced by the Proposed Actions during the phased development.

Construction activities would adhere to the ~~NYCDEP~~NYC DEP Noise Code in order to mitigate construction noise. Noise source and path control measures that would be implemented to the extent feasible, practical, and safe. With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot-tall construction noise barrier, construction noise would be reduced but would still exceed the thresholds for significant construction noise impact prior to mitigation. In order to eliminate all significant adverse noise impacts, use of the loudest construction equipment, such as drill rigs during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction, would have to be reduced or eliminated and other construction activities would need to be substantially limited so as to not occur adjacent to existing noise sensitive receptors or to occur for substantially shorter durations. These limitations would severely limit the Proposed Actions' goals and objective for the project. Therefore, since it is not feasible to fully avoid or mitigate potential impacts, the significant adverse construction noise impact would be unavoidable.

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Growth-Inducing Aspects of the Proposed Project

The term "growth-inducing aspects" generally refers to the potential for a proposed project to trigger additional development in areas outside of the project site (i.e., directly affected area) that would not experience such development without the proposed project.

Introduction

The *2021 City Environmental Quality Review (CEQR) Technical Manual* indicates that an analysis of the growth-inducing aspects of a proposed project is appropriate when the project:

- Adds substantial new land use, new residents, or new employment that could induce additional development of a similar kind or of support uses, such as retail establishments to serve new residential uses; and/or
- Introduces or greatly expands infrastructure capacity (e.g., sewers, central water supply).

As described in **Chapter 1, Project Description**, the Applicant is seeking several discretionary approvals from the City Planning Commission (CPC)—including a zoning map amendment, special permits and zoning text amendments (the Proposed Actions)—to facilitate the proposed large-scale development of a site located in East New York in Brooklyn. The mixed-use development would contain a mix of community facility, commercial, and residential uses anchored by the Christian Cultural Center (CCC) and surrounded by publicly accessible open space and street system.

Principal Conclusions

The Proposed Actions would permit an increase in the maximum floor area ratio, commercial uses, mandatory inclusionary housing, a parking garage, and modifications to certain regulations related to the large-scale general development in order to facilitate the development of a new mixed-use community on the campus of the CCC. Approval of the Proposed Actions would allow for more dense development on the Development Site that is contextual with its surroundings, the provision of affordable housing on site, and a parking scheme that will best serve the needs of visitors and residents. It is intended to further the City's development goals for affordable housing, create a sustainable, affordable neighborhood anchored by the presence of the CCC, and targeted at addressing a number of economic, social, educational and cultural needs of the neighborhood.

The requested discretionary approvals include a zoning map amendment that would apply to the entire Project Area, which in addition to the Development Site includes de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100, and extends to the centerlines of Flatlands Avenue, Louisiana Avenue and Pennsylvania Avenue. However, as there are existing buildings on these lots, including affordable housing developments, it is unlikely that the Proposed Actions would induce any new development.

These goals would be realized in connection with the development of approximately 2,050 units of affordable housing, approximately 100,904 gross square feet (gsf) of community facility space, and approximately 110,570 gsf of retail space. Additional space would be included for parking. All of this would be built upon underutilized space currently used for surface parking. As described in **Chapter 2, Land Use, Zoning, and Public Policy**, there are several existing developments that create a residential and mixed-use character of the neighborhood surrounding the Development Site, which are independent of the Proposed Project. Existing developments such as the Spring Creek Towers/Starrett City, Vandalia Avenue, Breukelen Houses, and Linden House developments provide affordable housing options alongside community facility uses such as senior centers and schools to residents in the neighborhood. Commercial uses are also located throughout the neighborhood. Overall, the study area is well developed with a mix of uses near good transportation options.

As discussed in **Chapter 3, Socioeconomic Conditions**, the Proposed Project would comply with and exceed the requirements of Option 1 of the City's Mandatory Inclusionary Housing (MIH) program. Sitewide, the Proposed Project would include 50 percent of units at 60 percent of Area Median Income (AMI) or less, with the majority of these units rented at 40 or 50 percent of AMI and senior housing capped at 60 percent AMI. An additional 25 percent of units would be affordable at 80 percent of AMI or less and the remaining 25 percent of units would be affordable at 100 percent of AMI or less. In all, it is expected that the first 1,000 homes to be constructed would not include any rents above 80 percent AMI.

The non-MIH units would be income-based affordable housing through various city and state programs for low, moderate, and middle income. The income bands for the affordable housing units in excess of the MIH requirement, as well as the applicable programs for the senior~~/supportive~~ housing units, would remain subject to the availability of capital subsidy and other public capital sources at the time of construction.

The Proposed Project would result in an alternative housing option in the neighborhood because 75 percent of the proposed units would be available for households earning 80

percent or less of AMI. It is also noted that many existing renters in the area rely on Section 8 vouchers. Section 8 vouchers would be accepted at the Proposed Development, creating another housing option for low-income renters in the area. The proposed affordable ownership or condominium units would also provide a path for area low-income renters looking to own their home. The detailed assessment in **Chapter 3, Socioeconomic Conditions** indicates that real estate market condition in the study area is not expected to change significantly and concludes that the Proposed Project is not expected to result in significant adverse impacts due to indirect residential displacement.

Furthermore, as discussed in **Chapter 11, Water and Sewer Infrastructure**, the infrastructure in the study area is already well developed such that improvements associated with the Proposed Actions would not induce additional growth or overburden the existing system.

Although the Proposed Actions would result in increased development, it is not anticipated that the Proposed Actions would result in substantial new development in nearby areas that would generate significant secondary impacts. Additionally, the zoning changes introduced by the Proposed Actions are limited to the boundaries of the Project Area and would not extend beyond the Project Area.

Therefore, the Proposed Actions would not induce significant new growth in the surrounding area.

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Irreversible and Irretrievable Commitments of Resources

Per the *2021 CEQR Technical Manual*, this chapter should summarize a proposed project's impacts on the loss of environmental resources, both in the immediate future and in the long-term. Resources include both man-made and natural resources. Examples of losses include removal of vegetation without replacement, use of fossil fuels and materials for construction, etc. The extent to which the Proposed Project forecloses future options or involves trade-offs between short-term environmental gains and long-term losses should also be addressed. In considering the trade-offs of the project, it is also possible to compare short-term losses with long-term benefits.

The Proposed Project constitutes a long-term commitment of land resources, thereby rendering land use for other purposes highly unlikely in the foreseeable future; however, the Development Site does not possess any natural resource of significant value, and the site has been previously developed. Furthermore, funds committed by the Applicant to the design, construction/renovation, and operation of developments under the Proposed Actions are not available for other projects.

These commitments of resources and materials are weighed against the benefits of the Proposed Project. As described in **Chapter 1, Project Description,** the Proposed Actions

would facilitate the construction of a new, mixed-use development surrounding the existing Christian Cultural Center (CCC) with affordable housing, a mix of community facility uses, and commercial uses. The Proposed Project would also provide significant improvements to the public realm, including a publicly accessible street network and new public open space. Through the development of this new mixed-use development that is integrated into the urban fabric, the Proposed Actions seek to provide needed services, business opportunities, and affordable housing to the community.

The Proposed Actions would facilitate the development of market rate and affordable housing, the latter of which would add to the City's affordable housing stock and support the goals outlined in the City's affordable housing plan, "Housing New York: A Five-Borough Ten-Year Plan" of producing 200,000 affordable homes two years ahead of schedule, by 2022, and generating an additional 100,000 homes over the following four years. Additionally, the trade school, Performing Arts Center, neighborhood retail, and publicly accessible open space would provide needed services and amenities to the neighborhood. The Proposed Actions would work in concert to leverage investments in local public infrastructure and housing.

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Response to Comments on the DEIS

Introduction

This document summarizes and responds to comments on the Draft Environmental Impact Statement (DEIS) for the Innovative Urban Village project published on May 6, 2022.

City Environmental Quality Review (CEQR) requires a public hearing as part of the environmental review process. Oral and written comments were received during the meeting held by the New York City Planning Commission on August 24, 2022. Written comments were accepted from issuance of the DEIS through the close of the public comment period, which ended at 5:00 PM on September 6, 2022. **Appendix D** contains the written comments received on the DEIS. Where relevant and appropriate, the Final Environmental Impact Statement (FEIS) has been modified to incorporate and address substantive public comment on the DEIS.

Section 1 of this document lists the elected officials, organizations, and individuals that provided relevant comments on the DEIS. **Section 2** contains a summary of these relevant comments and a response to each. These summaries convey the substance of the comments made, but do not necessarily quote the comments verbatim. Comments are organized by subject matter and generally parallel the chapter structure of the DEIS. Where more than one commenter expressed similar views, those comments have been grouped and addressed together.

1. List of Elected Officials, Organizations, and Individuals who Commented on the DEIS

Organizations and Interested Public

1. Association for a Better New York, Aaron Sanders, written and oral testimony delivered on August 24, 2022 (ABNY)
2. Brooklyn Chamber of Commerce, Randy Peers, written and oral testimony delivered on August 24, 2022 (BCOC)
3. Community Education Council District 13, Cynthia McKnight, oral testimony delivered on August 24, 2022 (CEC13)
4. Sharon Haynes, oral testimony delivered on August 24, 2022 (Haynes)
5. Local Development Corporation of East New York, Bill Wilkins, oral testimony delivered on August 24, 2022 (LDC East NY)
6. New York Building Congress, Kate Cunningham, oral testimony delivered on August 24, 2022 (NYBC)
7. Service Employees International Union 32BJ, John Tritt, oral testimony delivered on August 24, 2022 (32BJ)
8. Angela White, oral testimony delivered on August 24, 2022 (White)

2. Comments and Responses on the DEIS

Comments Received in Support of the Proposed Action

The following organizations and members of the interested public submitted testimony in support of the Proposed Action that did not address the scope of the DEIS: Association for a Better New York, Brooklyn Chamber of Commerce, Community Education Council District 13, Sharon Haynes, Local Development Corporation of East New York, New York Building Congress, Service Employees International Union 32BJ, Angela White. The organizations and members of the interested public listed above provided all of the comments received on this application and are summarized herein.

Comments Relating to EIS Analyses

Project Description

C.1 **The project would create a total of 2,050 units of housing. The plans are for all these housing units to be income-based and affordable. A large portion of these units will be reserved for households with lower incomes, ensuring that members of our East New York Community can afford to move in. Also, 200 of these affordable housing units will be reserved for seniors. 50 percent of the units will be made available to Community Board 5 residents, per HPD policy. There will be no direct or indirect displacement. (ABNY, BCOC, CEC13, Haynes, NYBC, 32BJ)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

C.2 **A component of this project would advance homeownership. Homeownership is an important resource for New Yorkers to build equity, benefit from tax incentives, and begin to invest in generational wealth—something rent-burdened New Yorkers have historically been unable to do. (ABNY, Haynes, NYBC)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

C.3 **Holistically, the integration of affordable housing, community facilities services and retail is a win for the community—both those that will live here and its neighbors. (BCOC, White)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

C.4 **The project would include many benefits that will be available to the public, such as a Performing Arts Center, a school, a public playground, 24/7 childcare, green space, retail, parking, and shuttle bus service to nearby subway stations. (ABNY, BCOC, CEC13, Haynes, LDC East NY, NYBC, White)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

C.5 **Of the nearly 10 acres on the site, more than 50 percent will be open to the sky and a network of streets within the site will be integrated into the neighborhood street network, making this development part of the broader context. (BCOC)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

C.6 **The Linden, Boulevard, Pink, and Wortman Houses are all in the vicinity of the Christian Cultural Center's proposed project. Several services that will benefit the residences of these NYCHA housing communities have been incorporated into the project. These include GED programs, childcare programs, career counseling, and vocational training. (BCOC, NYBC, White)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

C.7 **The project would create economic opportunities for members of our community. This project will create locations for local businesses that serve our community to open-up shop. These businesses will bring both local retail and jobs to East New York. (BCOC, CEC13, Haynes, NYBC, 32BJ)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

C.8 **Parking is a major concern here in Brooklyn, and this project would provide additional parking for us. (Haynes)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

C.9 **This project is homegrown and reflective of our local needs. The Christian Cultural Center is a long-term stakeholder in the neighborhood that has helped the community shoulder many changes over the last few decades. Under the leadership of Rev. A.R. Bernard, they have a vision to further support the needs of East New York and bring opportunities for our youth and families. Residents and neighborhoods can have confidence that this is by and for their community. (BCOC, LDC East NY, NYBC)**

Response: Comment noted. This comment is not related to the substance of the environmental review.

Appendix A: Waterfront Revitalization Program – Consistency Assessment

FOR INTERNAL USE ONLY	WRP No. 18-208
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

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

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

A. APPLICANT INFORMATION

Name of Applicant: Innovative Urban Living, LLC

Name of Applicant Representative: David Velez, AICP

Address: One Penn Plaza Suite 715 New York, NY 10119-0800

Telephone: 646-722-9247 Email: dvelez@vhb.com

Project site owner (if different than above): Bryan Kelly on behalf of Innovative Urban Living, LLC

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The Applicant, Innovative Urban Living, LLC, is seeking several discretionary approvals from the City Planning Commission (CPC), including:
-A zoning map amendment to change the existing R5 district to an R7-2 district with a C2-4 commercial overlay.
-An amendment to Appendix F of the Zoning Resolution (ZR) (Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas) to establish the Project Area as a Mandatory Inclusionary Housing (MIH) area.
-An amendment to Appendix I of the ZR (Transit Zone) to expand the boundary of the Transit Zone to include the Project Area.
-A special permit pursuant to ZR 74-743(a)(2) to locate buildings within a large-scale general development without regard to yard, court, distance between buildings, and height and setback regulations to allow for the centralized community-centered core and street-oriented residential buildings envisioned by the Proposed Project.
-A special permit pursuant to ZR 74-512 to permit a public parking garage with more than 150 spaces with the possibility of some spaces being located on the roof of the public parking garage during periods of peak parking demand for the church (Sundays and Tuesday evenings).

2. Purpose of activity

The Applicant, Innovative Living, LLC, is seeking several approvals to facilitate an approximately 2.2 million gross square foot (gsf) development housed within 10 proposed buildings, ranging from two to 15 stories. This would include: 2,050 residential units; 100,904 gsf of community facility space including a day care, general community facility and the existing CCC facility; 110,570 gsf of commercial space including a grocery store, local retail space, the trade school and Performing Arts Center (PAC), and 343,244 gsf of parking, including residential parking and of parking related to the on-site church (includes an additional 25,410 sf of flexible parking space on the roof of the garage).

C. PROJECT LOCATION

Borough: Brooklyn Tax Block/Lot(s): See Project Description

Street Address: 12020 Flatlands Avenue, Brooklyn, NY 11207

Name of water body (if located on the waterfront): N/A

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

- ☐ City Map Amendment
- ☑ Zoning Map Amendment
- ☑ Zoning Text Amendment
- ☐ Site Selection – Public Facility
- ☐ Housing Plan & Project
- ☑ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____
- ☐ Zoning Certification
- ☐ Zoning Authorizations
- ☐ Acquisition – Real Property
- ☐ Disposition – Real Property
- ☐ Other, explain: _____
- ☐ Concession
- ☐ UDAAP
- ☐ Revocable Consent
- ☐ Franchise

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

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

State Actions/Approvals/Funding

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

Federal Actions/Approvals/Funding

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

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

E. LOCATION QUESTIONS

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

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

F. WRP POLICY ASSESSMENT

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

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

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

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

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

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

G. CERTIFICATION

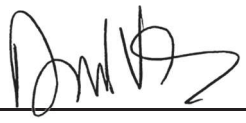
The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification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

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

Applicant/Agent's Name: David Velez

Address: One Penn Plaza Suite 715 New York, NY 10119-0800

Telephone: 646-722-9247 Email: dvelez@vhb.com

Applicant/Agent's Signature: 

Date: 5/4/22

WRP Consistency Assessment

The New York City Waterfront Revitalization Program (WRP) establishes the City's policies and objectives for maximizing benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. The Project Area is located within the City's Coastal Zone (**Figure A-1**) and the Proposed Actions are consequently subject to the policies of New York City's Waterfront Revitalization Program (WRP).

The WRP Consistency Assessment Form (CAF) is used to identify the relevant WRP policies; the CAF is included in this appendix. For all relevant policies, a written assessment to determine consistency with the applicable WRP policy is provided.

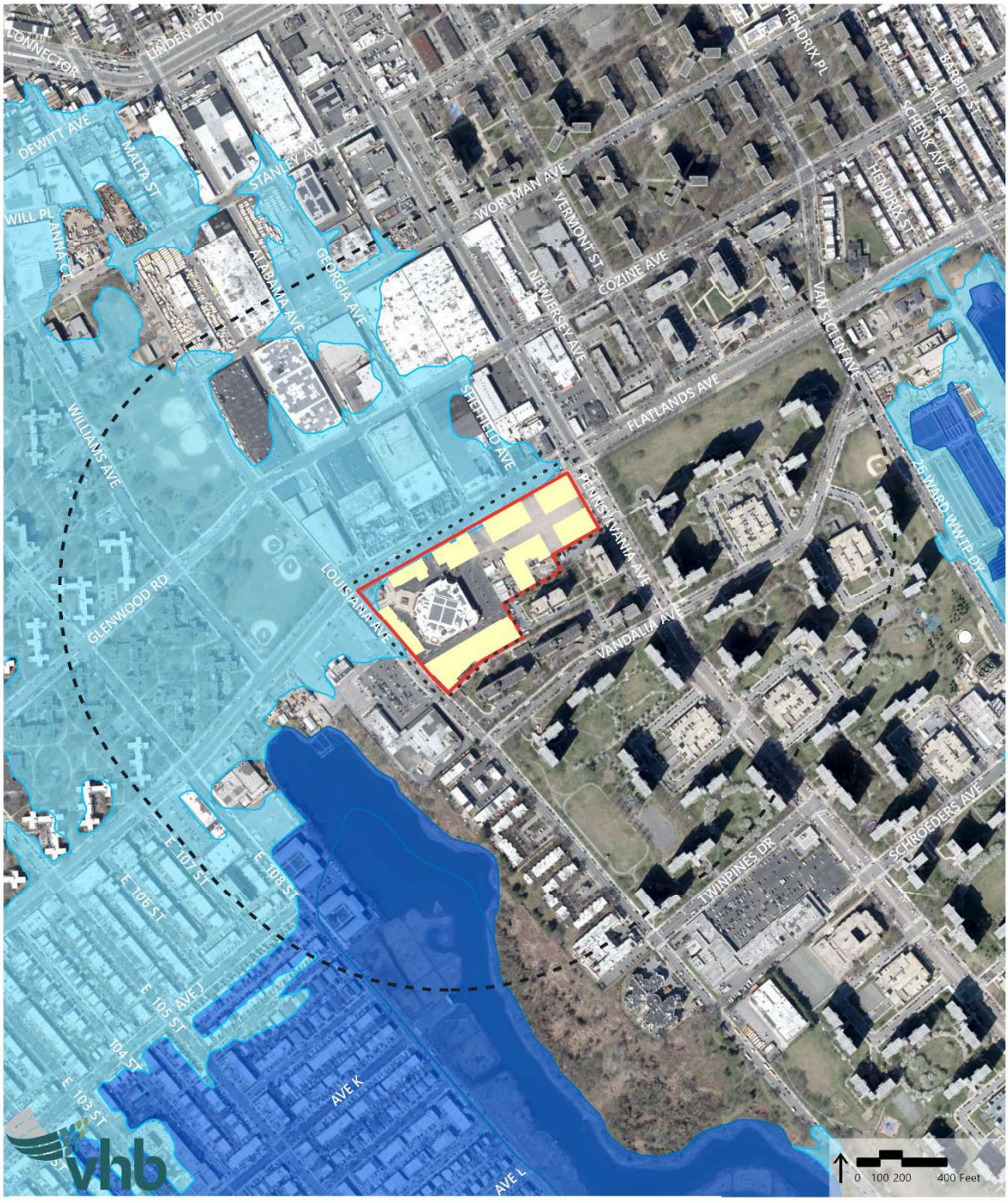
As described in **Part I: Project Description**, the Applicant proposes the development of a mixed-use, purpose-built community on the campus of the CCC, comprising income-based affordable housing, a performing arts center (PAC), local retail, a grocery store, and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood (the Proposed Project). This new development would occur in the East New York neighborhood of Brooklyn on Block 4430, Lot 1 and Block 4434, Lots 1 and 10 (Development Site).

The Applicant is requesting several Proposed Actions to facilitate the Proposed Project:

- A zoning map amendment to rezone the Development Site and *de minimis* portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100, and extends to the centerlines of Flatlands Avenue, Louisiana Avenue and Pennsylvania Avenue (the Project Area) from R5 to R7-2 with a C2-4 overlay;
- A zoning text amendment to Appendix F of the Zoning Resolution (ZR) (Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas) to establish the Project Area as a Mandatory Inclusionary Housing (MIH) area;
- An amendment to Appendix I of the ZR (Transit Zone) to expand the boundary of the Transit Zone to include the Project Area;
- A special permit pursuant to ZR 74-743(a)(2) to locate buildings within a large-scale general development without regard to yard, court, distance between buildings, and height and setback regulations to allow for the centralized community-centered core and street-oriented residential buildings envisioned by the Proposed Project;
- A special permit pursuant to ZR 74-512 to permit a public parking garage with more than 150 spaces with the possibility of some spaces being located on the roof of the public parking garage during periods of peak parking demand for the church (Sundays and Tuesday evenings).

Figure A-1 Flood and Coastal Zone Map

F



Policy 1: Support and facilitate commercial and residential redevelopment in areas well suited to such development

Policy 1.1: Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.

The Proposed Project would include a total approximate 2,162,808-gsf development to be constructed in phases over a planned 10-year period, with 12 buildings ranging from two to 15 stories. The proposed building program for the site would include approximately 1,645,820 gsf of residential space accommodating approximately 2,050 residential units; 100,904 gsf of community facility space including a day care, general community facility and the existing CCC facility; 110,570 gsf of commercial space including a grocery store, local retail space, the trade school and Performing Arts Center (PAC), and 305,514 gsf of parking, including residential parking and of parking related to the on-site church, plus an additional 25,410 sf of flexible parking space on the roof of the proposed parking garage to allow for increased parking capacity during the church's peak parking periods (Sundays and Tuesday evenings). At all other times, this space would be reserved for recreational space.

The Proposed Actions would facilitate the development of a mixed-use, purpose-built community on the campus of the CCC, which would be comprised of income-based affordable housing; a PAC; a grocery store; local retail; new publicly-accessible open space; and a variety of community facilities targeted to the civic, economic, educational, and cultural needs of the East New York neighborhood.

The Proposed Project is in an appropriate area for development because the Project Area was previously developed and is located within an area that contains an established residential presence; is well-served by roadways, public transportation, and infrastructure; and is absent of special area designations, such as Special Natural Waterfront Areas (SNWA) or Significant Maritime and Industrial Areas (SMIA). The Proposed Actions would also be consistent with neighboring land uses and activities. Furthermore, the 0.2 percent annual chance floodplain is located on the extreme northern and western edges of the Project Area (along Flatlands Avenue and along Louisiana Avenue), and as described further under Policy 6.2, will be elevated out of current 0.2 percent floodplain through the proposed site grading and would remain that way largely until the 2080s. Given the above, the Proposed Actions would be consistent with Policy 1.1.

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

The Project Area has access to sufficient roadway, transit, and essential community services. The Proposed Actions would not result in any significant adverse impacts on community facilities or water and sewer facilities. Further, they would not result in the physical loss of open space resources or result in any significant adverse shadow, air quality, noise, or other environmental impacts that would affect the utilization of any publicly accessible spaces. In fact, the Proposed Project would introduce new publicly-accessible open spaces and community facilities to a site that has historically been used for church parking. Therefore, the Proposed Actions would be consistent with Policy 1.3.

Policy 1.5: Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.

As discussed under Policy 6.2, the Proposed Project is being designed with consideration of climate change and sea level rise.

Policy 4: Protect and restore the quality and function of ecological systems within the New York City coastal area.

Policy 4.1: Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.

A special Natural Waterfront Area, Fresh Creek Basin is located a block away from the Project Area. The Proposed Project will not affect the ecological quality of this SNWA as the site would comply with the City's requirements related to stormwater management during construction. Furthermore, as part of the Proposed Project, there will be a series of detention tanks that will be provided throughout the site to control the release of stormwater flow into city infrastructure.

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

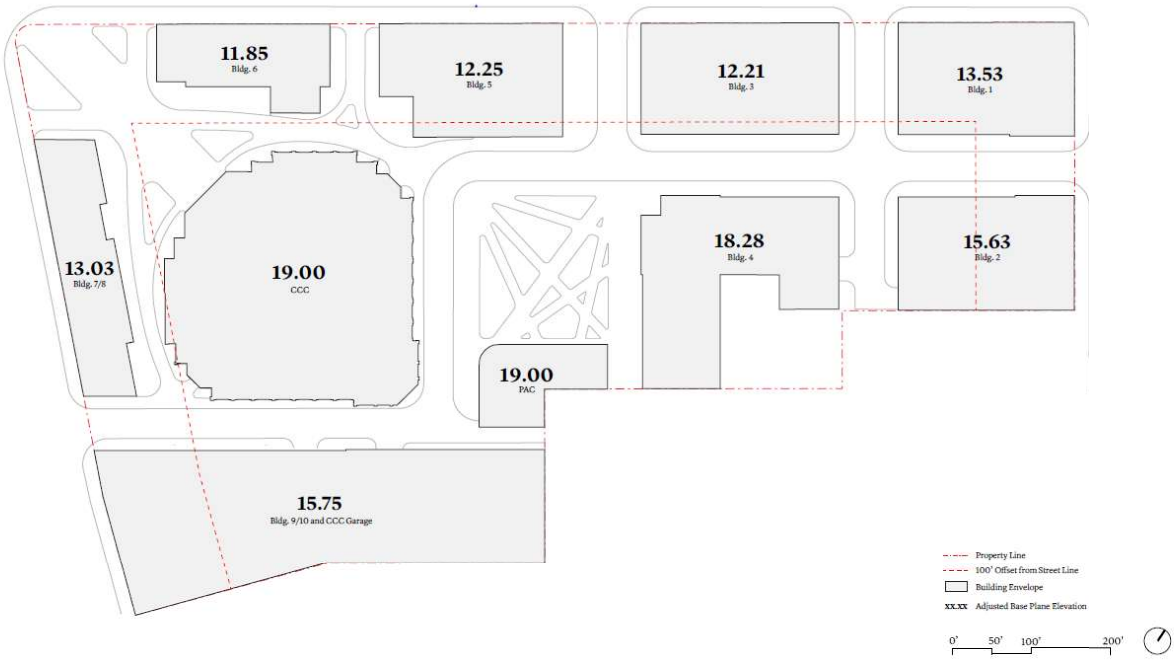
Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.

See response to WRP Policy 6.2, below.

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

Guidance provided by DCP includes a detailed methodology to determine the consistency of a project with Policy 6.2. This guidance identifies three basic steps to determine the consistency of a project with this policy: (1) identify vulnerabilities and consequences; (2) identify adaptive strategies; and (3) assess policy consistency. This assessment is based on the elevation drawings provided in **Figure A-2,** which show the lowest occupied floor elevation of each building.

Figure A-2 Building Elevation



Source: PAU

1. Identify vulnerabilities and consequences

1(a). Complete the Flood Elevation Worksheet to identify current and future flood elevations in relation to the elevations of the site and project features.

See attached Flood Evaluation Worksheet.

1(b). Identify any project feature that may be located below the elevation of the 1-Percent Floodplain over the lifespan of the project under any sea level rise scenario.

For this assessment, building features are defined in one of four categories:

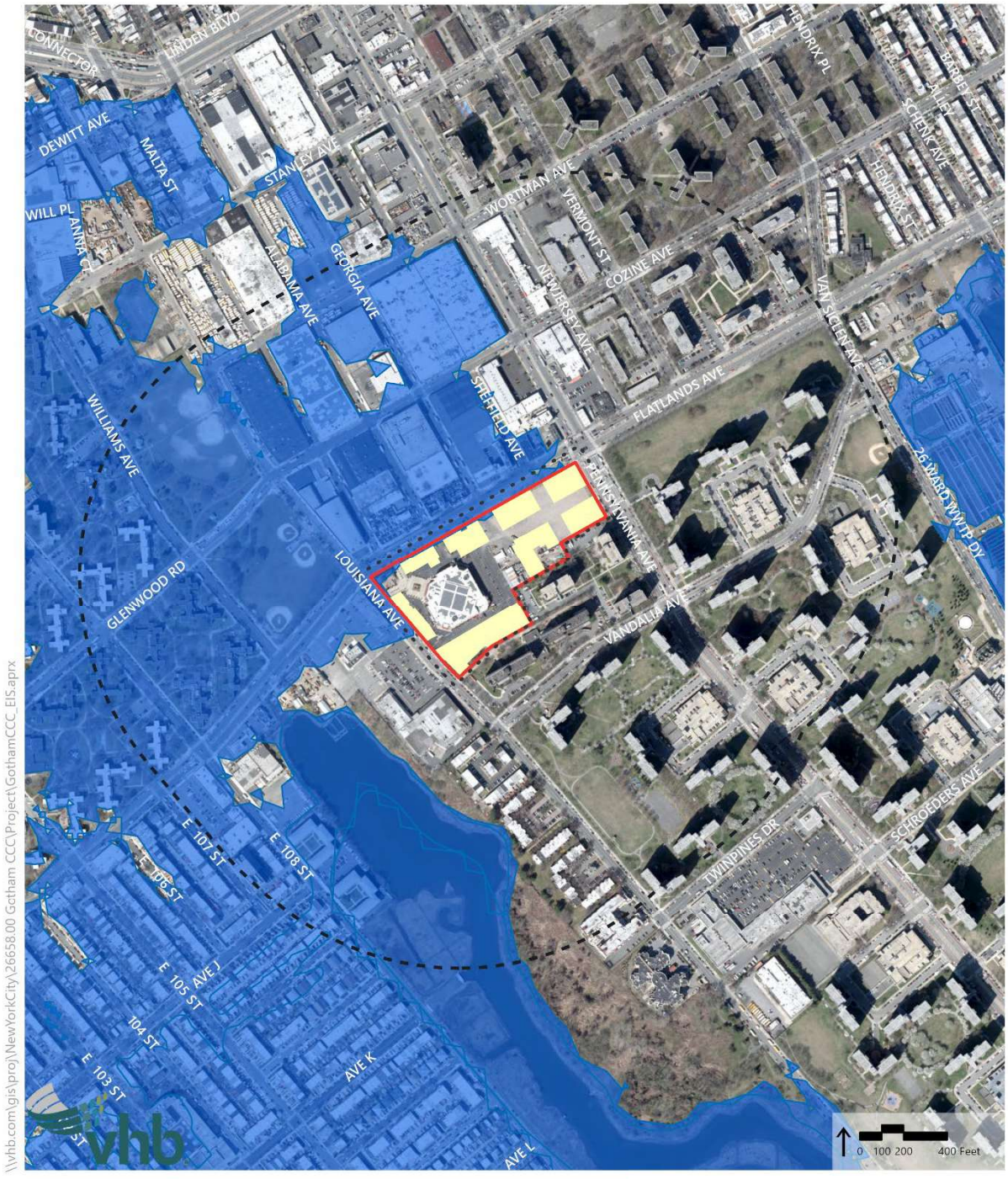
- (1) vulnerable: project features that have the potential to incur significant damage if flooded;
- (2) critical: project features that if damaged would have severe impacts on the project and its ability to function as designed;
- (3) potentially hazardous: project features that if damaged or made unsecure by flooding could potentially adversely affect the health and safety of the public and the environment; and,
- (4) other: project features that are entirely open and unenclosed spaces, except the open storage of potentially hazardous materials, which may be damaged by flooding, but are

not likely to present significant consequences and are more easily repaired.

The Flood Elevation Worksheet was prepared for the Proposed Project and is provided in this Appendix (see below). This tool identifies current and future flood elevations in relation to the elevations of the site and project features, presents a range of future flood elevations in relation to the elevations of the site and project features, and presents a range of future flood elevations as affected by sea level rise, from high (90th percentile) to low (10th percentile), where the "high estimate" represents a high-end projected increase in flood elevation.

According to the NYC Panel on Climate Change (NPCC), sea level rise projections in the middle range (25th to 75th percentile) in NYC are likely to have an increase of 4 to 8 inches by the 2020s, 11 to 21 inches by the 2050s, 18 to 39 inches by the 2080s, and 22 to 50 inches by 2100. Under the "high estimate" scenario (90th percentile), sea level rise projections reach 10 inches by the 2020s, 30 inches by the 2050s, 58 inches by the 2080s, and 75 inches by 2100. Sea level rise projections are relative to a 2000-2004 base period (the most recent projections from the NPCC were issued in 2015). According to the Preliminary Flood Insurance Rate Map (PFIRM) for Kings County, NY dated January 30, 2015 (Map Number 3604970219G), the northern portion of the Project Area boundary abuts the 0.2 percent annual chance minimal flood hazard area. The BFE is derived from the 1 percent annual chance flood hazard area to the west of the Project Area, which occurs at 10 feet NAVD88 (see attached worksheet and **Figure A-1**). Based on the NPCC "high estimate" scenario, the 1 percent annual chance flood BFE for the Project Area could increase up to 10.83 feet in the 2020s, 12.50 feet in the 2050s, 14.83 feet in the 2080s, and up to 16.25 feet by 2100 (NAVD88) as compounded by sea level rise projections (see **Table A-2)**. However, according to future floodplain projection maps based on NPCC estimates, the floodplain will remain largely the same into the 2050s with the Project Area abutting the 0.2 percent annual chance floodplain (see **Figure A-2**). Based on current projections, the Project Area is not projected to enter the 1 percent annual chance floodplain until the 2080s.

Figure A-2 2050's Flood and Coastal Zone Map



\\vhb.com\gis\proj\NewYorkCity\26658.00 Gotham CCC\Project\GothamCCC_EIS.aprx

The Proposed Project's buildings are anticipated to have a lifespan of 50 or more years (which extends through 2081), when adaptive reuse in the form of major rehabilitation or reconstruction is assumed. The Proposed Project's buildings and open space elements are evaluated for projected flood levels through 2100 (the farthest data projection currently available).

The lowest occupiable floors of the proposed buildings would have a mix of community facility, local retail, grocery store space, and residential lobbies. The lowest floor elevation of the Proposed Project would be the retail and residential lobby space in Building 6, which would be constructed at an elevation of 11.89 feet NAVD88, an elevation that would be approximately 1.83 feet higher than the nearest 100-year flood height of 10 feet NAVD88. The proposed public spaces would also be constructed at the ground level throughout the site, which would be above the current 100-year flood height. Therefore, the Proposed Project would not result in development of any vulnerable, critical, or potentially hazardous features, within areas exposed to 1 percent annual chance flooding by the 2050s under the 90th percentile projections.

Using the 100-year flood height as a proxy for the 200-year flood height, the Proposed Project would also not be vulnerable under current conditions. Buildings 3, 5, and 6 would be within the 200-year flood height starting in the 2050's under high projections and the middle projections in the 2080s. In the 2080s, Buildings 7 and 8 would be within the 200-year floodplain under high to middle projections and Building 1 would be within the 200-year floodplain under high projections. In the 2080's these buildings may also be within the 100-year annual floodplain height, however this is at the end of the Proposed Project's lifespan.

Mechanical equipment across the site would be located on the cellar level and on the roof of the proposed buildings.

Table A-2 100-Year Floodplain Elevations with Sea Level Rise

Decade	Low Estimate – 10th percentile (ft)	Mid-Range – 25th to 75th percentile (ft)		High Estimate – 90th percentile (ft)
2020	10.17	10.50	10.67	10.83
2050	10.67	11.33	11.75	12.50
2080	11.08	12.42	13.25	14.83
2100	11.25	13.00	14.17	16.25

1(c). Identify any vulnerable, critical, or potentially hazardous features that may be located below the elevation of Mean Higher High Water over the lifespan of the project under any sea level rise scenario.

Based on the range of sea level rise predictions described above, Mean Higher High Water (MHHW) at the National Oceanic and Atmospheric Administration (NOAA) Station nearest the Project Area (North Channel #8507201) could range up to 8.97 feet NAVD88 by 2100 under the "high estimate" (90th percentile) scenario. Current tidal and flood heights in the Project Area are 2.72 feet NAVD88, as adjusted for changes in sea level since the 1983-2001

tidal epoch. As discussed above the lowest elevation of the Proposed Project is 11.89 feet NAVD88. As shown in the figure in the attached Flood Evaluation Worksheet, the ground floors of the proposed buildings and critical equipment would not be affected by MHHW in the 2080s under the any sea level rise scenario.

1(d). Describe how any additional coastal hazards are likely to affect the project, both currently in the future, such as waves, high winds, or debris.

Since the Project Area abuts the 0.2 percent annual chance minimal flood hazard area, the site would not be at risk for inundation from 1 percent annual chance flood events for its projected lifespan. Wave action hazards (i.e., Zone AE, VE or Coastal A Zone) have not been designated for the Project Area, and the Project Area is not subject to the Limit of Moderate Wave Action (LiMWA). As such, coastal hazards are not likely to affect the Project Area.

2. Identify adaptive strategies

2(a). For any features identified in Step 1(b), identify adaptive strategies:

As discussed above, the Proposed Project would not result in development of any vulnerable, critical, or potentially hazardous features, within areas exposed to 1 percent annual chance flooding by the 2050s under the 90th percentile projections. However, Buildings 3, 5, and 6 would be within the 200-year flood height starting in the 2050's under 90th percentile projections.

The proposed buildings are anticipated to have a lifespan of about 50 years (through around 2081), when adaptive reuse in the form of major rehabilitation or reconstruction is anticipated to be required. If retrofits of vulnerable elements of the building are required prior to the 2070's, there are some adaptive strategies that can be undertaken. For example, as shown in the Flood Evaluation Worksheet, in a 100-year flood occurring with the sea level rise that is projected for the 2080's the water level would rise 13.25 feet NAVD88. In this scenario, some ground floor spaces would be about 1 foot underwater. This means that in the future, there could be potential damage to paving materials and plantings, flood damage to the property, damage to the building structure, or potentially increased flood insurance costs. Measures to adapt and protect the site would rely on the implementation of best practices and technology available at that time. These may include but not be limited to structural changes, such as dry flood-proofing the ground floor areas, considering the implementation of a passive barrier strategy to protect vulnerable features, and incorporating marine glass into the ground floor facades as appropriate. Operational changes may include moving vulnerable uses or equipment to a higher elevation.

The Climate Resiliency Guidelines developed by the Mayor's Office of Climate Resiliency recommend designing adaptive strategies for a proposed project with features below the projected elevation of the "middle range estimate" MHHW (50th percentile) scenario and sea level rise combined, over a project's anticipated useful life. All elements of the project would be elevated above projected MHHW heights as described above.

2(b). Describe any additional measures being taken to protect the project from additional coastal hazards such as waves, high winds, or debris.

As discussed above, the Project Area does not intersect the LiMWA, and would not be impacted by coastal hazards such as waves, high winds, or debris.

2(c). Describe how the project would affect the flood protection of adjacent sites, if relevant. How would the project lead to increased flooding on adjacent sites? How would the project protect upland sites from coastal hazards? Does the project complement or conflict with planned, adjacent flood protection projects?

Because the floodplain within NYC is controlled by astronomic tide and meteorological forces (e.g., nor'easters and hurricanes) and not by fluvial flooding, the Proposed Project would not have the potential to adversely affect the floodplain or result in increased coastal flooding at adjacent sites or within the study area. During and following construction, activities within the Project Area would be completed in accordance with applicable stormwater regulations. Therefore, the construction and operation of the Proposed Project would not exacerbate future projected flooding conditions on adjacent sites.

3. Assess policy consistency

Based on this information, the Proposed Actions would promote Policy 6.2. The Proposed Project would not result in development of any vulnerable, critical, or potentially hazardous features, within areas exposed to 1 percent annual chance flooding or MHHW by the 2050s under the 90th percentile projections.

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

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

Enter information about the project and site in highlighted cells in Tabs 1-3. Tab 4, "Summary Charts" contains primary results. Tab 5, "0.2%+SLR" produces charts to be used for critical infrastructure or facilities. Tab 6, "Calculations" contains background computations. Appendix A contains tide elevations for station across the city to be used for the elevation of MHHW if a site survey is not available. Non-highlighted cells have been locked.

Background Information	
Project Name	Innovative Urban Village
Location	East New York, Brooklyn
Type(s)	☑ Residential, Commercial, Community Facility ☑ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facility ☐ Industrial Uses ☐ Over-water Structures ☐ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/Drainage ☐ Coastal Protection
Description	The Applicant, Innovative Living, LLC, is seeking several approvals to facilitate an approximately 2.16 million gross square foot (gsf) development housed within 12 buildings, ranging from two to 15 stories. This would include: 2,050 residential units; 100,904 gsf of community facility space including a day care, general community facility and the existing CCC facility; 110,570 gsf of commercial space including a grocery store, local retail space, the trade school and Performing Arts Center (PAC), and 305,514 gsf of parking, including residential parking and of parking related to the on-site church (plus an additional 25,410 sf of flexible parking space on the roof of the garage).
Planned Completion Date	2031
Expected Project Lifespan	50+

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

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

Last update: Sept. 7, 2018

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.72	**2.72**	**NAVD88**	*Appendix A*
1% flood height	10.00	**10.00**	**NAVD88**	*Flood Hazard Mapper*
Design flood elevation	11.00	**11.00**	**NAVD88**	*Flood Hazard Mapper*
As relevant:				
0.2% flood height	10.00	10.00	**NAVD88**	*Flood Hazard Mapper (1% Flood Height)*

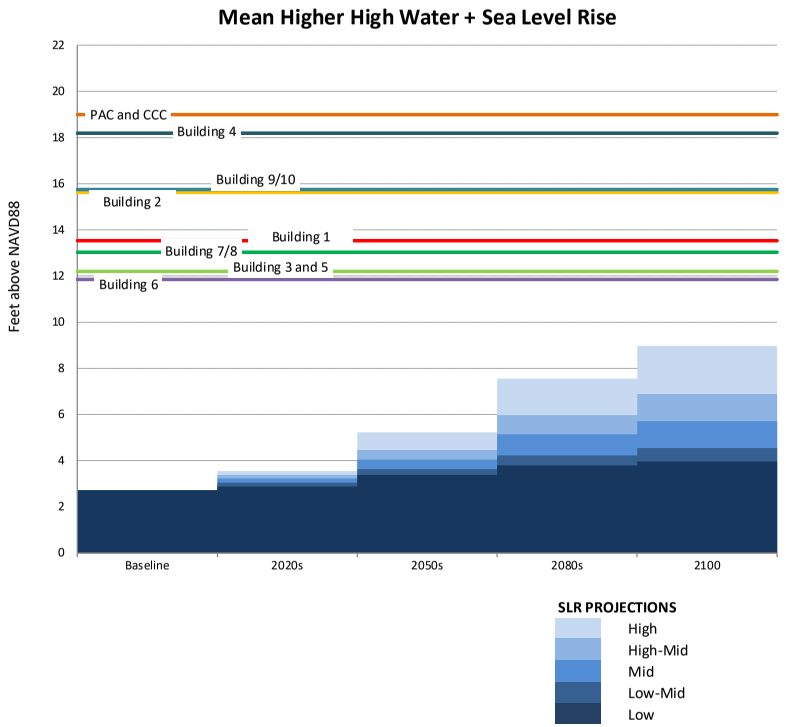
Data will be converted based on the following datums:

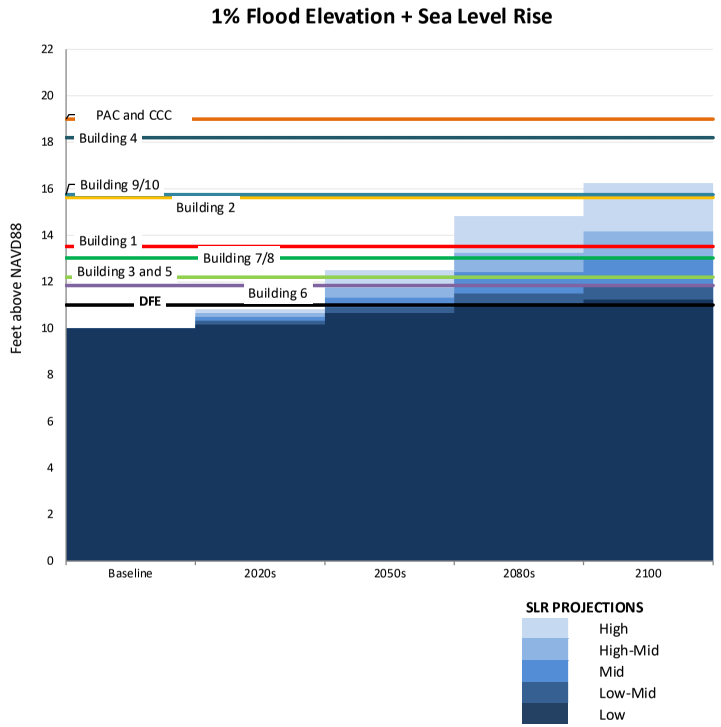
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*

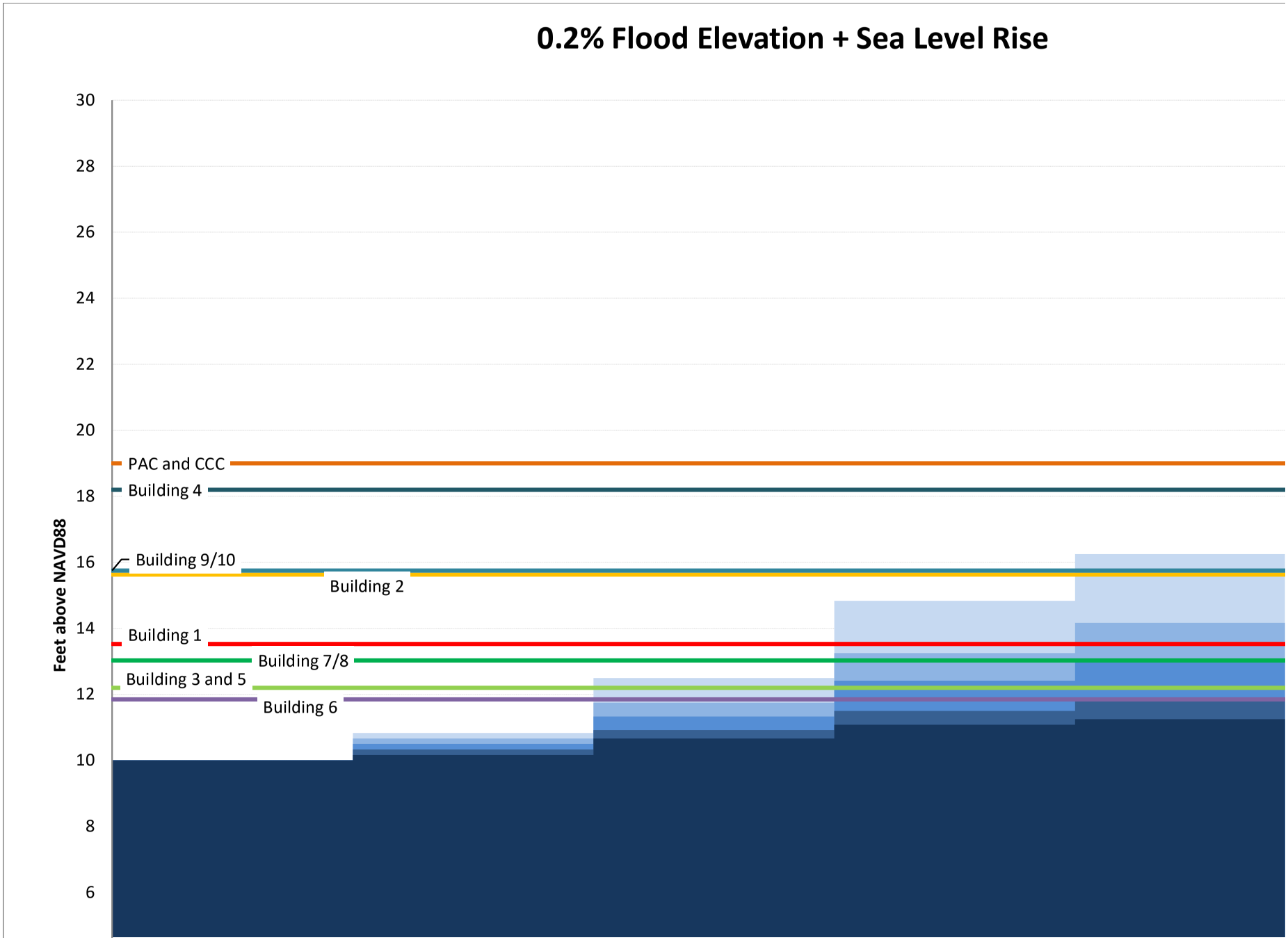
Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
Building 1	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	50+	13.5	Feet	NAVD88	*13.5*	*13.5*	*10.8*	*3.5*
Ground-floor retail/ grocery store uses on multi-famiiy residential buildings located along Flatlands Avenue of the Project Area									
Building 2	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	50+	15.6	Feet	NAVD88	*15.6*	*15.6*	*12.9*	*5.6*
Description of Planned Uses and Materials									
Building 3 and 5	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	50+	12.2	Feet	NAVD88	*12.2*	*12.2*	*9.5*	*2.2*
Description of Planned Uses and Materials									
Building 4	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	50+	18.2	Feet	NAVD88	*18.2*	*18.2*	*15.5*	*8.2*
Description of Planned Uses and Materials									
Building 6	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	50+	11.9	Feet	NAVD88	*11.9*	*11.9*	*9.1*	*1.9*
Description of Planned Uses and Materials									
Building 7/8	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	50+	13.0	Feet	NAVD88	*13.0*	*13.0*	*10.3*	*3.0*
Description of Planned Uses and Materials									
Building 9/10	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☑ Other	50+	15.8	Feet	NAVD88	*15.8*	*15.8*	*13.0*	*5.8*
Building									
PAC and CCC	☐ Vulnerable ☐ Critical ☑ Potentially Hazardous ☐ Other	50+	19.0	Feet	NAVD88	*19.0*	*19.0*	*16.3*	*9.0*
Description of Planned Uses and Materials									

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






0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
PAC and CCC
Building 4
Building 9/10
Building 2
Building 1
Building 7/8
Building 3 and 5
Building 6

Appendix B: LPC Correspondence

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 20DCP057K
Project: INNOVATIVE URBAN VILLAGE
Date Received: 8/19/2021

Comments:

The LPC is in receipt of the Historic and Cultural Resources chapter of the DEIS dated 7/20/21. The document appears acceptable.

Gina Santucci 8/20/2021

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 34507_FSO_GS_08202021.docx

Appendix C: Traffic Analysis: Year 2026 with Project Improvements and Mitigation

2026 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service – Flatlands Avenue and East 108th Street

Intersection & Approach		2026 No-Action				2026 With-Action				2026 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
SIGNALIZED INTERSECTIONS														
Weekday AM Peak Hour														
Flatlands Avenue	EB	L	0.12	12.6	B	L	0.13	13.6	B	L	0.13	13.6	B	-Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane. -Restripe the NB approach from one 20-foot wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane.
		TR	0.40	15.3	B	TR	0.42	15.6	B	TR	0.42	15.6	B	
	WB	L	0.34	16.2	B	L	0.37	17.2	B	L	0.37	17.2	B	
		TR	0.44	15.9	B	TR	0.49	16.7	B	TR	0.49	16.7	B	
East 108th Street	NB	LTR	0.99	89.7	F	LTR	1.00	94.0	F	LT	0.51	44.5	D	
		-	-	-	-	-	-	-	-	R	0.58	48.0	D	
	SB	LTR	0.54	45.9	D	LTR	0.56	46.9	D	LTR	0.48	43.4	D	
Overall Intersection[2]		-	-	**31.0**	**C**	-	-	**31.7**	**C**	-	-	**23.9**	**C**	
Weekday Midday Peak Hour														
Flatlands Avenue	EB	L	0.18	14.4	B	L	0.18	15.0	B	L	0.18	15.0	B	-Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane. -Restripe the NB approach from one 20-foot wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane.
		TR	0.56	18.9	B	TR	0.58	19.4	B	TR	0.58	19.4	B	
	WB	L	0.47	25.5	C	L	0.50	27.5	C	L	0.50	27.5	C	
		TR	0.42	16.7	B	TR	0.45	17.0	B	TR	0.45	17.0	B	
East 108th Street	NB	LTR	0.94	80.6	F	LTR	0.96	84.5	F	LT	0.35	39.9	D	
		-	-	-	-	-	-	-	-	R	0.69	53.1	D	
	SB	LTR	0.64	49.6	D	LTR	0.66	51.0	D	LTR	0.55	44.7	D	
Overall Intersection[2]		-	-	**29.8**	**C**	-	-	**30.7**	**C**	-	-	**25.2**	**C**	

2026 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service – Flatlands Avenue and East 108th Street

Intersection & Approach		2026 No-Action				2026 With-Action				2026 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Weekday PM Peak Hour														
Flatlands Avenue	EB	L	0.19	17.3	B	L	0.20	18.4	B	L	0.18	18.4	B	-Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane. -Restripe the NB approach from one 20-foot wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane. -Modify signal timing: Shift 4 sec of green time from EB/WB phase to EBL/WBL phase and 1 sec of green time from NB/SB to EBL/WBL. [EB/WB green time shifts from 67 sec to 63 sec. NB/SB green time shifts from 29 sec to 28 sec. EBL/WBL green time shifts from 9 sec to 14 sec.]
		TR	0.67	20.8	C	TR	0.71	21.0	C	TR	0.75	25.8	C	
	WB	L	0.82	52.3	D	L	0.91	66.5	E	L	0.78	47.7	D	
		TR	0.54	17.9	B	TR	0.57	18.6	B	TR	0.61	21.6	C	
East 108th Street	NB	LTR	0.86	66.7	E	LTR	0.89	70.3	E	LT	0.34	41.2	D	
		-	-	-	-	-	-	-	-	R	0.58	48.0	D	
	SB	LTR	0.84	65.9	E	LTR	0.88	71.9	E	LTR	0.72	53.7	D	
Overall Intersection[2]		-	-	**31.6**	**C**	-	-	**34.2**	**C**	-	-	**30.8**	**C**	

2026 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service – Flatlands Avenue and East 108th Street

Intersection & Approach		2026 No-Action				2026 With-Action				2026 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Saturday Peak Hour														
Flatlands Avenue	EB	L	0.29	27.8	C	L	0.31	30.5	C	L	0.26	28.0	C	-Install "No Standing Anytime" regulations along the east curb of the NB approach for 75 feet to provide an additional travel lane. -Restripe the NB approach from one 20-foot wide travel lane with parking to one 10-foot wide right turn lane and one 10-foot wide shared left-through lane. -Modify signal timing: Shift 2 sec of green time from NB/SB phase to EBL/WBL phase. Shift 1 sec of green time from EB/WB phase to EBL/WBL phase. [NB/SB green time shifts from 29 sec to 27 sec. EB/WB green time shifts from 37 sec to 36 sec. EBL/WBL green time shifts from 9 sec to 12 sec.]
		TR	0.70	25.1	C	TR	0.75	26.8	C	TR	0.77	28.3	C	
	WB	L	1.04	91.6	F	L	1.15	128.7	F	L	0.99	75.4	E	
		TR	0.79	28.2	C	TR	0.85	31.2	C	TR	0.87	33.6	C	
East 108th Street	NB	LTR	0.97	65.6	E	LTR	1.00	71.3	E	LT	0.36	27.0	C	
		-	-	-	-	-	-	-	-	R	0.80	45.3	D	
	SB	LTR	0.60	31.4	C	LTR	0.62	32.2	C	LTR	0.57	31.4	C	
Overall Intersection[2]		-	-	**39.8**	**D**	-	-	**45.8**	**D**	-	-	**36.8**	**D**	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] Impact worsened due to signal timing changes at nearby intersection

Denotes a significantly impacted movement

2026 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service – Flatlands Avenue and Georgia Avenue

Intersection & Approach		2026 No-Action				2026 With-Action				2026 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
UNSIGNALIZED INTERSECTIONS														
Weekday AM Peak Hour														
Flatlands Avenue	EB	LT	-	1.4	A	L	0.10	8.6	A	-	-	-	-	-Mitigation not required.
		-	-	-	-	TR	0.31	9.7	A	-	-	-	-	
	WB	L	-	0.0	A	L	0.00	0.0	A	-	-	-	-	
		TR	-	0.0	A	TR	0.51	5.3	A	-	-	-	-	
Georgia Avenue	NB	-	-	-	-	LTR	0.15	34.4	C	-	-	-	-	
Overall Intersection[2]		-	-	**0.5**	**A**	-	-	**8.2**	**A**	-	-	-	-	
Weekday Midday Peak Hour														
Flatlands Avenue	EB	LT	-	1.2	A	L	0.11	9.8	A	-	-	-	-	-Mitigation not required.
		-	-	-	-	TR	0.49	13.1	B	-	-	-	-	
	WB	L	-	0.0	A	L	0.00	0.0	A	-	-	-	-	
		TR	-	0.0	A	TR	0.46	10.1	B	-	-	-	-	
Georgia Avenue	NB	-	-	-	-	LTR	0.10	31.4	C	-	-	-	-	
Overall Intersection[2]		-	-	**0.6**	**A**	-	-	**12.1**	**B**	-	-	-	-	

2026 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service – Flatlands Avenue and Georgia Avenue

Intersection & Approach		2026 No-Action				2026 With-Action				2026 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Weekday PM Peak Hour														
Flatlands Avenue	EB	LT	-	1.7	A	L	0.15	7.9	A	-	-	-	-	-Mitigation not required.
		-	-	-	-	TR	0.58	11.1	B	-	-	-	-	
	WB	L	-	0.0	A	L	0.00	0.0	A	-	-	-	-	
		TR	-	0.0	A	TR	0.46	17.5	B	-	-	-	-	
Georgia Avenue	NB	-	-	-	-	LTR	0.69	52.4	D	-	-	-	-	
Overall Intersection[2]		-	-	**0.9**	**A**	-	-	**17.7**	**B**	-	-	-	-	
Saturday Peak Hour														
Flatlands Avenue	EB	LT	-	1.2	A	L	0.13	8.8	A	-	-	-	-	-Mitigation not required.
		-	-	-	-	TR	0.55	11.3	B	-	-	-	-	
	WB	L	-	0.0	A	L	0.00	0.0	A	-	-	-	-	
		TR	-	0.0	A	TR	0.59	10.9	B	-	-	-	-	
Georgia Avenue	NB	-	-	-	-	LTR	0.15	25.2	C	-	-	-	-	
Overall Intersection[2]		-	-	**0.5**	**A**	-	-	**11.5**	**B**	-	-	-	-	

2026 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service – Flatlands Avenue and Georgia Avenue

Intersection & Approach		2026 No-Action				2026 With-Action				2026 Mitigation				Mitigation Measures
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Sunday Peak Hour														
Flatlands Avenue	EB	LT	-	1.8	A	L	0.64	33.3	C	-	-	-	-	-Mitigation not required.
		-	-	-	-	TR	0.77	25.0	C	-	-	-	-	
	WB	L	-	0.0	A	L	0.00	0.0	A	-	-	-	-	
		TR	-	0.0	A	TR	0.56	17.8	B	-	-	-	-	
Georgia Avenue	NB	-	-	500+	F	LT	0.26	16.6	B	-	-	-	-	
		-	-	-	-	R	0.49	20.7	C	-	-	-	-	
Overall Intersection[2]		-	-	**500+**	**F**	-	-	**22.0**	**C**	-	-	-	-	

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[3] Impact worsened due to signal timing changes at nearby intersection

Denotes a significantly impacted movement

Appendix D: Comments on the DEIS

TESTIMONY FROM THE ASSOCIATION FOR A BETTER NEW YORK SUBMITTED TO CITY PLANNING COMMISSION (CPC) REGARDING THE CHRISTIAN CULTURAL CENTER'S INNOVATIVE URBAN VILLAGE PROJECT

August 24, 2022

Good morning Chair Grodnick, Vice Chair Knuckles and members of the City Planning Commision. My name is Aaron Sanders, and I am the Public Policy Director at the Association for a Better New York. Thank you for the opportunity to deliver testimony on behalf of ABNY in support of the Innovative Urban Village Project.

ABNY is a nonprofit organization representing community stakeholders, including corporations, nonprofits, unions, government authorities, and educational, cultural, and health institutions dedicated to the advancement and support of New York City's people, communities, and businesses. Our mission is to promote connections between the public and private sectors to make New York City a better place to live, work, and visit for all.

I will begin my testimony today by discussing why this project is vital to this community of East New York, Brooklyn. Housing insecurity and affordability are problems that persist in New York City aggregately. However, neighborhoods like East New York are facing the brunt of the crisis. According to a May 2022 report from the Association for Neighborhood & Housing Development, the rate of eviction for every 1,000 filings was 25.2 percent. Community Board 5 in Brooklyn ranks in the top 20 in evictions. Additional data suggest that only 9 percent of affordable housing stock was available to residents who live in East New York. In other words, there is a scarcity of housing for those who need it most. I would also like to highlight that in the same year, 33 percent of households were categorized as severely rent burdened, and 29 percent of all households surveyed were analyzed to be rent burdened. This data suggests that the housing crisis is negatively impacting residents in East New York.

After reviewing the merits of the project and thoughtful recommendations from various stakeholders regarding this development, ABNY supports the Innovative Urban Village project for the aforementioned reasons. One important factor is that this project received overwhelming support from Community Board 5 during its review at the ULURP stage–the project received a favorable vote of 22-1. A vote of this magnitude clearly shows a community consensus about the project.

Another important component of this project is that nearly all of the 1,950 housing units will be set aside for affordable housing. The project has an emphasis on housing low- and middle income residents; prospective residents who earn between 30 to 80 percent of the AMI will have priority access to housing. This is commendable and indicates a willingness to provide housing for those most in need. Additionally, 200 of those units will be allotted to senior citizens, and 50 percent of the developed housing units will be available to residents who live within Community Board 5.

There is also a component of this project which would advance homeownership. Homeownership is an important resource for New Yorkers to build equity, benefit from tax incentives, and begin to invest in

generational wealth - something rent burden New Yorkers have historically been unable to do. In addition, homeownership fosters social cohesion within communities.

Lastly, the addition of 24/7 daycare made available to residents will meet the needs of families with non-standard work schedules — parents working nights, single moms working multiple jobs, and emergency workers contending with rotating shifts. This will benefit families for whom child care options are few and far between. These are families who are also primarily low-income families of color.

ABNY supports the development of the Innovative Urban Village Project. This project encourages economic growth, sustainable housing, and innovative childcare options for New Yorkers. We encourage the City Planning Commission to consider the comprehensive value add of this project to this Brooklyn community.

Thank you.

August 23rd, 2022

Testimony submitted the NYC Department of City Planning by the Brooklyn Chamber of Commerce at public hearing held by the on August 24 2022 – *Innovative Urban Village in ENY, Brooklyn*

My name is Randy Peers and President and CEO of the Brooklyn Chamber of Commerce.

The Brooklyn Chamber of Commerce is a borough-wide membership and economic development organization dedicated to helping businesses through four channels -- promotion, support, advocacy, and convening. The Brooklyn Chamber and its affiliate organizations, the Brooklyn Alliance and Brooklyn Alliance Capital, provides direct business services, technical assistance and support programs to help Brooklyn businesses grow.

The Brooklyn Chamber of Commerce believes this development is beneficial for East New York and its residents. First and foremost, the Christian Cultural Center is a reputable, long-standing community member that has the best interest of the community at heart. This project will create housing opportunities for families of various sizes and incomes. Their plans call for nearly 2,000 units of rental housing – all of which will be income-restricted, ranging from 30% to 100% of AMI – and 200 units of which will be set aside for seniors, our most vulnerable population. There is also 100 units of affordable homeownership that will provide our residents and families the ability to establish themselves here for the long term and build generational wealth.

Secondly, the plan will create opportunities for local entrepreneurs and business owners to open businesses and employ its neighbors. The Center plans to incorporate a host of services and amenities that will not only serve the residents of the new buildings, but the broader community as well – this will benefit residents from across the street as well as the broader East New York neighborhood. These services include GED programs, childcare programs, career counseling, vocational training, a performing arts center, and open green space, to name a few.

The Brooklyn Chamber of Commerce also support the Innovative Urban Village proposal for the following reasons:

- Christian Cultural Center is a long-term stakeholder in the neighborhood that has helped the community shoulder many changes over the last few decades. Under the leadership of Rev. A.R. Bernard, they have a vision to further support the needs of East New York and bring opportunities for our youth and families.
    - Christian Cultural Center will continue to operate their church and is partnering with Gotham Organization and Monadnock Development to advance this 10-year project. Residents and neighborhoods can have confidence that this is by and for their community.
- Create a total of 2,050 units of housing. The plans are for all these housing units to be income-based and affordable. A large portion of these units will be reserved for households with lower incomes, ensuring that members of our East New York Community can afford to move in. Also, 200 of these affordable housing units will be reserved for seniors.
    - Over the course of Gotham Org and Christian Cultural Center's engagement with the community, which dates back to the Summer of 2016, they have incorporated community feedback including reducing the heights of some buildings [from 10-17 stories down to 9-15 stories] and eliminating income tiers between 100-120% of AMI.

    - 50% of the units will be made available to Community Board 5 residents per HPD policy.
    - Through the process of analyzing the project, there will be no direct or indirect displacement.
    - Holistically, the integration of affordable housing, community facilities services and retail is a win for the community – both those that will live here and its neighbors.
- Include many benefits that will be available to the public, such as a Performing Arts Center, a school, a public playground, 24/7 childcare, green space, retail, parking, and shuttle service to nearby train stations.
    - Of the nearly 10 acres on the site, more than 50% will be open to the sky and a network of streets within the site will be integrated into the neighborhood street network, making this development park of the broader context.
- Incorporate several services that will benefit the residents of NYCHA housing into their project. These include GED programs, childcare programs, career counseling, and vocational training.
    - The Linden, Boulevard, Pink, and Wortman Houses are all in the vicinity of the Christian Cultural Center's proposed project. This project will give the residents of these buildings opportunities to use the public benefits and services that are incorporated into this project.
- Create economic opportunities for members of our community. This project will create locations for local businesses that serve our community to open-up shop. These businesses will bring both local retail and jobs to East New York.

In closing, we look forward to continuing to work with the Christian Cultural Center on this project and furthering the needs and aspirations of East New York residents. We urge the Brooklyn Borough President to vote to approve this project.

WEBVTT

1

00:03:16.830 --> 00:03:18.070

Host: Uh-huh.

2

00:03:18.190 --> 00:03:20.639

Host: Morning. Okay. Yup. I'll be.

3

00:03:20.670 --> 00:03:22.120

Host: We're ready to go.

4

00:03:22.130 --> 00:03:23.140

Host: Yeah. Okay.

5

00:03:23.680 --> 00:03:27.490

Vice-Chair Knuckles: Good morning and welcome to the City planning Commission. Public

6

00:03:27.500 --> 00:03:28.490

Vice-Chair Knuckles: A remote

7

00:03:28.500 --> 00:03:32.860

Vice-Chair Knuckles: public meeting for August the twenty, fourth, two thousand and twenty two

8

00:03:33.110 --> 00:03:36.890

Vice-Chair Knuckles: Brian singer, senior Director of Land Use

9

00:03:36.900 --> 00:03:45.810

Vice-Chair Knuckles: Commission Operations will now outline general information about the remote public hearing and how to participate. Ryan.

10

00:03:46.760 --> 00:04:06.139

Host: Thank you. And good morning. Ah, verbal testimony may be provided online or by calling in on your phone. Ah, If you wish to speak, you must register through the Nyc. Engaged portal if you wish to access the hearing. Ah, please register through the upcoming meetings page of the Nyc. Engaged portal.

11

00:04:06.150 --> 00:04:17.940

Host: A link to join the hearing is on the landing page after you register. Ah, please do not close the landing page without first clicking on the link. If you are accessing the hearing via phone

12

00:04:17.950 --> 00:04:29.990

Host: and wish to speak, you must first register with the dial and participant hotline on Ah, with through the numbers listed on the screen. If one of the numbers is busy, please try another one

13

00:04:30.000 --> 00:04:43.409

Host: uh the meeting. Id is six, one, eight, two, three, seven, seven, three, nine, six press pound to skip the participation Id. The password is the new one.

14

00:04:43.620 --> 00:04:48.710

Host: The phone number is also posted on the upcoming meetings. Page of the Nyc engaged Portal.

15

00:04:49.420 --> 00:04:54.819

Host: Please note that no matter how you are accessing the meeting, you must first register to speak.

16

00:04:54.900 --> 00:05:12.699

Host: Those accessing, the meeting online will have the option to turn on their camera while giving testimony. When it is your turn to speak you'll be notified and promoted to a panelist. This will allow you to unmute your microphone and grant you the ability to turn on your camera. So listen closely for your name to be called.

17

00:05:12.710 --> 00:05:20.829

Host: There will be a short period where it will appear that you no longer in the meeting, don't be alarmed, you'll rejoin the meeting as a panelist.

18

00:05:20.840 --> 00:05:33.610

Host: If you're accessing the hearing via phone. Your name will be called it. It's your registered speakers. Once your name has been called, you'll be given the ability to unmute yourself, and you do this by pressing Star Six to on your phone

19

00:05:33.620 --> 00:05:49.750

Host: for those, those listening to the online live stream who Haven't registered to speak. They decide that they wish to do so, they must first speak through the upcoming meetings page at the Nyc. Engaged portal likewise for those hearing,

20

00:05:49.760 --> 00:06:01.169

Host: listening to the A meeting via phone, and they who have decided they want to speak. They must also register to speak through the dial and participant online that I described a moment ago.

21

00:06:01.180 --> 00:06:18.699

Host: Speakers are limited to three minutes of testimony. There are a few exceptions to the three minute time limit. Elected officials recorded the courtesy of jumping through the queue, and are not limited to three minutes. If consecutive translation services are being used, the time will be extended to five minutes,

22

00:06:18.710 --> 00:06:29.559

Host: and If an applicant team with three or more speakers, which is to make a team presentation, the team will generally be allowed a total of ten minutes. The chair will announce when the time limit is reached.

23

00:06:29.570 --> 00:06:41.169

Host: Ah! Be mindful of potential background, noise, or in your testimony make sure that if you are watching the proceedings via livestream, that the livestream is muted when you begin your testimony, otherwise you'll hear it back up.

24

00:06:41.180 --> 00:06:55.029

Host: If you wish to submit written testimony, it should be submitted to the Department of State planning. The mailing and email addresses can be found on our website planning on Nyc. Gob: and note that this remote public hearing is being recorded.

25

00:06:55.040 --> 00:07:22.709

Host: Do you have a few quick announcements? Ah! Before I hand it over to the vice-chair Ah! You may have noticed the state line of Christian has a new face. Ah! The Department is pleased to ah welcome! Ah, Rosalani Kamani! Ah, to ah! Excuse me, Rasmia Kermani, who is participating in her first public hearing today. Ah, also just a note to the Commissioners that regarding the Bruckner sites rezoning, which is scheduled for vote to date,

26

00:07:22.720 --> 00:07:32.579

Host: there was a letter that was sent out, clarifying the correct number of the proposed units. That I will hand it over to the

27

00:07:33.520 --> 00:07:51.010

Vice-Chair Knuckles: Thank you, Ryan. Good morning, and again welcome to the City Planning commission.

28

00:07:51.910 --> 00:08:10.860

Host: So today we have six folks, including a proposal in drugs that would bring approximately three hundred and forty nine two homes, one hundred and sixty, eight of them affordable, and ninety nine Set aside from senior housing to Brooklyn Boulevard, in the Bronx and Frogs next section of Bronx.

29

00:08:10.870 --> 00:08:24.070

Vice-Chair Knuckles: Three of our votes are on projects by the Department of Housing, Preservation and Development, Hpd. Which would bring fifty new affordable homes to the Bronx, and one hundred and sixty affordable homes to Manhattan.

30

00:08:24.680 --> 00:08:42.820

Vice-Chair Knuckles: We also have several public hearings on projects that seek permission to create more than two thousand eight hundred new homes, including in Queens in Brooklyn. If you'd like to sign up to speak during any of the public hearings, please go to Nyc. Gov. Engage

31

00:08:42.830 --> 00:08:51.250

Vice-Chair Knuckles: That's Nyc: Go, engage. Okay, let's get started. Madam Secretary, Please begin the meeting.

32

00:08:51.690 --> 00:08:53.040

Calendar Officer: Good morning.

33

00:08:53.190 --> 00:08:54.850

Calendar Officer: This is the State

34

00:08:55.860 --> 00:09:06.590

Calendar Officer: Mining Commission public meeting held remotely through the Nyc engaged world. Today is Wednesday, August the twenty fourth of two thousand and twenty two. I will now call the role I'll just know, for the record chair. Garlic is absent by Sierra Knuckles.

35

00:09:06.600 --> 00:09:07.580

Vice-Chair Knuckles: Here,

36

00:09:08.530 --> 00:09:13.290

Calendar Officer: Commissioner Bose, our work is absent. Commissioner Bernie.

37

00:09:13.300 --> 00:09:14.230

*Comm. Burney: Here,

38

00:09:14.290 --> 00:09:15.980

*Comm. Burney: Commissioner Serumo.

39

00:09:15.990 --> 00:09:16.800

*Comm. Cerullo: Yeah.

40

00:09:16.960 --> 00:09:18.770

Calendar Officer: I'm. Sure. It's

41

00:09:18.780 --> 00:09:21.320

*Comm. Douek: here, Commissioner Edie

42

00:09:21.330 --> 00:09:22.180

Calendar Officer: here,

43

00:09:22.820 --> 00:09:24.350

Calendar Officer: Commissioner Gold

44

00:09:24.500 --> 00:09:27.269

Calendar Officer: here, Commissioner Goodridge.

45

00:09:28.470 --> 00:09:29.480

Here,

46

00:09:29.540 --> 00:09:31.390

Calendar Officer: Commissioner Karbani.

47

00:09:31.400 --> 00:09:32.310

*Comm. Kirmani: Here

48

00:09:32.780 --> 00:09:34.360

*Comm. Kirmani: Commissioner Madden,

49

00:09:36.890 --> 00:09:38.040

Calendar Officer: here

50

00:09:38.830 --> 00:09:40.389

Calendar Officer: Commissioner or Saudi Arabia.

51

00:09:40.400 --> 00:09:41.270

*Comm. Osorio: Here,

52

00:09:41.520 --> 00:09:43.990

Calendar Officer: Commissioner,

53

00:09:44.000 --> 00:09:44.850

here

54

00:09:44.940 --> 00:09:46.850

Calendar Officer: a quorum is present.

55

00:09:46.860 --> 00:09:51.639

The first item is the approval of the minutes of the public meeting of Wednesday, the August the tenth,

56

00:09:52.450 --> 00:09:53.920

Calendar Officer: two thousand and twenty-two

57

00:09:55.020 --> 00:10:02.089

*Comm. Burney: the minutes all in favor, we say all right. Any opposed.

58

00:10:02.330 --> 00:10:04.030

Vice-Chair Knuckles: The minutes are approved.

59

00:10:06.330 --> 00:10:16.469

Calendar Officer: Scheduling calendar numbers one and two. We have resolutions for adoption scheduling Wednesday, September the seventh, two thousand and twenty two for a remote public hearing to be held through the Mit engage portal

60

00:10:18.880 --> 00:10:20.489

Vice-Chair Knuckles: on the resolutions,

61

00:10:20.500 --> 00:10:22.000

Vice-Chair Knuckles: all in favor,

62

00:10:22.010 --> 00:10:24.639

*Comm. Burney: bye, bye, bye, bye,

63

00:10:25.000 --> 00:10:26.440

*Comm. Osorio: any opposed.

64

00:10:27.800 --> 00:10:30.069

Vice-Chair Knuckles: Thank you. The resolutions are adopted.

65

00:10:31.260 --> 00:10:49.890

Calendar Officer: The next part of the calendar is your report. Section on page five reports of the Bronx Calendar, Number three Morse Heights, Ncp. Cd. Five, c. Two hundred and three, eight, one, H. A. X. In the matter of an application for Udap designation, project, approval, and Disposition of city owned property concerning more sites. Ncp.

66

00:10:50.090 --> 00:10:53.019

A favorable report on Calendar Number three,

67

00:10:53.160 --> 00:10:54.640

Calendar Officer: my cher knuckles.

68

00:10:54.650 --> 00:10:55.620

Vice-Chair Knuckles: Yes,

69

00:10:56.230 --> 00:10:57.450

Calendar Officer: Commissioner

70

00:10:57.520 --> 00:10:58.649

for me.

71

00:10:58.660 --> 00:10:59.510

*Comm. Burney: Yes,

72

00:10:59.870 --> 00:11:01.400

*Comm. Burney: Commissioner Surreal.

73

00:11:01.410 --> 00:11:02.460

*Comm. Cerullo: Yes,

74

00:11:02.820 --> 00:11:04.180

Calendar Officer: i'm sure and do it.

75

00:11:04.190 --> 00:11:05.169

*Comm. Douek: Yes,

76

00:11:05.810 --> 00:11:08.240

*Comm. Douek: it's not easy. Yes,

77

00:11:08.300 --> 00:11:10.210

Calendar Officer: Commissioner gold.

78

00:11:10.740 --> 00:11:11.890

Yes,

79

00:11:12.240 --> 00:11:13.860

Calendar Officer: Commissioner Goodridge,

80

00:11:22.410 --> 00:11:23.970

Calendar Officer: Commissioner Madden.

81

00:11:24.640 --> 00:11:25.740

Comm. Marin: Yes,

82

00:11:26.660 --> 00:11:28.290

Commissioner.

83

00:11:28.300 --> 00:11:29.400

*Comm. Osorio: Yes,

84

00:11:30.650 --> 00:11:31.890

Commissioner Rompershot.

85

00:11:31.900 --> 00:11:32.900

Calendar Officer: Yes,

86

00:11:33.870 --> 00:11:36.879

variable report has been adopted on calendar number three

87

00:11:36.890 --> 00:11:53.490

Calendar Officer: for of the Bronx counter Number four Morseania open door, Cd. Three, c. Two, two, zero, three, eight, zero, h, eight x. In the matter of an application for UDAAP designation, project, approval, and disposition of city owned property concern me, or senior open door for favorable report on Calendar Number four by stern knuckles.

88

00:11:53.500 --> 00:11:54.890

Vice-Chair Knuckles: Yes,

89

00:11:54.900 --> 00:11:55.990

Calendar Officer: Commissioner Bernie.

90

00:11:56.000 --> 00:11:57.090

*Comm. Burney: Yes,

91

00:11:57.190 --> 00:11:58.730

*Comm. Burney: Commissioner Sir Rudolph.

92

00:11:58.740 --> 00:11:59.740

*Comm. Cerullo: Yes,

93

00:12:00.160 --> 00:12:01.539

Calendar Officer: appreciate it to it.

94

00:12:01.550 --> 00:12:02.390

*Comm. Douek: Yes,

95

00:12:02.530 --> 00:12:04.079

Calendar Officer: Commissioner Edie.

96

00:12:04.090 --> 00:12:04.980

*Comm. Eaddy: Yes,

97

00:12:05.110 --> 00:12:06.490

Calendar Officer: Commissioner Gold.

98

00:12:06.500 --> 00:12:07.610

Calendar Officer: Yes,

99

00:12:09.410 --> 00:12:10.830

Calendar Officer: in our good Ridge

100

00:12:13.920 --> 00:12:15.790

Calendar Officer: Commissioner Kermani.

101

00:12:15.800 --> 00:12:16.680

*Comm. Kirmani: Yes,

102

00:12:17.400 --> 00:12:18.990

*Comm. Kirmani: Commissioner Madden.

103

00:12:19.540 --> 00:12:20.800

Calendar Officer: Yes,

104

00:12:21.270 --> 00:12:22.490

Calendar Officer: Commissioner also.

105

00:12:23.200 --> 00:12:24.130

*Comm. Osorio: Yes,

106

00:12:24.690 --> 00:12:25.990

*Comm. Osorio: Commissioner Rampershad.

107

00:12:26.000 --> 00:12:27.070

*Comm. Rampershad: Yes,

108

00:12:27.940 --> 00:12:30.990

variable report has been adopted on Calendar Number Four.

109

00:12:31.000 --> 00:12:50.209

Calendar Officer: For of the rocks Calendar numbers five and six partner sites rezoning, Cd. Ten Calendar, number five, c. Two two zero, zero, zero, seven, Zmx calendar number six, um and two, two zero, zero, zero, eight, zero x, and the matter of an application for zoning app and Zoning text Moments concerning

110

00:12:50.220 --> 00:12:54.670

Calendar Officer: favorable report on Calendar numbers Five in six by Trinacles.

111

00:12:54.900 --> 00:12:56.490

Calendar Officer: Yes,

112

00:12:56.500 --> 00:12:57.890

Commissioner Burney.

113

00:12:57.900 --> 00:12:58.760

*Comm. Burney: Yes,

114

00:12:58.870 --> 00:13:00.459

Calendar Officer: Commissioner Sierra Leone.

115

00:13:00.470 --> 00:13:01.440

Calendar Officer: Yes,

116

00:13:01.960 --> 00:13:03.089

here's what you're doing.

117

00:13:03.100 --> 00:13:04.070

*Comm. Douek: Yes,

118

00:13:04.310 --> 00:13:05.790

Mr. Eddy.

119

00:13:05.800 --> 00:13:06.700

Calendar Officer: Yes,

120

00:13:06.930 --> 00:13:08.270

Calendar Officer: Commissioner Gold.

121

00:13:08.410 --> 00:13:09.570

*Comm. Gold: Yes,

122

00:13:10.160 --> 00:13:11.770

Commissioner Goodridge.

123

00:13:13.240 --> 00:13:14.300

Calendar Officer: Yeah.

124

00:13:14.700 --> 00:13:16.190

Calendar Officer: Commissioner Kirmani.

125

00:13:16.200 --> 00:13:17.130

*Comm. Kirmani: Yes.

126

00:13:17.860 --> 00:13:19.260

Calendar Officer: Krishnak Madd:

127

00:13:20.520 --> 00:13:37.790

Calendar Officer: So i'd like to make a statement. I soil the documents that the applicant provided indicating that more three bedroom units would be provided, brings down the unix overall unit. Count, I will say that i'm still not convinced that the zoning designation is correct,

128

00:13:37.800 --> 00:13:40.889

so i'm going to vote. Yes, with the hopes that Council will address this

129

00:13:43.520 --> 00:13:45.290

Calendar Officer: Commissioner.

130

00:13:45.300 --> 00:13:46.450

*Comm. Osorio: Yes,

131

00:13:46.720 --> 00:13:49.010

Calendar Officer: Commissioner Rampershad.

132

00:13:49.020 --> 00:13:50.010

*Comm. Rampershad: Yes,

133

00:13:50.160 --> 00:13:56.610

Calendar Officer: Variable reports have been adopted on the calendar numbers five and six Borough Queens Calendar numbers seven and eight

134

00:13:57.270 --> 00:14:09.910

Calendar Officer: calendar number seven, Cd. Thirteen in two, three, zero, zero, zero, seven Hm. Kq. Cambria Heights, two Hundred and Twenty Second Street, historic District Calendar, Number eight, Cdm. Thirteen,

135

00:14:09.920 --> 00:14:29.129

Calendar Officer: and then two, three, zero, zero, eight; Hq. Cambria Heights, two Hundred and Twenty Seventh Street historic district, and the matter of communications concerning the historic district designations for Cambri Heights, two Hundred and Twenty Seventh Street historic districts on the adoption of calendar numbers seven and eight for the referral to the City Council, vice ter knuckles.

136

00:14:29.140 --> 00:14:30.400

Vice-Chair Knuckles: Yes,

137

00:14:30.560 --> 00:14:32.099

Calendar Officer: for your Burney.

138

00:14:32.110 --> 00:14:34.690

*Comm. Burney: Yes, Commissioner's.

139

00:14:34.700 --> 00:14:35.790

*Comm. Cerullo: Yes,

140

00:14:35.800 --> 00:14:36.790

Calendar Officer: which you're in direct.

141

00:14:36.800 --> 00:14:37.650

*Comm. Douek: Yes,

142

00:14:37.950 --> 00:14:39.490

*Comm. Douek: for your eating.

143

00:14:39.500 --> 00:14:40.430

*Comm. Eaddy: Yes,

144

00:14:40.780 --> 00:14:42.110

Calendar Officer: Commissioner. Gold.

145

00:14:42.190 --> 00:14:43.280

*Comm. Gold: Yes,

146

00:14:43.590 --> 00:14:45.140

Calendar Officer: Commissioner Goodridge,

147

00:14:48.210 --> 00:14:49.589

Calendar Officer: Commissioner Kramani.

148

00:14:49.600 --> 00:14:50.510

*Comm. Kirmani: Yes,

149

00:14:51.400 --> 00:14:52.979

Calendar Officer: Commissioner, let it.

150

00:14:53.890 --> 00:14:54.980

Yes,

151

00:14:55.510 --> 00:14:56.670

quick.

152

00:14:56.960 --> 00:15:00.530

*Comm. Osorio: Yes, Sheriff's studio. Can we share a rappershot

153

00:15:00.540 --> 00:15:01.430

Yes,

154

00:15:02.000 --> 00:15:06.659

Calendar Officer: Calendar Numbers seven and eight have been adopted for the referral to the City Council.

155

00:15:08.570 --> 00:15:21.970

Calendar Officer: Her of Manhattan countered Numbers nine through twelve of seven to five, Tenth Avenue, Dep. Cd. Four Calendar, number nine, c. Two two hundred and three, four, zero, eight Am. Calendar number ten in two, two, zero, three, three, nine zrm has been withdrawn

156

00:15:21.980 --> 00:15:40.890

Calendar Officer: under Number eleven, c. Two two hundred and three through eight Csm. Council, number twelve, c. Two hundred and thirty, seven Csm. And the matter of an application for you. Designation, project, approval, disposition of Cityial property, and special permits concerning seven hundred and five Tenth Avenue, D. P. Site for favorable reports on counter numbers nine, eleven and twelve

157

00:15:40.900 --> 00:15:42.240

Calendar Officer: by chernacles.

158

00:15:42.250 --> 00:15:45.270

*Comm. Burney: Yes, Commissioner Bernie.

159

00:15:45.280 --> 00:15:47.679

Calendar Officer: Yes, i'm sure.

160

00:15:47.690 --> 00:15:48.740

Calendar Officer: Ah, yes,

161

00:15:49.170 --> 00:15:50.190

Calendar Officer: we should do it.

162

00:15:50.200 --> 00:15:51.090

*Comm. Douek: Yes,

163

00:15:53.590 --> 00:15:54.590

Calendar Officer: yes,

164

00:15:55.180 --> 00:15:56.580

Rich trickled.

165

00:15:56.740 --> 00:15:58.000

Calendar Officer: Yes.

166

00:15:58.380 --> 00:16:00.699

Calendar Officer: Can I share a good bridge.

167

00:16:01.990 --> 00:16:03.030

*Comm. Goodridge: Yeah,

168

00:16:09.130 --> 00:16:10.590

Calendar Officer: I'm sure. But it

169

00:16:12.730 --> 00:16:13.880

Comm. Marin: Yes,

170

00:16:14.500 --> 00:16:16.410

Calendar Officer: commissioner or studio.

171

00:16:16.420 --> 00:16:17.360

*Comm. Osorio: Yes,

172

00:16:17.410 --> 00:16:18.690

*Comm. Osorio: Commissioner Rappershot.

173

00:16:18.700 --> 00:16:19.750

*Comm. Osorio: Yes.

174

00:16:21.630 --> 00:16:27.990

Calendar Officer: Your reports have been adopted on calendar numbers nine eleven and twelve. The next part of the calendar is the public hearings of Page ten.

175

00:16:30.150 --> 00:16:32.940

Vice-Chair Knuckles: Okay, thank you. Again. Uh,

176

00:16:33.680 --> 00:16:41.520

Vice-Chair Knuckles: we ask those who are testifying to limit their remarks to three minutes, after which you will be muted.

177

00:16:41.610 --> 00:16:52.250

Vice-Chair Knuckles: Please also let me note that while we welcome the opportunity to hear your comments, we ask that courtesy and the Forum be observed at all times. During your testimony.

178

00:16:58.740 --> 00:17:17.280

Calendar Officer: Screens, Calendar numbers thirteen and fourteen, forty, twenty, five Crescent Street, rezoning, Cd. One Calendar, number thirteen, c. Two, two, zero, one hundred and six, nine Cmq. Calendar number fourteen in two, two, zero, one, seven, zero, Z Rq. Public hearing in the matter of an application for zoning math and zoning text amendments concerning four thousand and twenty five Christmas treatment.

179

00:17:21.750 --> 00:17:27.090

Vice-Chair Knuckles: Okay, this is a ten minute team presentation.

180

00:17:27.490 --> 00:17:30.819

Vice-Chair Knuckles: The participants will be Dan Eggers, who

181

00:17:30.890 --> 00:17:33.150

Vice-Chair Knuckles: battery Rose and walk.

182

00:17:33.500 --> 00:17:38.870

Vice-Chair Knuckles: Andrew Rosen Walk, Dietra, Parson, Nora Fernandez,

183

00:17:39.030 --> 00:17:40.850

Vice-Chair Knuckles: Noah Bernstein,

184

00:17:43.700 --> 00:17:45.429

Vice-Chair Knuckles: Are you ready to proceed?

185

00:17:45.470 --> 00:17:47.640

xPH01 - *AT - Dan Egers: Yes, We are by Ste. Your novels.

186

00:17:47.690 --> 00:17:48.829

Vice-Chair Knuckles: Thank you.

187

00:17:49.050 --> 00:18:06.320

xPH01 - *AT - Dan Egers: All right. Good morning. Vice chair, knuckles and Commissioners Dan Eggers Land Use attorney from Rainbow Tart. Good to see you again. It's it's been a while, and good to see some of our faces as well. I'm. Representing Crescent Street Associates, Llc. Owner of Forty, Twenty, by Crescent Street, and an affiliate of the Rosa Walker.

188

00:18:06.360 --> 00:18:17.649

xPH01 - *AT - Dan Egers: I will explain the proposed actions and discuss the site and context. The Nora Fernandez from Gene Kaufman architect, will show the contemplated development, and Andrew Rosenwalk will speak on behalf of ownership

189

00:18:17.660 --> 00:18:28.089

xPH01 - *AT - Dan Egers: additionally to respond to any questions you may have. I'm joined by my colleague Gertrude Carson as Well, as Noah Bernstein from Akrf and Henry Rosen walk from ownership next slide.

190

00:18:29.920 --> 00:18:43.649

xPH01 - *AT - Dan Egers: This is an application for rezoning from M. One to R. Five B. And N. One to R. Five D. Zoning districts to an M. One, two, R. Six, a district within the existing Dutch killed subdistrict of Special Long Island City mixed use district.

191

00:18:43.800 --> 00:18:57.390

xPH01 - *AT - Dan Egers: A mandatory inclusionary housing area will also be mapped over the proposed free zone area and this will facilitate a new seven-story mixed-use building about one hundred and seventy five thousand square feet of floor area at forty, Twenty Five Crescent Street

192

00:18:57.400 --> 00:18:58.490

xPH01 - *AT - Dan Egers: next slide

193

00:19:00.530 --> 00:19:08.979

xPH01 - *AT - Dan Egers: forty minus twenty. Five. Crescent Street is on the block bounded by Fortieth and forty first avenues and Crescent Street in Twenty Seventh Street. Next slide.

194

00:19:11.320 --> 00:19:24.550

xPH01 - *AT - Dan Egers: Specifically, the proposed rezoned area would be the portion of the block one hundred feet north of forty First Avenue, and eighty feet south, forty of the mue, which is now into M, one, two, R. Five, B and M, one, two, R. Five D. Districts

195

00:19:24.560 --> 00:19:37.579

xPH01 - *AT - Dan Egers: the rezoning would rezone this area to M, one, two, R. Six, a zoning district extending the existing M. One to R. Six a zoning district immediately south. This area, north to within eighty feet of

196

00:19:37.590 --> 00:19:55.710

xPH01 - *AT - Dan Egers: this district would continue to serve as a transition with regard to density and height and the higher density blocks to the south, the adjacent M. One, two, R. Five, B. And M. One, two, R. Five d districts in addition to forty twenty-five presentry, six smaller lots of part of the proposed rezone area.

197

00:19:55.720 --> 00:20:05.320

xPH01 - *AT - Dan Egers: Four of these are used for vehicle storage. One has a three-story residential building, and one has a nine-story hotel, as are small portions of six otherwise

198

00:20:05.330 --> 00:20:06.530

xPH01 - *AT - Dan Egers: next slide.

199

00:20:08.800 --> 00:20:12.889

xPH01 - *AT - Dan Egers: Here is an aerial image of the site and the proposed rezoned area

200

00:20:16.310 --> 00:20:17.629

xPH01 - *AT - Dan Egers: next slide.

201

00:20:19.270 --> 00:20:35.120

xPH01 - *AT - Dan Egers: The site is in a proxy's forty five thousand square foot lot, with approximately two hundred and fifty five feet of frontage on Crescent Street and two hundred feet of frontage on Twenty Seventh Street. The site now is four one-story buildings, used as go into space for orca the exterminating service.

202

00:20:35.130 --> 00:20:40.890

xPH01 - *AT - Dan Egers: The facility where the owner stores and tests. It's water, storage and cooling tower products and a parking lot,

203

00:20:40.900 --> 00:21:02.150

xPH01 - *AT - Dan Egers: As you all hear, The existing light industrial use will be remaining on the property as part of an excuse development for a land use. Rationale. We believe this project is consistent with the specific purposes of special law on city mixed use district permit development, residential, commercial and light manufacturing uses and encourage the development of affordable housing.

204

00:21:02.160 --> 00:21:03.690

xPH01 - *AT - Dan Egers: Next lines please.

205

00:21:06.010 --> 00:21:12.179

xPH01 - *AT - Dan Egers: Here. Our existing conditions shown in Street level photos of the site next slide.

206

00:21:14.160 --> 00:21:16.879

xPH01 - *AT - Dan Egers: It's Twenty Seventh Street next slide

207

00:21:18.960 --> 00:21:22.230

xPH01 - *AT - Dan Egers: Twenty Seventh Street, and next slide, please,

208

00:21:24.200 --> 00:21:28.439

xPH01 - *AT - Dan Egers: All right, and I will now turn it over to Nora Fernandez. Thank you.

209

00:21:30.220 --> 00:21:42.299

xPH01 - *AT - NORA FERNANDEZ: And good morning. Vice chair, knuckles and commissioners. I don't know if you can see me. Oops. Yes, I cannot start the video. I'm sorry about that.

210

00:21:42.310 --> 00:21:56.340

xPH01 - *AT - NORA FERNANDEZ: Um. Here is the original site plan and the proposed development. As you can see, there will be commercial manufacturing and residential uses with a courtyard. Start my video next slide, please.

211

00:21:56.920 --> 00:22:23.730

xPH01 - *AT - NORA FERNANDEZ: In response to the community's concerns regarding loading and delivery some Crescent street which has a bike lane. We have revised the illustrative side plan to include the requested loading zone on twenty-seven streets and a bridgeway from the Twenty Seventh Street

portion signs with instruct deliveries to the building being made on Thirty-seven Street, and the river is for residents in the present street portion of The building would be brought through the Graceway

212

00:22:23.920 --> 00:22:41.309

xPH01 - *AT - NORA FERNANDEZ: through department staff. The applicant team has been in contact with theot to work on ways to ensure vehicular, and by traffic is maintained during construction, and we understand that the ot does not currently have any major concerns about the building in relation to the bike length. After opening

213

00:22:41.320 --> 00:22:42.900

xPH01 - *AT - NORA FERNANDEZ: slight, please,

214

00:22:44.830 --> 00:23:04.100

xPH01 - *AT - NORA FERNANDEZ: there would be a total of approximately one hundred and seventy five thousand square feet of floor area, three point nine far of which five thousand would be in commercial use, and twelve thousand square feet in manufacturing, and one hundred and fifty, eight thousand square feet three point five. Far would be residential,

215

00:23:04.110 --> 00:23:19.190

xPH01 - *AT - NORA FERNANDEZ: with an mih up to three point six far is permitted with up to an additional zero point. Four fa are allowed for the signated, permitted industrial uses for a total of four point zero far permitted,

216

00:23:19.200 --> 00:23:33.450

xPH01 - *AT - NORA FERNANDEZ: the commercial use would be either office or local retail space depending on market conditions, and the manufacturing use would be light industrial use by the owners pipe-fitting operations. This would, among other things, preserve industrial jobs

217

00:23:33.690 --> 00:23:57.540

xPH01 - *AT - NORA FERNANDEZ: of the residential approximately thirty nine thousand five hundred square feet, would be permanently a portable under mandatory inclusionary housing option one which requires at least twenty-five percent of the residential floor area be affordable to households with incomes not exceeding sixty percent am I, of which ten percent cannot exceed forty percent ami.

218

00:24:04.950 --> 00:24:18.920

xPH01 - *AT - NORA FERNANDEZ: The originally intended unit mix was about nineteen percent two hundred bedrooms. But in response to the community Board's request for more, two and three bedrooms. The contemplated mix is now forty, two, and three bedrooms one hundred and three.

219

00:24:18.930 --> 00:24:32.819

xPH01 - *AT - NORA FERNANDEZ: The building design would have sixty, five feet six-story base. Height, then set back fifteen feet from each street, and have a total height of seventy, five feet, and seven stories, which is less than the eighty five.

220

00:24:33.360 --> 00:24:44.489

xPH01 - *AT - NORA FERNANDEZ: A portion fronting on Crescent Street would be fifty, five feet within twenty, five feet of the adjacent M. One over two, R. Five T district north of the site,

221

00:24:44.500 --> 00:25:05.299

xPH01 - *AT - NORA FERNANDEZ: one hundred and eighteen required parking spaces would be provided, in the seller, of which eighty eight would be for the residents, and thirty would be for commercial and manufacturing. Use a team for commercial twelve for manufacturing access to the building's. Parking would be from Twenty Seventh Street and loading for the manufacturing would be on Crescent Streets

222

00:25:05.310 --> 00:25:07.769

xPH01 - *AT - NORA FERNANDEZ: here. Our next slide, please.

223

00:25:08.600 --> 00:25:16.290

xPH01 - *AT - NORA FERNANDEZ: This is the land. Use the diagram showing the proposed buildings in context. Next slide, please.

224

00:25:17.130 --> 00:25:28.540

xPH01 - *AT - NORA FERNANDEZ: These are images of the proposed building from the street. The new building would create a nearly continued street wall along each side of the street frontages next slide, please,

225

00:25:35.970 --> 00:25:49.730

xPH01 - *AT - NORA FERNANDEZ: and these are proposed illustrative renderings of the building, which is our design concept regarding the comments that the review session had about sustainability and vegetation.

226

00:25:49.740 --> 00:26:17.050

xPH01 - *AT - NORA FERNANDEZ: We want to state that we end to be below local low, ninety-seven green, that's house emissions limits. We seek to make them yc zero waste guidelines. We have green roofs, we have bird, safe glass. We have high efficiency exterior envelopes and glacing areas that are less than forty percent. And for vegetation. We're thinking native plants, glasses, grasses, and trees. Thank you. And now we we have Andrew Rosenberg. Talk.

227

00:26:20.770 --> 00:26:22.379

xPH01 - *AT - Andrew Rosenwach: Good morning,

228

00:26:22.550 --> 00:26:23.580

xPH01 - *AT - Andrew Rosenwach: my honor.

229

00:26:24.100 --> 00:26:31.089

xPH01 - *AT - Andrew Rosenwach: Yes, good morning, vice chair not to send the commissioners. I am Andrew Roosevelt, principal of the road for my

230

00:26:31.100 --> 00:26:40.780

xPH01 - *AT - Andrew Rosenwach: on the site we have been major suppliers, and about water tanks in the five-year-olds and related services.

231

00:26:41.310 --> 00:26:55.700

xPH01 - *AT - Andrew Rosenwach: We've been around town for about five generations. In fact, in the city I speak today in support of my company's application,

232

00:26:55.710 --> 00:27:01.699

xPH01 - *AT - Andrew Rosenwach: or a rezoning not permit the redevelopment of our facility of one thousand nine hundred and forty, five

233

00:27:02.000 --> 00:27:15.640

xPH01 - *AT - Andrew Rosenwach: Long Island city, which we have only and operated since one thousand nine hundred and seventy eight. We are extremely excited about the project, which will result in a truly an excuse, development,

234

00:27:15.650 --> 00:27:35.130

xPH01 - *AT - Andrew Rosenwach: residential, commercial, and manufacturing uses. The project will make new facilities for our water-thank business life-fitting activities would allow our business to retain the presence of low mountain city and be able to service thousands of customers we work with with extreme findings.

235

00:27:35.140 --> 00:27:44.389

xPH01 - *AT - Andrew Rosenwach: We basically always hold the workforce from new local communities and the city.

236

00:27:44.490 --> 00:27:55.889

xPH01 - *AT - Andrew Rosenwach: This will allow us to maintain that presence and give that opportunity for skilled jobs. At the same time the project will provide many other benefits,

237

00:27:55.970 --> 00:28:02.580

xPH01 - *AT - Andrew Rosenwach: units of affordable housing and transient oriented development. Only a few blocks.

238

00:28:07.990 --> 00:28:10.080

Host : That was that was time.

239

00:28:10.700 --> 00:28:11.860

Vice-Chair Knuckles: Okay.

240

00:28:13.890 --> 00:28:19.719

Vice-Chair Knuckles: So now we can go to questions from the Commission. Let me just see if they are

241

00:28:19.920 --> 00:28:21.220

Vice-Chair Knuckles: or any.

242

00:28:29.060 --> 00:28:35.550

Host : I don't. I don't. Oh, yes, okay, Commissioner Commissioner Osaudio.

243

00:28:36.100 --> 00:28:47.269

Host : Thank you. Vice chair. Thanks so much for the presentation. This is very useful, and thanks so much for highlighting aspects of the comments or the discussion that you're addressing at the moment.

244

00:28:47.280 --> 00:29:03.450

*Comm. Osorio: I wanted to follow up with two quick questions. I know that it's been tier from the comments from the Community Board and the Board President that the community facility is a community priority. Can you expand a little bit on that, and specifically

245

00:29:03.460 --> 00:29:12.839

*Comm. Osorio: and inform us whether or not you're committing any specific. Well, how many square footage are you committing to a community facility in the current version of the plan.

246

00:29:17.780 --> 00:29:24.489

Host : Am I? Am I a big I'm: sorry. Am I able to answer that even though I was part of the the presentation?

247

00:29:24.500 --> 00:29:27.690

Yeah, yeah, yeah, this is Q. And A. For all of your team.

248

00:29:27.700 --> 00:29:33.389

Host : It's first time with this with this format. Actually, So the So the

249

00:29:33.400 --> 00:29:35.140

xPH01 - *AT - Dan Egers: I don't know if someone's going to

250

00:29:36.210 --> 00:30:01.660

xPH01 - *AT - Dan Egers: ownership will give serious consideration, to including a community facility space for a mobile non-profit or or community group we've we've uh indicated our President, and we we look forward to hearing from the President and the Meeting Board and the and a Council member as to whether they have any community groups that are searching for space, and then ownership will give serious considerations of providing that space.

251

00:30:02.530 --> 00:30:14.079

*Comm. Osorio: Thanks so much for that. I know that this has been underlined as a priority from the community. But do you have a sense of how much space are you considering at the point at the moment,

252

00:30:14.950 --> 00:30:27.420

xPH01 - *AT - Dan Egers: as of Now we Haven't finalized the the building design. What you've seen is illustrative. So there's there's no specific amount of square footage in mind, so that would come about as part of the conversation we would have with the community.

253

00:30:28.370 --> 00:30:45.200

*Comm. Osorio: Thank you. Thank you. I appreciate that. I wanted to highlight another concern that has been brought up in the comments which in my mind connects with the previous question, Which is this suggestion or recommendation to

254

00:30:45.770 --> 00:30:54.169

*Comm. Osorio: explore a thirty percent local hiring commitment. And i'm wondering if what's your rationale, what's What's your response to that?

255

00:30:54.700 --> 00:31:13.620

xPH01 - *AT - Dan Egers: Yes, so the the applicant's general contractor is skiami, and we understand they have extensive experience regarding participation of of N. Of Mwbs, and they've, in fact, represented to ownership that they all make best efforts to meet a target of uh thirty percent in Mwb. Participation in the project.

256

00:31:14.870 --> 00:31:34.249

*Comm. Osorio: Thank you. The The other question that I have has to do with the sustainability measures. And again, I appreciate the response as part of the presentation. I was wondering if you can expand a little bit on specific concerns that have been brought up in the previous comments, including

257

00:31:34.280 --> 00:31:48.150

*Comm. Osorio: the amount and layout of vegetation that is being proposed Specifically, What are the measurements that you're taking to address urban Heat Island effect

258

00:31:48.160 --> 00:32:06.169

*Comm. Osorio: on one end, and then on the other. I know that you briefly mentioned that you're considering a series of interventions. Ah! To be compliant with local loss. But I was wondering if you can expand a little bit specifically on um solar and and and and in green groups. Yes,

259

00:32:07.120 --> 00:32:09.680

xPH01 - *AT - Dan Egers: uh, nor can can you speak to that, please?

260

00:32:09.810 --> 00:32:19.539

xPH01 - *AT - NORA FERNANDEZ: Yeah, sure. Thank you for the question, and for allowing us to explain a bit more. Yes, the intent is to have as much

261

00:32:19.550 --> 00:32:35.509

xPH01 - *AT - NORA FERNANDEZ: percolation soiled as we could in the courtyards and on the roof. Ah! We are also proposing green roofs that will be vegetative, and we are looking at native plantings to, you know, enhance the conditions of

262

00:32:35.520 --> 00:32:44.379

xPH01 - *AT - NORA FERNANDEZ: what is the position now of parks and the city on trying to work with a local vegetation, and

263

00:32:44.470 --> 00:32:50.600

xPH01 - *AT - NORA FERNANDEZ: we are considering having some areas of solar panels. It's just the

264

00:32:50.610 --> 00:33:04.699

xPH01 - *AT - NORA FERNANDEZ: It's too early in the process, I believe, to give you a certain percentage of how much solar, if it's going to be on the project, or how much of vegetation. But this is the intense from our side

265

00:33:04.870 --> 00:33:06.590

xPH01 - *AT - NORA FERNANDEZ: as architects.

266

00:33:07.530 --> 00:33:12.539

*Comm. Osorio: Thank you. Vice Chair. Can I have a quick follow-up One last Follow up question,

267

00:33:12.550 --> 00:33:27.989

*Comm. Osorio: please. Thank you. Yeah, Thanks for that. Speaking about the courtyard, you remind me of another question that has come up, which is the the lack of public access to the proposed courier. Can you expand a little bit? What is your response to that, or how are you addressing it?

268

00:33:28.000 --> 00:33:30.259

xPH01 - *AT - Deirdre Carson: So I may I address this, please?

269

00:33:31.170 --> 00:33:33.370

Vice-Chair Knuckles: Yes, um!

270

00:33:34.500 --> 00:33:52.850

xPH01 - *AT - Deirdre Carson: While we understand the desire of the community to have access here, it isn't customary to have community access in rear yards for individual buildings. This isn't a plaza which is a bonusable amenity where public access would be required. So

271

00:33:52.860 --> 00:34:22.469

xPH01 - *AT - Deirdre Carson: this is a fairly large building, and we expect that the port work will have heavy heavy usage by the residents of the building. Um! And it will serve a purpose and provide then with recreational area. So that takes, I won't say it takes a burden off of other public spaces, but it does provide a service for public for open space for the residents of the building. Um! It's uh beyond the purview and and capability really uh, of this area is sort of the general

272

00:34:22.480 --> 00:34:23.330

public.

273

00:34:25.050 --> 00:34:39.709

*Comm. Osorio: Thank you. I appreciate that response, and I understand that this is the on the requirement. But given the thoughtfulness of the interventions that you're giving to improving environmental conditions and creating additional green infrastructure. I highly encourage you to consider

274

00:34:39.820 --> 00:34:45.629

*Comm. Osorio: to the extent possible. You know, creating some level of public permission to these amenities.

275

00:34:46.949 --> 00:34:49.189

xPH01 - *AT - Deirdre Carson: We'll take it under it by some. Thank you.

276

00:34:49.199 --> 00:34:50.109

*Comm. Osorio: Thank you.

277

00:34:50.610 --> 00:34:55.459

Vice-Chair Knuckles: Thank you. Commissioner Osaudio. Are there any other other questions

278

00:34:55.600 --> 00:34:56.979

Vice-Chair Knuckles: for the team?

279

00:35:01.880 --> 00:35:07.810

Vice-Chair Knuckles: Okay, I'd like to ask this question of Miss Fernandez.

280

00:35:08.000 --> 00:35:14.800

Vice-Chair Knuckles: This Fernandez. I understand that the manufacturing component here would be

281

00:35:15.230 --> 00:35:20.819

Vice-Chair Knuckles: of light industrial as I understand it. But i'm wondering,

282

00:35:21.270 --> 00:35:23.629

Vice-Chair Knuckles: would you still, um,

283

00:35:24.590 --> 00:35:40.690

Vice-Chair Knuckles: in order to abate any noise issues since you This is a residential component as well. Would there be any particular treatment of the industrial space, so as to abate any any

284

00:35:40.910 --> 00:35:42.629

Vice-Chair Knuckles: acoustic coalitions.

285

00:35:45.440 --> 00:35:49.209

xPH01 - *AT - NORA FERNANDEZ: Thank you, Commissioner vice-chair

286

00:35:49.330 --> 00:35:59.649

xPH01 - *AT - NORA FERNANDEZ: I believe we are considering that of course I mean it's early in the process, as I explained earlier, but both ownership and us as architects would

287

00:35:59.660 --> 00:36:14.060

xPH01 - *AT - NORA FERNANDEZ: never think of doing a building that would be a nuisance for our tenants upstairs. So definitely we are considering the impact, even though this is live manufacturing. So the expectations of sounds impacts are

288

00:36:14.070 --> 00:36:24.350

xPH01 - *AT - NORA FERNANDEZ: minimal in comparison to Probably the surrounding noises in that area. But yes, it's a thing that we are taking seriously, and we consider.

289

00:36:25.240 --> 00:36:27.700

Vice-Chair Knuckles: Okay, Thank you. Thank you

290

00:36:28.060 --> 00:36:37.360

Vice-Chair Knuckles: right. If there are no other questions from the Commissioners. We can now go to

291

00:36:37.960 --> 00:36:41.950

Vice-Chair Knuckles: the speakers,

292

00:36:42.850 --> 00:36:46.089

Vice-Chair Knuckles: Do I? Yet have the list of speakers.

293

00:36:46.350 --> 00:36:50.589

Host : There are no other speakers signed up, no other speakers. Yeah.

294

00:36:50.600 --> 00:36:51.439

Vice-Chair Knuckles: Okay.

295

00:36:51.640 --> 00:36:54.179

Vice-Chair Knuckles: All right. Um.

296

00:36:58.940 --> 00:36:59.990

Vice-Chair Knuckles: So

297

00:37:00.170 --> 00:37:03.549

Vice-Chair Knuckles: there are no other speakers.

298

00:37:05.020 --> 00:37:06.949

Vice-Chair Knuckles: Then we will close the hearing.

299

00:37:07.010 --> 00:37:08.149

Turkish.

300

00:37:09.910 --> 00:37:27.699

Host : Okay? Ah, of Queens Calendar Number fifteen, seventy, eight, forty, six, Metropolitan Avenue, re so name Cd. Five, c. Two, two, zero, one, three, three, Cmq public hearing, and the matter of an application for zoning math amendment concerning at seventy eight, forty, six metropolitan avenue resili.

301

00:37:29.810 --> 00:37:32.189

Vice-Chair Knuckles: Okay, uh

302

00:37:35.280 --> 00:37:37.660

Vice-Chair Knuckles: this is a three-minute presentation

303

00:37:38.090 --> 00:37:40.580

Vice-Chair Knuckles: uh our first speaker

304

00:37:40.890 --> 00:37:46.109

Vice-Chair Knuckles: three minutes for a speaker I mean. Our first speaker is Richard Lobell, the

305

00:37:48.740 --> 00:38:04.879

xPH03 - *AT - Richard Lobel: Good morning, Vice Chair Commissioners. Thank you for hearing us today. We are here for the um seventy, eight, forty six metropolitan avenue rezoning. Ah! And I also wanted to ah join other speakers in welcoming Commissioner Kimani on to the commission

306

00:38:05.030 --> 00:38:06.220

*Comm. Kirmani: next slide.

307

00:38:08.460 --> 00:38:23.499

xPH03 - *AT - Richard Lobel: So there's a very straightforward rezoning. The rezoning area is roughly five thousand square feet. Next slide, please. This will be an amendment to alter the zoning from existing R. Five district to R. Five, D. C. Two, three district.

308

00:38:23.510 --> 00:38:52.699

xPH03 - *AT - Richard Lobel: This would have the primary purpose of legalizing and making performing an existing useful six veterinary medicine use, which has existed on the ground floor for roughly twenty nine years. This is a heavily utilized facility by local residents. This would also allow the building to be expanded to stories atop the building to allow for two residential apartments where it is currently intended would be housed.

309

00:38:52.710 --> 00:39:07.119

xPH03 - *AT - Richard Lobel: Ah! Workers at the existing veterinary practice. So this has been a long-standing goal of Ah! The existing practice to allow for ah workers to live above the ah the facility in order to provide Ah! Twenty four hour care.

310

00:39:07.130 --> 00:39:25.729

xPH03 - *AT - Richard Lobel: Um! So the development that has an existing one for ah medical facility for ah veterinary medicine Ah! Would be expanded to three stories. This would also have the added effect of bringing an adjacent building into conformance and compliance, which itself has a ground floor. Use group six offices next slide,

311

00:39:26.790 --> 00:39:54.540

Host : So you can see from the zoning map that commercial overlays here in particular, are well known to the area. This is in an area where roughly four blocks on the southern portion of Metropolitan Avenue, and five blocks on the northern portion are already zoned with commercial use, so I have been recognized by in the community board. Ah, the Queensburg President! Ah! And and everyone else to examine this, and it's internally appropriate to allow for commercial uses Here

312

00:39:54.550 --> 00:39:55.709

xPH03 - *AT - Richard Lobel: our next slide

313

00:39:56.150 --> 00:40:06.350

xPH03 - *AT - Richard Lobel: the next slide merely shows on the tax map of a more focused area, which is the two properties with existing ground floor commercial uses. Next slide

314

00:40:07.050 --> 00:40:14.109

xPH03 - *AT - Richard Lobel: the next slide. The area map demonstrates and fall. Why, this is entirely appropriate. There's a

315

00:40:14.120 --> 00:40:27.830

xPH03 - *AT - Richard Lobel: a a street width of one hundred feet along Metropolitan Avenue year. This is an existing, heavily utilized commercial thoroughfare as can be seen from the area map. There are abundant commercial uses along this strip.

316

00:40:27.840 --> 00:40:40.060

xPH03 - *AT - Richard Lobel: Um. The ah commercial overlay here would merely be an extension of existing C two Ah, C. Two districts in the area. Ah! In addition, we would know that the current zoning of the site is R. Five

317

00:40:40.070 --> 00:40:53.439

xPH03 - *AT - Richard Lobel: and R. Five, with community facilities, would permit. A two-far. The R five D. With a commercial overlay here, allows for the same overall if they are merely allowing for the specific uses that are proposing the site

318

00:40:53.450 --> 00:41:00.779

xPH03 - *AT - Richard Lobel: next slide. If you want to page through, there's some photographs in the area. Immediately in the foreground you can see the

319

00:41:00.790 --> 00:41:19.700

xPH03 - *AT - Richard Lobel: adjacent building which already exists. The three stories. The proposed building here will be of similar height. Ah! And the proposal ends with on the the presentation ends with

the site, map, area, map, and floor plans. So again, a very straightforward application approved the United States by the Community board, and we're happy to answer the question.

320

00:41:20.590 --> 00:41:21.770

Vice-Chair Knuckles: Thank you.

321

00:41:21.990 --> 00:41:24.669

Vice-Chair Knuckles: The questions for Mr. Lobell, The

322

00:41:31.950 --> 00:41:34.570

Vice-Chair Knuckles: I don't see any at the moment,

323

00:41:35.130 --> 00:41:37.210

xPH03 - *AT - Richard Lobel: so we'll go to our.

324

00:41:37.250 --> 00:41:39.589

Vice-Chair Knuckles: Am I missing something? No,

325

00:41:39.600 --> 00:41:43.150

Host : no, no, no, no, no, no, no, no, no, no, no, no, no, no, no, no, no, no, no, no, no, No, no hands. Right?

326

00:41:43.160 --> 00:41:47.339

Vice-Chair Knuckles: Okay. Our next speaker is Spiro by Zigos

327

00:41:47.920 --> 00:41:49.590

Vice-Chair Knuckles: spiro Bicycles

328

00:41:49.600 --> 00:41:57.090

xPH03 - *AT - Richard Lobel: vice chair. Spiro is the project architect, and is available for questions, as is of the remainder of the

329

00:41:57.830 --> 00:42:00.389

xPH03 - *AT - Richard Lobel: Okay. Um,

330

00:42:00.960 --> 00:42:08.350

Host : at your discretion by sure, you can just call the names if you want. Oh, yes, okay.

331

00:42:08.510 --> 00:42:09.859

Vice-Chair Knuckles: Ah,

332

00:42:09.880 --> 00:42:11.720

Vice-Chair Knuckles: Robert Thomas

333

00:42:12.320 --> 00:42:15.439

Vice-Chair Knuckles: Amanda Ionadi

334

00:42:16.020 --> 00:42:17.809

Vice-Chair Knuckles: and Kevin Williams.

335

00:42:20.100 --> 00:42:22.529

xPH03 - *AT - Richard Lobel: We any of you wish to speak

336

00:42:26.090 --> 00:42:27.260

xPH03 - *AT - Richard Lobel: all right.

337

00:42:28.350 --> 00:42:30.759

Vice-Chair Knuckles: Are there any other speakers on this item?

338

00:42:31.830 --> 00:42:37.019

Host : There appear to be no more speakers signed up. Further Speaker signed up on this item:

339

00:42:37.130 --> 00:42:39.259

xPH03 - *AT - Richard Lobel: All right, uh,

340

00:42:39.430 --> 00:42:42.299

Vice-Chair Knuckles: then, we will close the hearing.

341

00:42:42.440 --> 00:42:45.069

xPH03 - *AT - Richard Lobel: Thank you. Thank you very much.

342

00:42:48.170 --> 00:42:55.490

Calendar Officer: Of Queens counter. Number sixteen, seventy, nine, eighteen, one Hundred and Sixty Fourth Street, rezoning, Cd. Eight, C, two, two, zero, four, one

343

00:42:55.560 --> 00:42:57.090

for Z. And Q.

344

00:42:57.100 --> 00:43:02.959

Calendar Officer: Public hearing, and the matter of an application for zoning map amendment concerning seventy, nine, eighteen, one Support Street, rezoning the

345

00:43:06.120 --> 00:43:08.180

Vice-Chair Knuckles: Okay, uh

346

00:43:13.190 --> 00:43:14.709

xPH03 - *AT - Richard Lobel: thank you very much.

347

00:43:15.000 --> 00:43:28.249

xPH03 - *AT - Richard Lobel: Um. So again, we have a three-minute presentation. I'm. Joined by Amanda I. Anati from my office, as well as Dr. Mikhail Kantias, the project applicant Victor Forletti the project architect and Kevin Williams of equity environmental.

348

00:43:28.260 --> 00:43:41.500

xPH03 - *AT - Richard Lobel: Um. So we've got a rezoning here seventy, nine to One hundred and Sixty Four street. You can see the building. Ah! Which is a development site before you. Um! That is a four thousand square foot lot, with a roughly four thousand square foot building.

349

00:43:41.510 --> 00:43:50.799

xPH03 - *AT - Richard Lobel: Dr. Kantius, who was with us today, operates a medical laboratory on the second floor, and has done so without incidents since one thousand nine hundred and ninety next slide.

350

00:43:51.750 --> 00:44:19.690

Host : So this rezoning is a very straightforward rezoning, and merely allows for an existing c. One, three overlay to be changed through C, two, three, overlay on nine full lots, and what this enables, in short, is to allow for Dr. Kantius to occupy and use the space for his existing use Group Nine. A medical laboratory. I would know that This is the type of category at which

351

00:44:19.700 --> 00:44:33.519

xPH03 - *AT - Richard Lobel: offensive noise, vibration, smoke, or other particular matter is not permitted. This is a much more routine medical laboratory. Dr. Kantius processes tissue samples here to examine for evidence of cancer next slide.

352

00:44:35.530 --> 00:45:05.039

xPH03 - *AT - Richard Lobel: So what would be permitted? Here again, Dr. Kanty supported the site in one thousand nine hundred and ninety or thirty years ago currently is improved with ground floor and cellar Youth group. Sixty offices occupied by a Queen's Hospital wic program, and The second story is occupied by Dr. Kantes's Medical Research Laboratory. I know the questions from the Review session were centered primarily around environmental issues, and Kenneth Williams will be available to answer those

353

00:45:05.050 --> 00:45:14.899

xPH03 - *AT - Richard Lobel: as as raised by the Commissioners. So the proposed rezoning here would again facilitate the legalization of this existing nonconforming use. Curve. Nine a use next slide.

354

00:45:16.690 --> 00:45:32.129

xPH03 - *AT - Richard Lobel: So again to note, We're on the corner of Union turn by one hundred and sixty-four This is a very busy area. Both of these streets are extra wide streets at one hundred and forty and one hundred and twenty feet, and next slide.

355

00:45:33.380 --> 00:45:50.129

xPH03 - *AT - Richard Lobel: The next slide demonstrates merely the the focus of the area. Again, the development site in red with the rezoning area. But bending around toward the internal, we would note on the zoning map again. We are at the intersection of two wide streets next slide, please,

356

00:45:51.150 --> 00:46:18.900

xPH03 - *AT - Richard Lobel: I think perhaps best seen on the area map. Um, So it's considered to be a benefit to allow for youth groups, seven, nine, fourteen of similar uses, which would not otherwise exist in the C. One district, So there's already an existing C, two district to the north of the site. You can see that three blocks to the north, so it's not a district which is unknown to the area, but again allows for things like this Medical lab and other use group numbers.

357

00:46:19.230 --> 00:46:31.059

xPH03 - *AT - Richard Lobel: So with that, again the photographs and plans are attached, and we are hopeful that the Commission will approve this application, and we're happy to answer any specific question.

358

00:46:32.230 --> 00:46:33.379

Vice-Chair Knuckles: Thank you

359

00:46:35.630 --> 00:46:40.459

Vice-Chair Knuckles: questions for Mr. Lobell or members of his Team

360

00:46:43.780 --> 00:46:45.799

Vice-Chair Knuckles: Commissioner Osorio,

361

00:46:46.390 --> 00:46:59.620

*Comm. Osorio: and thank you. Vice chair, knuckles. I was wondering if I think the applicant said, that you would expand on some of the concerns for questions that were raised regarding the environmental concerns.

362

00:46:59.770 --> 00:47:05.529

*Comm. Osorio: Yeah, I would, if if permitted, I would defer to Kevin Williams of equity environmental for that discussion.

363

00:47:06.470 --> 00:47:24.430

*Comm. Osorio: Hi Kevin, Williams principal planner and equally environmental, or the environmental assessment statement, and I understand that the comments from the Commission primarily ranged on two issues. One was a previous fire department.

364

00:47:24.450 --> 00:47:39.400

xPH03 - *AT - Kevin Williams: Compliance issues, and the other is related to some testimony. I think, that came out of the Community Board. We're large regarding a viral facts database report on the facility. So on the first matter

365

00:47:39.410 --> 00:47:57.420

xPH03 - *AT - Kevin Williams: regarding the fire department, there was an inspection related to the storage of material that was used to process the histopathology. Ah slides um! And so there are a variety of chemicals that are that are used at a facility like this in order to

366

00:47:57.430 --> 00:48:27.230

xPH03 - *AT - Kevin Williams: combined tissue and blood samples. Um, as well as obviously chemical reactions that are needed to identify the presence of of cancers or other Um! Ah! Medical conditions in these slides, and this is stored in a of these ah materials are stored in a in a sealed ah storage location on site, and and obviously how those are stored and processed and removed as important and related to its um

367

00:48:27.240 --> 00:48:38.359

xPH03 - *AT - Kevin Williams: the facilities Department of Health permit which it has been permitted for the entirety of the lab's use. And so those those

368

00:48:38.450 --> 00:48:52.869

xPH03 - *AT - Kevin Williams: concerns from Dot have been resolved, and my understanding are sorry with the fire department have been resolved, and my understanding is that you know, once a new stick of occupancy is issued that that

369

00:48:52.880 --> 00:49:22.599

xPH03 - *AT - Kevin Williams: obviously that that would be subject to alliance with the fire department. But those discussions have already been had in my understanding. There is an agreement in place. Um! And everything has been remedied to date. But obviously, as ah, the use were to be legalized, they would be subject to to those agreements that have been reached with the part of my understanding, and I believe Mr. Labelle's office has submitted the information regarding the cure to the fire department of concerns.

370

00:49:22.610 --> 00:49:35.120

xPH03 - *AT - Kevin Williams: And obviously we'll. If there are more questions on that matter, we can have Richard or Amanda to weigh in on those, but those have been, in fact, cured. Now, regarding the matter

371

00:49:35.130 --> 00:50:05.080

xPH03 - *AT - Kevin Williams: related to the Environmentifax database, which I think has caused some confusion related to how this facility is permitted. Um. The information contained in that report Um. And as in the notes that I believe were forwarded from um shelter of Ltc. Were basically Ah, an explanation of this database and a characterization of the facility as this database basically provides um a compliance. Some reason

372

00:50:05.090 --> 00:50:34.219

*Comm. Osorio: environment packs database which identifies that this is a large source Hazardous um waste disposal facility. That's a gross characterization. So obviously you know the any any time that you have a laboratory anytime. You have a hospital. In fact, the hospital a mile down the street has the same viral facts permit in the process of disposing of medical waste you have to have

373

00:50:34.230 --> 00:50:48.270

xPH03 - *AT - Kevin Williams: by the Department Health from the Wadsville Center, from the State of New York, as the Sephora laboratories has, and in the process of that that's sort of jointly managed by Dec.

374

00:50:48.280 --> 00:51:18.149

xPH03 - *AT - Kevin Williams: The Epa. The concern regarding whether or not this is an epa permit. It is not, and viral facts is a database that has been around for a long time. That basically contains all permitting data from anything that is subject to regulatory land use permits that relate to human health, and in this case, because one of the elements in the doh permit is how you handle and receive such materials in order for the laptop

375

00:51:18.160 --> 00:51:47.140

xPH03 - *AT - Kevin Williams: operate. They need to have a license harder that removes this this material. They need to make sure it's stored correctly, and and they need to make sure whatever compliance matters related to the operational laboratory are in order. And so that's all. The Environmental facts database does is indicate that there's a permit present for the storage of medical materials the storage of the materials that are needed to process

376

00:51:47.150 --> 00:52:16.930

xPH03 - *AT - Kevin Williams: um the ah, the the slides and the and the histopathology laboratory, and and basically it provides um. The history of the biennial of Ah Ah Site visits that are done by Dc. And that's simply all that is a record of, and it, and as the American Acts database shows, there are no existing clients issues. Laboratory Um is in compliance with the requirements of the Department of Health. And so so those are, I think, any other questions for that.

377

00:52:16.940 --> 00:52:28.769

xPH03 - *AT - Kevin Williams: Sorry. There's you know, a lot of some moving pieces here and trying to just clarify. You know how this information, you know, came to the city planning mission's attention.

378

00:52:28.780 --> 00:52:30.389

Vice-Chair Knuckles: Thank you, Mr. Williams,

379

00:52:30.810 --> 00:52:33.579

*Comm. Osorio: by circles. Can I ask our follow a question,

380

00:52:33.700 --> 00:52:34.390

Vice-Chair Knuckles: please.

381

00:52:34.400 --> 00:52:34.990

Vice-Chair Knuckles: Yes,

382

00:52:35.000 --> 00:52:52.540

*Comm. Osorio: thank you. Yeah. I really appreciate the response, And considering anotherizing the questions and concerns that have come up during the process At the review session I raised another question, which is related with the designations that have been placed for the for the last immediately adjacent,

383

00:52:52.550 --> 00:53:13.119

*Comm. Osorio: and so which doesn't include the your property, but I but I but i'm wondering, you know, whether there's going to be a need for an additionally designation to address um any concerns, and or I wanted to know what are the what was the nature of those designations, whether they've been addressed, and what are the implications for the result.

384

00:53:13.130 --> 00:53:29.140

xPH03 - *AT - Kevin Williams: Absolutely, Commissioner. Sorry I forgot that matter. So the designations are our present, I believe, on the former Gas Station Site it's, now a three-story commercial building on what I think it's fifty-three

385

00:53:29.150 --> 00:53:33.460

xPH03 - *AT - Kevin Williams: sorry um at one six thousand two hundred and twenty Union turnpike

386

00:53:33.470 --> 00:54:02.389

xPH03 - *AT - Kevin Williams: um lot fifty-three, and ah! The adjacent to a couple of adjacent sites. So those came about the two thousand and six. Ah, Jamaica hills ah built crest Free Zone. Um! And I think about a good time to ah to review those um, and my firm also does a lot of you to a designation work with oer. So this um The new designations here that were placed in the and the way that you destinations are placed in a rezoning process

387

00:54:02.400 --> 00:54:03.600

xPH03 - *AT - Kevin Williams: is,

388

00:54:03.610 --> 00:54:33.120

xPH03 - *AT - Kevin Williams: and it's explained in that environmental assessment document for Um! What was a city planning sponsor area White rezoning is, you know they have a lot of properties here, and they have to ask themselves. Um, you know this was an r, five d um and a c, one, two to a C, one, three rezoning, and in this case only a sliver of our lot is was changed. Ah! From the ah, the What's the existing designation on site? Um to an R. Five B. So the only thing that impacted our

389

00:54:33.130 --> 00:54:40.559

xPH03 - *AT - Kevin Williams: and the adjacent lots Is this change from A. C, one, two to a C, one, three. And in the course of doing that

390

00:54:40.570 --> 00:55:10.290

xPH03 - *AT - Kevin Williams: what planning staff at the city does Is they? They ask, Okay, what would be induced to be developed right from this? And the criterion that they put forward. Um in the environmental assessment was buildings of a certain age. Um and um the size of the lots, and and whether or not the reduction in parking requirements is merely a change from one to three hundred to one to four hundred, and they also, I think, shortened up the zoning district in that rezoning

391

00:55:10.300 --> 00:55:26.010

xPH03 - *AT - Kevin Williams: one hundred and fifty feet to a one hundred feet depth of the overlay. And basically what they did is and when they, if a site is considered soft, then that the ideas are going to be an in-ground disturbance, and that's when they place an e-designation

392

00:55:26.020 --> 00:55:32.319

xPH03 - *AT - Kevin Williams: so our site in both our rezoning and the at the two thousand and six rezoning the

393

00:55:32.330 --> 00:55:55.090

xPH03 - *AT - Kevin Williams: was not considered to require an E designation, and in two thousand and six the rationale was. Our building was built in one thousand nine hundred and eighty-three, whereas the adjacent buildings were built in the twenties, and thirtys, and were in a less modern state of repair; and in addition, one of the other criteria in that two thousand and six eis that was vas that was done. One hundred and one

394

00:55:55.100 --> 00:56:23.029

xPH03 - *AT - Kevin Williams: was whether or not the use was unique, you know. So what do you have adjacent to our site like dry cleaners, local retail, the kind of slots in and out. So basically the way. The two thousand and six rezoning presumably looked at at Dr. Panty as a site was that it was a a new building, and to the medical laboratory use was unique, and so they did not, therefore place an a designation on the site at that time

395

00:56:23.040 --> 00:56:46.870

xPH03 - *AT - Kevin Williams: for our rezoning um the rationale. Why any designation was not place, because this is simply a legalization, and if there's no in ground disturbance, the building is going to be used. There's no breach of the foundation. They don't place any designation on the site, and this is not my determination. It's just standard practice, and the way that you evaluate that in the hazardous materials. Chapter.

396

00:56:46.880 --> 00:56:51.789

xPH03 - *AT - Kevin Williams: Thank you, Mr. Williams. I just want to see as you as your question been answered,

397

00:56:51.800 --> 00:56:54.290

xPH03 - *AT - Kevin Williams: the one Sorry.

398

00:56:54.300 --> 00:56:55.890

Yes, it has. Thank you.

399

00:56:56.450 --> 00:57:18.170

xPH03 - *AT - Kevin Williams: I I just want to quickly say the status of those he designations. So um the corner lot that had the gas station where a new commercial building was built, that site was remedied and remediated. There have been no new developments on any of the other designated lots. So if those did we have to redevelop or did redevelop, they would have to remediate.

400

00:57:18.180 --> 00:57:23.889

*Comm. Osorio: But but just to clarify. So you just that that last part. Um, just make sure I understood what you said at the end.

401

00:57:23.900 --> 00:57:45.680

*Comm. Osorio: Your rationale, as compared to the two thousand and six rezoning which you know didn't find the need for any designation in your lawn is basically still stamped. You. You do not see any Pernie designation there, because there's not going to be any ground disturbance. Now, if it would be redeveloped. What type of remediate? There, there, Wasn't. At this point we don't anticipate the need for additional remediation for

402

00:57:46.970 --> 00:57:49.030

*Comm. Osorio: Well, okay, thank you. Now

403

00:57:49.040 --> 00:57:50.239

*Comm. Osorio: you got it.

404

00:57:50.250 --> 00:57:52.010

Vice-Chair Knuckles: Thank you, Mr. Williams.

405

00:57:52.020 --> 00:57:54.169

Vice-Chair Knuckles: Other questions.

406

00:57:54.520 --> 00:57:55.600

xPH03 - *AT - Kevin Williams: Four.

407

00:57:56.100 --> 00:57:58.860

Vice-Chair Knuckles: Any of the team members by the Commission,

408

00:57:59.400 --> 00:58:01.189

Vice-Chair Knuckles: but any other questions

409

00:58:02.960 --> 00:58:04.529

Vice-Chair Knuckles: I don't see any

410

00:58:04.590 --> 00:58:06.020

Vice-Chair Knuckles: um.

411

00:58:06.140 --> 00:58:09.510

Vice-Chair Knuckles: Is there anyone else present who would like to speak on this item,

412

00:58:13.720 --> 00:58:18.550

xPH03 - *AT - Richard Lobel: Not the hearing is closed. Thank you. Thank you. Vice Chair,

413

00:58:22.920 --> 00:58:33.459

Calendar Officer: Brooklyn Calendar numbers seventeen through to twenty Livonia, four, Cd. Sixteen, Calendar, number seventeen, c. Two to zero, four, two, seven

414

00:58:34.710 --> 00:58:41.290

Calendar Officer: come to number eighteen, c. Two to zero, four, two, eight, H. Uk, common number nineteen, c. Two, two, zero, four, two, nine Zmk

415

00:58:41.300 --> 00:58:54.649

Host : calendar number twenty in two, two, zero, four, three, zero, zero. Public hearing in the matter of an application for you. Designation of project, approval, disposition of city owned property, and an amendment to an Urban renewal Plan zoning, map and zoning text, and it's consuming a Levon.

416

00:58:59.840 --> 00:59:02.139

Host : It's concerning Livonia for

417

00:59:03.880 --> 00:59:05.690

Vice-Chair Knuckles: having some audio issues there.

418

00:59:05.700 --> 00:59:06.649

Host : Yeah,

419

00:59:09.620 --> 00:59:11.580

Vice-Chair Knuckles: Okay. Ah,

420

00:59:14.960 --> 00:59:23.939

Host : i'm looking for the speakers list. Do you not have it? Sure, I can call the the speakers for you like I have it here.

421

00:59:23.950 --> 00:59:32.160

Host : All right. Let's see. Thank you. Okay. So we have a ten minute team presentation.

422

00:59:32.180 --> 00:59:33.410

Host : Ah,

423

00:59:33.580 --> 00:59:49.889

Host : and the speakers are a part of that Michael Sandler Joshua's guarantee Laurie Garvin, Amy Pivot, Hannah Birdai, David Downs Brian Laughlin, and Jonathan Botler

424

00:59:52.610 --> 00:59:56.099

Vice-Chair Knuckles: is there a Hannah or a die as well.

425

00:59:56.430 --> 00:59:58.950

Host : Yeah, Hannah Burai. Yes.

426

00:59:59.020 --> 01:00:00.489

Vice-Chair Knuckles: Okay. Now I Haven't:

427

01:00:00.500 --> 01:00:02.939

Host : Okay. Now you have it. Okay,

428

01:00:04.760 --> 01:00:07.759

Vice-Chair Knuckles: Okay, Mr. Sandler and Team

429

01:00:10.390 --> 01:00:27.140

Host : Good morning Commissioners. My name is Amy Quebec and I'm. Here, representing the New York City Department of Housing, preservation and development this morning. Thank you so much for having us here to present this proposal for a truly transformative project on three on four sites, along along Withonia Avenue, in Brownsville

430

01:00:27.150 --> 01:00:42.930

xPH04 - *AT - Amy Pivak: Overall. This proposed project will provide approximately four hundred and ninety eight affordable housing units to folks at a range of incomes, including supportive and senior housing and commercial and community facility spaces to respond to the Themes of healthy Living and food systems.

431

01:00:42.940 --> 01:01:10.289

xPH04 - *AT - Amy Pivak: To facilitate the project, Hvd. Requests the following actions: The rezoning from R. Six and R. Six to two, four to R. Seven, two, C, two, four, a zoding text amendment to map and Mih area, urban development action, area, designation, project, approval and disposition of city owned land and an amendment to the Groundsville to urban renewal. Plan to change the land, Use destination of three of the sites from commercial to residential, and we'll go into more detail on those actions later in the presentation.

432

01:01:10.670 --> 01:01:27.600

xPH04 - *AT - Amy Pivak: So, given the range of programs that dissipated on these sites, we have a large team here assembled to move this project forward, and that includes Radstone development. The Brownsville Partnership, Catholic Charities and Seo family of services, as well as Math Ackerman and C. And B. Consulting

433

01:01:27.700 --> 01:01:29.200

xPH04 - *AT - Amy Pivak: next slide, please.

434

01:01:30.930 --> 01:01:40.740

Vice-Chair Knuckles: This project is a result of collaborative community process that started in two thousand and sixteen, with residents and community partners that led to the development of the Browns of the clan.

435

01:01:40.900 --> 01:01:56.179

xPH04 - *AT - Amy Pivak: Following this, Hpd. Released a series of Rfps to meet the community's priorities, including this site, sitesee for healthy living and food systems, and we'll get into how each of these sites supports the goals of the Plan and Rfp. In the following slides:

436

01:01:56.650 --> 01:01:58.350

xPH04 - *AT - Amy Pivak: next slide, please.

437

01:02:00.800 --> 01:02:08.440

xPH04 - *AT - Amy Pivak: So the development team partners have committed with the city to continued outreach in Brownsville after they were awarded this Rfp.

438

01:02:08.510 --> 01:02:19.229

xPH04 - *AT - Amy Pivak: This slide highlights the continuous outreach and community engagement that we that have included a series of public forums, the Hope summits, driveway meetings and door to door outreach.

439

01:02:19.310 --> 01:02:28.689

xPH04 - *AT - Amy Pivak: You do understand, as a team that there have been concerns with communication about encroachments on city property, as expressed at the Community Board Meeting and Borough President. Hearing

440

01:02:29.340 --> 01:02:48.309

xPH04 - *AT - Amy Pivak: this summer, Hb. Property management has been going door to door to meet with neighbors. To discuss these encroachments on a case by case basis. We recognize the need for continuous engagement with our neighbors. As this project moves towards construction, we have had and commit to continue. Having collaborative conversations to resolve these encouragement issues,

441

01:02:48.320 --> 01:02:56.790

xPH04 - *AT - Amy Pivak: conversations with some of the property owners directly affected have progressed since the borough-president hearing, and were happy to further address this during the q and A

442

01:02:56.990 --> 01:03:01.629

next slide, please, and I will be handing it off to Jackie at this point.

443

01:03:02.080 --> 01:03:04.389

xPH04 - *AT - Jaclyn Scarinci: Thanks, Amy. Good morning, Commissioners.

444

01:03:04.400 --> 01:03:16.799

xPH04 - *AT - Jaclyn Scarinci: Livonia Avenue, where all four of the proposed developments are located, is the main thoroughfare in the surrounding area, and the line uses are characterized by mixed-use residential and commercial uses.

445

01:03:16.810 --> 01:03:26.500

xPH04 - *AT - Jaclyn Scarinci: Flavonia. Four consists of the four project sites within two project areas that are adjacent to the elevated three line that runs along the Bonia Avenue

446

01:03:26.590 --> 01:03:35.489

xPH04 - *AT - Jaclyn Scarinci: Project Dairy. One is bounded by Livonia Avenue to the North Powell Street to the east, Mother Gaston to the west and Riverdale Avenue to the south,

447

01:03:36.040 --> 01:03:55.959

xPH04 - *AT - Jaclyn Scarinci: to the north of Project Area one you will see the niche of Van dyke, one in two houses, children, Houses and Brownsville houses built in the nineteen fifty S. And sixty S. Which are more tower in the park, ranging from six to twenty five stories, and to the south the two-story Ne. And my home built in the nineteen eighty S. Next slide please

448

01:03:57.160 --> 01:04:10.030

xPH04 - *AT - Jaclyn Scarinci: project area two is five blocks west of Project Area one, and is founded by Livonia Avenue, Thomas Boyland, Amboy Street and Riverdale Development Site, c. Four sits within product area two,

449

01:04:10.040 --> 01:04:39.920

xPH04 - *AT - Jaclyn Scarinci: and the went, and about the the building and Norman design approach that we applied to all four buildings, and then I'll talk very briefly about what's happening in each one of the buildings. Um, we we really focused on the our, the objectives that were established on the grounds of plan, of of promoting an active mix these corridor Um, We took a full advantage of the opportunity of having four different sites to really mix up the different types of housing that would be provided to the

450

01:04:39.930 --> 01:04:57.789

served and the different community benefits that were being provided made for those buildings. And we're trying to use uh strategic adjacencies with other things going on in the neighborhood uh to to, to, to really kind of uh activate the um if we go to the next planet.

451

01:04:59.170 --> 01:05:24.349

xPH04 - *AT - Brian Loughlin: So each one of the buildings uh has a different way of uh of meeting the different community benefits that. Uh, Jackie just outline um, but in kind of a a quick highlight for each building Uh, C. One has a ten thousand square foot uh farm. It has been the best formative and the

overall retail space of the ground for in two hundred and twenty-five units of work that we have next slide, please,

452

01:05:25.420 --> 01:05:30.030

xPH04 - *AT - Brian Loughlin: c. Two, which is immediately across the street from scene one.

453

01:05:30.530 --> 01:05:48.370

xPH04 - *AT - Brian Loughlin: It has eight units of supportive housing with on-site supported services, a family support center at the ground floor and a job ready in this training center, also to be provided at the ground floor. This building, so it will be open to the entire community Next one, please,

454

01:05:50.420 --> 01:06:18.650

xPH04 - *AT - Jaclyn Scarinci: c. Three, which is just down the block from C one, and t two is our senior building. Um. This building has a one hundred and thirty-nine units of housing before with seniors Um, an eight thousand five hundred square foot senior center that has a variety of open spaces, including a large

455

01:06:18.980 --> 01:06:20.680

xPH04 - *AT - Brian Loughlin: Uh. Next slide,

456

01:06:22.850 --> 01:06:30.509

xPH04 - *AT - Brian Loughlin: C Four is the last building, and it is a little bit down the road, but still pneumonia, and directly across from Betty that park.

457

01:06:30.520 --> 01:06:52.120

xPH04 - *AT - Brian Loughlin: Um! So that is that a prime candidate for a twenty-five thousand square foot Use Recreation Center um, which will be programmed in such a way to complement operate outdoor activities across the street. In addition to this use Recreation center. It has multiple levels of accessible outdoor space for residents, and then at fifty-four you fifty four units of

458

01:06:53.200 --> 01:06:54.860

xPH04 - *AT - Brian Loughlin: next slide, please.

459

01:06:56.600 --> 01:07:01.319

So with that I turn it back over to Jackie, who can summarize the land use actions?

460

01:07:01.740 --> 01:07:11.090

xPH04 - *AT - Jaclyn Scarinci: Yeah. So I know. Amy highlighted the actions at the beginning of the presentation. But just to walk you through more specifically,

461

01:07:11.130 --> 01:07:16.509

xPH04 - *AT - Jaclyn Scarinci: we have a rezoning mih text amendment, you

462

01:07:16.540 --> 01:07:21.210

xPH04 - *AT - Jaclyn Scarinci: and disposition of city on property and amendment to the urban renewal plan.

463

01:07:21.330 --> 01:07:23.619

xPH04 - *AT - Jaclyn Scarinci: Happy to answer questions as well.

464

01:07:24.830 --> 01:07:26.040

Vice-Chair Knuckles: Thank you.

465

01:07:26.510 --> 01:07:29.299

Vice-Chair Knuckles: See if there are questions from the Commission

466

01:07:31.670 --> 01:07:33.090

Vice-Chair Knuckles: are there?

467

01:07:34.970 --> 01:07:36.450

Host : Let's see your hand up

468

01:07:36.460 --> 01:07:38.919

Host : right right. Sorry,

469

01:07:38.930 --> 01:07:40.490

Vice-Chair Knuckles: Commission of Sorio.

470

01:07:41.020 --> 01:07:46.689

Host : I think Commissioner Kurmani are going to have her hand up first. Yep, she does Sorry about that.

471

01:07:46.700 --> 01:08:03.339

*Comm. Kirmani: Oh, no problem, thank you. Krishna Samario. Thank you. Vice chair, knuckles. Thank you for the presentation to the team. Um, So just can you talk? Can you talk a little bit more about the mitigation of the encroachment issues with the Ne. My home.

472

01:08:04.260 --> 01:08:08.919

*Comm. Kirmani: Yeah, I would be happy to speak to that. My name is Michael Sandler. I'm. An Assistant Commissioner.

473

01:08:08.930 --> 01:08:16.659

xPH04 - *AT - Michael Sandler: He. Um. So you know. First Hpd wanted to acknowledge the leadership and investment of the Ami home owners who long ago,

474

01:08:17.060 --> 01:08:25.990

Host : with conversion of my land into a portable home ownership and his investment in this community really bad. Uh, by the foundation of this.

475

01:08:26.000 --> 01:08:45.959

xPH04 - *AT - Michael Sandler: So on any signs of even taken from one time, it's pretty common, but it would be minor replacement issues, especially from on this project. We have four sites and twelve properties, so that there are some encroachments where fences are not in the exact right place where you want to see them in the property line. Um! Regarding the Vmi homeowners, there are five

476

01:08:45.970 --> 01:09:00.660

xPH04 - *AT - Michael Sandler: in my homes that are adjacent to these sites. Um! Three of those have, or had a minor encroachments from fences or shares. Um. One of those has already been resolved. Um, the two remaining

477

01:09:01.330 --> 01:09:04.249

adjacent to site, c. One, and our

478

01:09:04.279 --> 01:09:08.149

xPH04 - *AT - Michael Sandler: rains from around eight inches to around five feet.

479

01:09:08.270 --> 01:09:16.510

xPH04 - *AT - Michael Sandler: But these are very minor. We are very confident in being able to resolve these

480

01:09:16.939 --> 01:09:24.189

xPH04 - *AT - Michael Sandler: directly in touch with Uh. The the owner of one of these two sites, and a reviewing some materials that she sent to us

481

01:09:25.250 --> 01:09:27.829

xPH04 - *AT - Michael Sandler: to the other owners Zoom. We've contacted them.

482

01:09:27.840 --> 01:09:33.689

xPH04 - *AT - Michael Sandler: So we really hope to have a collaborative conversation with each homeowner in the case of advance for a shared.

483

01:09:33.700 --> 01:09:35.689

xPH04 - *AT - Michael Sandler: And you think this can be done it

484

01:09:35.700 --> 01:09:37.809

little or no cost to the homeowner.

485

01:09:37.819 --> 01:09:41.859

xPH04 - *AT - Michael Sandler: There was very little impact on the livability of their property, owner

486

01:09:41.870 --> 01:09:47.009

of the property that we think it could really improve the ability of these properties.

487

01:09:47.220 --> 01:09:49.090

You know new fans at the end of it

488

01:09:49.100 --> 01:09:52.920

xPH04 - *AT - Michael Sandler: a better maintained property next door, with onsite billing

489

01:09:54.730 --> 01:09:59.869

xPH04 - *AT - Michael Sandler: and new lighting. So I believe they answer the question. But i'm happy to answer any.

490

01:10:00.520 --> 01:10:01.769

*Comm. Kirmani: Thank you,

491

01:10:03.000 --> 01:10:05.089

Vice-Chair Knuckles: uh Commissioner Osorio,

492

01:10:05.100 --> 01:10:18.289

*Comm. Osorio: and thank you. Vice Chair, just to build on the previous point, and thanks for highlighting this as part of the Presentation, that each Pd. Is knocking door-to-door that you're doing outreach to try to address the remaining engagement

493

01:10:18.300 --> 01:10:39.050

*Comm. Osorio: issues but I just want to highlight that there's been significant controversy around the way in which the process in which this conversation plans in hell. So i'm wondering if you can explain. In addition to individual outreach. Have there been meetings? Have you been working with the community groups which is there? There's a strong legacy we are when you're organizing.

494

01:10:39.060 --> 01:10:46.950

*Comm. Osorio: To what extent can you describe the outreach process regarding your handling of the issue

495

01:10:47.190 --> 01:10:47.690

xPH04 - *AT - Michael Sandler: to the

496

01:10:47.700 --> 01:11:06.789

xPH04 - *AT - Michael Sandler: yeah, I mean, I think i'll say first that I I don't think that it's that's a shining example of i'm about handling an issue like this. We've had significant turnover on our team over the last few years, and this project has been solely at times, and I think that is called some real delays and getting back to people.

497

01:11:06.800 --> 01:11:10.189

xPH04 - *AT - Michael Sandler: So the inconsistency and the way that we communicate into the

498

01:11:10.200 --> 01:11:14.690

xPH04 - *AT - Michael Sandler: So I think you know we've. We've apologized in public forum. So this you know.

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01:11:14.700 --> 01:11:25.640

xPH04 - *AT - Michael Sandler: I apologize directly to the homeowners as well. Um, we we've sent letters to the homeowners about the encroachment, asking them to correct them and

500

01:11:26.310 --> 01:11:46.589

xPH04 - *AT - Michael Sandler: contact information. Two thousand and nineteen. Each of these property management team visited the area and spoke with homeowners. At that time the conversations were were amicable, and then last year we had a series of public forums uh about the project that included representatives from,

501

01:11:46.600 --> 01:11:51.189

xPH04 - *AT - Michael Sandler: I think, One of the challenges that's happened is that Hpt. And the project team has been

502

01:11:51.200 --> 01:11:53.790

xPH04 - *AT - Michael Sandler: hesitant to speak at a public forum

503

01:11:53.800 --> 01:11:54.800

xPH04 - *AT - Michael Sandler: about in

504

01:11:55.070 --> 01:11:58.510

xPH04 - *AT - Michael Sandler: about issues that impact an individual's property,

505

01:11:58.780 --> 01:12:06.589

xPH04 - *AT - Michael Sandler: and and so I think that that's applied to a lot of distrust uh between between Hd. And some of the you know the Homeowners Association.

506

01:12:06.600 --> 01:12:07.090

xPH04 - *AT - Michael Sandler: It's a

507

01:12:07.100 --> 01:12:13.909

xPH04 - *AT - Michael Sandler: I'll acknowledge the challenges on our team again from the long timeline and the transitions that we have,

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01:12:13.920 --> 01:12:17.589

and I think that we're on the right footing. Now I hope that we're on

509

01:12:17.600 --> 01:12:24.829

xPH04 - *AT - Michael Sandler: a better footing than we have been in the past. And, as I said, these are really minor

510

01:12:24.940 --> 01:12:26.290

and my homeowners, and

511

01:12:26.300 --> 01:12:30.310

xPH04 - *AT - Michael Sandler: really I don't think that they are going to cause

512

01:12:30.410 --> 01:12:33.730

xPH04 - *AT - Michael Sandler: for the homeowners. We really believe they can do this all

513

01:12:34.630 --> 01:12:37.359

and little or no.

514

01:12:37.370 --> 01:12:48.510

*Comm. Osorio: Thank you for your response, and I do believe that, given the presentation, and we discussed today, these disagreements can be sold, and I really encourage you to take

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01:12:48.520 --> 01:13:05.810

*Comm. Osorio: on those additional steps that you mentioned. I specifically highlight the opportunity here to really build on the legacy of the Brownshield plan, and engage as many organizations as possible, and really making sure that this this conversation, you know, can be addressed and doesn't jeopardize the Livonia for a project.

516

01:13:05.820 --> 01:13:08.720

*Comm. Osorio: I have another question. If I stere, if I may

517

01:13:08.730 --> 01:13:28.490

*Comm. Osorio: please. Thank you. Yeah. This. The other question is about the fifteen accessory parking units that are being proposed, which the Review sessions clarified. They're related with the supermarkets, not with. They're not intended for the residents. But you know this is an area that has a robust public transportation system, and hearing that

518

01:13:28.500 --> 01:13:43.080

*Comm. Osorio: this is really just for the supermarket. I'm wondering if you can explain a little bit the rationale for this, and whether or not there could be more innovative ways of really planning for this land. I mean, this is a

519

01:13:43.100 --> 01:13:53.270

*Comm. Osorio: public land, and this is a neighborhood that requires as much public investment as possible, and creating more accessory parking lots. I'm wondering if that's the best use for that.

520

01:13:56.210 --> 01:14:25.729

xPH04 - *AT - Brian Loughlin: Yeah, I'm: I'm: i'm with the winner is happy to answer that question. Um, we uh are not required um to to provide that parking. Um, as as you mentioned it's it's very uh transportation, which, but through the public media process that we we outlined as part of our presentation. Um, the issue of parking, especially around some of the commercial spaces that we're going to include at around four c. One kept coming.

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01:14:26.040 --> 01:14:54.519

xPH04 - *AT - Brian Loughlin: Um! And it It was something that frankly, our residents kept asking for over again. And so it was. It came out of those conversations. Um! And the request of the of of community residents for some parking um to be provided uh in in connection with that space. Um As part of that process. We also looked at, uh, potentially, including parking in the three other buildings and um into the conclusion that it was just

522

01:14:54.530 --> 01:15:19.020

xPH04 - *AT - Brian Loughlin: one clause, reconvene, and then to uh, not, as you say, not the best use of those spaces, c. One has a pretty substantial footprint, so it was really soon as the only place that we had any opportunity to include parking, and and we included it uh below, so that it would not interfere with this uh some Um, but that's sort of the pathology of how we get to those spaces. And then

523

01:15:22.180 --> 01:15:24.269

Vice-Chair Knuckles: you're muted our Commissioner.

524

01:15:24.930 --> 01:15:40.829

*Comm. Osorio: Thank you. Thank you. I, sir. Yes, I was just saying that I appreciate the response, and specifically appreciate the fact that you're testifying that this is in response to a community request. It's just. I just encourage you to all of us really to think about.

525

01:15:40.840 --> 01:15:54.629

*Comm. Osorio: How do we really take advantage of public transit and transportation, and really think about better ways of addressing this dilemma, because in areas where the infrastructure exists we can do better

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01:15:56.530 --> 01:15:59.260

*Comm. Osorio: understood. Thank you.

527

01:16:07.000 --> 01:16:25.109

Vice-Chair Knuckles: Thank you. Chair. So, Adam Michael a pleasure to see you. I want to go back to one of to the, to the encroachment. What type of any assistance would the city offer? I mean, we have to understand that the city's ability to build out this lot has been complicated throughout the years. Many laws.

528

01:16:25.120 --> 01:16:43.950

*Comm. Marin: Some who want to do this because of the bad survey, or because they may have one to say, those five feet and beautify their garden, or you can put concrete down in a fence, right? They've invested this time and money. Whether or not it was right, it's a different issue. Right? What type of assistance would the city try to offer those folks

529

01:16:43.960 --> 01:16:49.330

appease them into making sure they can move their property lines back to where they belong

530

01:16:50.610 --> 01:16:57.100

xPH04 - *AT - Michael Sandler: so so specifically regarding the Neia Maya homeowners. You know we had initially reached out in two thousand and nineteen at game

531

01:16:57.120 --> 01:17:23.980

xPH04 - *AT - Michael Sandler: or defenses to be new. We we now would like to have a direct conversation with the homeowners, and think that we could accomplish potentially if if we have a collaborative relationship with the owners, the other, we can widely accomplish a moving offense to where it needs to be um as part of an instruction process. And so that would not necessitate the the quarters. Necessarily,

532

01:17:23.990 --> 01:17:25.900

I said, we have twelve

533

01:17:25.910 --> 01:17:46.120

xPH04 - *AT - Michael Sandler: uh twelve neighbors, only five of whom are in the Mi homeowners. So there are some other encouragements on other sites that we do feel are important to be addressed in advance. But we're learning the Nemi a homeowner. We We think that this could likely be accomplished as part of the construction process. Um where the owners are not themselves into the work or

534

01:17:46.920 --> 01:17:52.260

xPH04 - *AT - Michael Sandler: correct. But then the project would absorb any cost. So I understand, Michael, I appreciate it. Thank you.

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01:17:53.520 --> 01:17:55.460

Vice-Chair Knuckles: Thank you, Commissioner Gold.

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01:17:55.840 --> 01:18:10.869

*Comm. Gold: I thank you. Vice chair. So that's not to belabor the point, because I think you can do that. Well, it's just obviously I think what you're getting from this side is certainly given. How important this project is! Certainly we don't want it to be derailed

537

01:18:11.230 --> 01:18:25.920

*Comm. Gold: by some other issues that can be dealt with easily, I guess, if it can go back to how many of the encroachment of just fences, how many, you know, basically I guess, just trying to get a sense for how

538

01:18:25.960 --> 01:18:30.789

significant the work could be to just get that all resolved.

539

01:18:32.290 --> 01:18:38.190

xPH04 - *AT - Michael Sandler: So regarding the Nehemiah of owners where there are encroachments. Those are fences and sheds.

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01:18:38.200 --> 01:18:41.089

xPH04 - *AT - Michael Sandler: So they are not. Yeah, they don't impact the

541

01:18:41.100 --> 01:18:43.290

homeowner. The homes themselves.

542

01:18:43.300 --> 01:18:49.790

xPH04 - *AT - Michael Sandler: As I said, we have some other encroachments that are that are not fences and sheds, but that we are having a

543

01:18:49.800 --> 01:18:53.160

xPH04 - *AT - Michael Sandler: neighbouring property owners, and and have not become,

544

01:18:53.170 --> 01:18:56.399

you know, as as critical issues in the of the population.

545

01:18:56.410 --> 01:18:57.699

xPH04 - *AT - Michael Sandler: The in my home

546

01:18:58.340 --> 01:19:05.490

*Comm. Gold: got it and got it, and those, I mean in those cases those are more significant. Are they overbuilt, or is it really

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01:19:05.500 --> 01:19:09.690

xPH04 - *AT - Michael Sandler: no sorry? None of the none of the enquiries involved actual building.

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01:19:09.700 --> 01:19:10.289

They are all

549

01:19:10.300 --> 01:19:14.389

offenses, sheds for cleaning walls uh things like that.

550

01:19:14.400 --> 01:19:21.299

xPH04 - *AT - Michael Sandler: So they're all things that can be resolved through the construction process or through.

551

01:19:22.470 --> 01:19:41.119

*Comm. Gold: Got it Got it? Yeah, It all sounds very manageable, and also encouraged to hear that it perhaps is a path forward to help some of these folks get a result during the construction project. So as I say, yeah, and certainly We did not want this to get in the way of what seems to be such an important and such a terrific project.

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01:19:41.130 --> 01:19:42.469

Ah, thank you,

553

01:19:43.120 --> 01:19:45.349

*Comm. Gold: thank you, Commissioner Bernie.

554

01:19:45.800 --> 01:20:03.770

*Comm. Burney: Oh, thank you. Um. On on site c. Three. There's a landscape activity, space, and the question had come up in review as to the nature of that space. Was it publicly accessible? Or is it just part of the senior center? How is it to be programmed and landscaped? Could you speak briefly to that

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01:20:05.940 --> 01:20:23.880

xPH04 - *AT - David Downs: sure Commissioner Um, David Downs, appreciate your question on behalf of Catholic charities we are committed to ah providing this as publicly accessible faith that we will maintain, and in perpetuity with our ownership and maintenance and management of the the building as a whole.

556

01:20:23.890 --> 01:20:40.869

xPH04 - *AT - David Downs: As Brian had mentioned in the overview of C. Three. We are looking forward to um a full community, shorette, or sort of visioning session sort of. Once we get out of the lurk. The idea was, You know, there's been a lot of

557

01:20:40.880 --> 01:20:54.770

*Comm. Burney: sort of turn on the encroachment issues that we wanted to to have a a focus on the divisioning and the the opportunity for the site there. So look forward to that coming up post- You work with the community input.

558

01:20:54.780 --> 01:21:01.139

*Comm. Burney: That that's true of it because this is an Ed that that likes a good public open space of any sort. So i'm happy to hear that.

559

01:21:05.450 --> 01:21:09.799

*Comm. Burney: Thank you, Commissioner Bernie. Are there other questions from the commission.

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01:21:10.810 --> 01:21:21.630

*Comm. Kirmani: Yes, Vice chair, if I may just ask one other, please. Thank you. So just because you you mentioned that the Shorette and I know this may be

561

01:21:21.700 --> 01:21:40.320

*Comm. Kirmani: more of a question um to to H. Pd. But given what I know about Brownsville over the years and the the real desire for a grocery store, I mean. There are grocery stores in in Brownsville that have throughout the years provided substandard produce meat services.

562

01:21:40.330 --> 01:21:48.700

*Comm. Kirmani: Will the grocery store and be part of the shorette process, and will residents have? Some say Will there be some sort of

563

01:21:48.710 --> 01:22:01.370

*Comm. Kirmani: the governance decision process for a democratic decision-making process for governance where Presidents might weigh in on the vendor, or how that space would be best for them.

564

01:22:03.200 --> 01:22:05.359

I didn't understand that

565

01:22:08.790 --> 01:22:10.300

*Comm. Kirmani: it's like um.

566

01:22:10.720 --> 01:22:12.880

Host : Do I need to repeat the question,

567

01:22:13.160 --> 01:22:14.490

xPH04 - *AT - Hannah Burdei: No, it's

568

01:22:15.330 --> 01:22:30.920

Host : Hi. So i'm Hanover Day. I'm with a rats and development. We're the designated developer for c. One regarding the supermarket at this point in time. It's It's too early to have a commitment from a specific

569

01:22:30.930 --> 01:23:00.399

xPH04 - *AT - Hannah Burdei: tenant. But throughout our community visioning meetings that we've had. We've had a lot of feedback from the community regarding the type of ah grocery store that they're looking for, and the types of goods that they're looking to purchase. And I will echo what you said regarding the desire to have more fresh, healthy foods, and that's the type of grocery store that we will be focused

570

01:23:00.410 --> 01:23:18.299

xPH04 - *AT - Hannah Burdei: on. You know That's an important element of the project overall focusing on healthy, living, healthy lifestyles. And as we move um, you know, closer to the time of actually beginning the construction on the project that's closer to

571

01:23:18.310 --> 01:23:26.610

xPH04 - *AT - Hannah Burdei: conversations with potential tenants. You know that'll be an important element of the the types of tenants we're looking for.

572

01:23:28.890 --> 01:23:30.080

*Comm. Kirmani: Thank you.

573

01:23:31.100 --> 01:23:33.950

Vice-Chair Knuckles: Other questions from the Commission.

574

01:23:37.390 --> 01:23:42.590

Vice-Chair Knuckles: I take one last look. I don't think I see any.

575

01:23:43.330 --> 01:23:45.710

Host : I don't see any further questions here.

576

01:23:45.720 --> 01:23:54.579

Host : Other public speakers, Ryan. There are two public speakers so far signed up that you like I would call

577

01:23:55.130 --> 01:23:58.660

Host : uh on your screen now,

578

01:24:00.920 --> 01:24:08.380

Host : and Stephanie Roberts Stephanie Roberts, to be followed by Keith. Little the

579

01:24:09.020 --> 01:24:12.259

Host : this Miss Roberts, are you there?

580

01:24:14.090 --> 01:24:17.049

Host : Yes, we can please Robins.

581

01:24:18.610 --> 01:24:22.029

xPH04 - 06 - Stephanie Roberts: Hi! Good morning, Everyone hear me. Yes,

582

01:24:22.080 --> 01:24:28.820

xPH04 - 06 - Stephanie Roberts: hi! Good morning. Thank you for this opportunity. I am one of the homeowners that's adjacent to

583

01:24:29.000 --> 01:24:30.510

xPH04 - 06 - Stephanie Roberts: the

584

01:24:30.920 --> 01:24:36.780

xPH04 - 06 - Stephanie Roberts: That's the one development for Sorry

585

01:24:37.530 --> 01:24:39.879

xPH04 - 06 - Stephanie Roberts: for the for the

586

01:24:40.530 --> 01:24:59.460

xPH04 - 06 - Stephanie Roberts: first building that's being built. I'm one of the homeowners um. I wanted to speak today to address that um hpd hadn't been in contact with us so formally up until the year that meeting That was done back early in early July,

587

01:24:59.980 --> 01:25:07.670

xPH04 - 06 - Stephanie Roberts: so I know that Michael explained that livability would be better off, that we change our fence

588

01:25:07.980 --> 01:25:09.059

xPH04 - 06 - Stephanie Roberts: back

589

01:25:09.070 --> 01:25:33.030

xPH04 - 06 - Stephanie Roberts: where the line would be permitted. But the thing is that livability for us would be to keep offense line where it's. Fancy me and my earth has had these homes over fifty years ago. So these fences were built during that timeframe, and so we have had. My husband and I have owned his home for over twenty years, and so for us to now move that fence line back. But we've been

590

01:25:33.070 --> 01:25:44.789

xPH04 - 06 - Stephanie Roberts: keeping up with this property for all this time is a disservice to us. I think that Hpd should work better with us, so that we can keep offense. So I see our fence is beautiful. We have already

591

01:25:44.820 --> 01:26:08.809

xPH04 - 06 - Stephanie Roberts: we structured our fence. We don't need a new fence or them to provide us with a new fence in order to make our homes more beautiful. We love the fact that you know they're building a new building, and all these overgrown trees will no longer be there, and that people will be able to have homes affordable homes, but at the same time it should not be a a service to us. We should be able to keep offense lives where they are.

592

01:26:08.820 --> 01:26:10.240

xPH04 - 06 - Stephanie Roberts: Thank you very much.

593

01:26:10.760 --> 01:26:14.090

PH04 - 11 - Keith Little: Thank you, Miss Roberts. Let me see if there are any questions

594

01:26:14.100 --> 01:26:15.510

Vice-Chair Knuckles: uh for you.

595

01:26:16.060 --> 01:26:18.639

Vice-Chair Knuckles: Are there any questions for Miss Roberts?

596

01:26:22.600 --> 01:26:26.490

Host : I don't see the rain has his hand up.

597

01:26:26.780 --> 01:26:46.350

*Comm. Marin: Thank you, Ryan. Mr. Roberts. I have a question for you, and I realized that your statement was at the home fifty years ago. You do have a closing survey, and your survey would indicate where your property line is. So I would suggest that you present that the Hpd. And anyone else that the question

598

01:26:46.400 --> 01:26:52.490

you know the bottom line here is, and we all know this once once you past ten years, you know it's. It's

599

01:26:52.940 --> 01:27:04.710

you have to that adverse possession. And unfortunately, that's what the city is dealing with in these situations. So I would just suggest you have all your documents in order, and then speak to Michael and team and some amicable revolution.

600

01:27:06.760 --> 01:27:15.010

xPH04 - 06 - Stephanie Roberts: Absolutely. I do have that. Actually. H. Pd. Sent me the copy of it. So I do have it, and i'll definitely turn it back into them. Thank you very much.

601

01:27:16.470 --> 01:27:19.060

PH04 - 11 - Keith Little: Thank you. Other questions for Ms. Roberts.

602

01:27:22.710 --> 01:27:25.289

Vice-Chair Knuckles: Don't believe I see any. Thank you, Miss Roberts.

603

01:27:25.500 --> 01:27:29.949

Vice-Chair Knuckles: Our next speaker is Keith, little Mr. Little.

604

01:27:30.240 --> 01:27:35.529

PH04 - 11 - Keith Little: Yep. Good morning, and thanks for the time. Hopefully, You guys can hear me.

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01:27:35.540 --> 01:27:53.020

PH04 - 11 - Keith Little: Yeah. My name is Keith. Well, I'm. President and Ceo of Seo family of services, but i'm also a board member of the Brownsville partnership. So obviously There's an investment here for those of you who are not familiar with. Scl. Sel is one of the largest human services providers in the State of New York

606

01:27:53.030 --> 01:28:08.469

PH04 - 11 - Keith Little: we provide a array of services, education, community, wellness, preventive and foster care, youth, justice, services, housing services, and support for the intellectually and developmentally disabled. We have been a part of the

607

01:28:08.480 --> 01:28:17.960

PH04 - 11 - Keith Little: A. Brownfield community since the nineteen eighty S. We operate about fifteen programs in the community of Brownfield. So obviously there is a significant investment.

608

01:28:18.060 --> 01:28:31.830

PH04 - 11 - Keith Little: We're also one of the backbone of one of two backbone organizations for the United for Brownsville initiative, which focused on social emotional and language to development for families and children ages at zero to three.

609

01:28:32.480 --> 01:28:43.030

PH04 - 11 - Keith Little: One of the challenges that we see being a human services, provider is with transition, age, youth, and young adults and providing services for them.

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01:28:43.040 --> 01:28:56.700

PH04 - 11 - Keith Little: Obviously, at being in this business. I see a need in New York City for affordable housing for young families and youth, transitioning from child welfare and homeless services into a Delta. It's always been a challenge.

611

01:28:56.710 --> 01:29:09.589

PH04 - 11 - Keith Little: I also see a need to supplement housing with opportunities to develop workforce skill sets that will assist the individuals we service, but also communities that we service. In.

612

01:29:09.810 --> 01:29:21.539

PH04 - 11 - Keith Little: In my opinion, the Livonia Ii project provides a unique opportunity, an essential opportunity to provide eighty units of affordable supportive housing,

613

01:29:21.550 --> 01:29:40.719

PH04 - 11 - Keith Little: also family support services, healthy alternatives, and with additional and I underland. This, with additional supports from New York City government and private investors, the establishment of a much needed career, readiness and development center that would benefit both the residents of the building that we're part of,

614

01:29:40.730 --> 01:29:43.999

PH04 - 11 - Keith Little: but also would benefit the community of Brownsville.

615

01:29:44.250 --> 01:30:01.639

PH04 - 11 - Keith Little: I think the need to provide supportive housing and other services that assist individuals in need as well as focus on uplifting and empowering communities of color is essential. In my opinion. I I fully endorse C Two and the Livonia Project, and I Thank you, guys, for the time.

616

01:30:02.260 --> 01:30:04.739

Vice-Chair Knuckles: Thank you, Mr. Little questions

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01:30:04.890 --> 01:30:06.380

Vice-Chair Knuckles: for Mr. Little.

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01:30:09.840 --> 01:30:13.950

Vice-Chair Knuckles: I don't see any. Thank you for your testimony, sir.

619

01:30:14.810 --> 01:30:21.090

Vice-Chair Knuckles: There any other speakers present who would like to speak on this item? The

620

01:30:23.860 --> 01:30:25.150

Vice-Chair Knuckles: if not

621

01:30:25.560 --> 01:30:28.340

Host : the hearing, is close. Thank you.

622

01:30:31.680 --> 01:30:50.790

Host : Era Brooklyn Calendar numbers twenty, one and twenty, two, one thousand five hundred and seventy, one Mcdonald Avenue, Cd. Twelve Calendar number twenty, one, C, two hundred and three zero Emk Calendar number twenty, two, n two, one, zero, two three one Zrk public hearing in the matter of an application for zoning map and zoning text amendments concerning

623

01:30:50.800 --> 01:30:52.639

Calendar Officer: one thousand five hundred and seventy-one. Mcdonald's

624

01:30:55.450 --> 01:31:01.560

Vice-Chair Knuckles: Okay, this is a team presentation of ten minutes.

625

01:31:02.050 --> 01:31:03.400

Vice-Chair Knuckles: Um.

626

01:31:03.720 --> 01:31:08.679

Vice-Chair Knuckles: I see the developer. One thousand five hundred and seventy. One development Llc:

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01:31:08.920 --> 01:31:11.719

Vice-Chair Knuckles: Uh: the architecture Firm

628

01:31:12.040 --> 01:31:17.990

Vice-Chair Knuckles: Land use council with Cousin O'connor and the Environmental Studies Corporation.

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01:31:18.020 --> 01:31:19.689

Vice-Chair Knuckles: Uh, please proceed.

630

01:31:25.720 --> 01:31:33.169

xPH05 - *AT - Rachel Scall: Sorry. It looks like my team members are missing. Ken Fisher and Sergey Ry. Back. I think, are waiting to be let them.

631

01:31:33.790 --> 01:31:36.790

Vice-Chair Knuckles: Okay, uh, Do you want to start?

632

01:31:37.350 --> 01:31:43.630

Host : We have? We have Sergey There's Ken all

633

01:31:44.060 --> 01:31:46.799

xPH05 - *AT - Rachel Scall: it's going to kick us off, so just give it a second.

634

01:31:50.060 --> 01:31:52.590

xPH05 - *AT - Sergey Rybak: Hello, everyone! Can you guys hear me or and see me?

635

01:31:52.600 --> 01:31:55.179

Vice-Chair Knuckles: Yes, yes, we can hear you.

636

01:31:59.770 --> 01:32:01.889

xPH05 - *AT - Sergey Rybak: I'm not sure. Can you guys see me as well?

637

01:32:01.900 --> 01:32:05.529

Host : Yes, you can see how. How is everyone?

638

01:32:05.590 --> 01:32:25.460

Host : Okay? First and foremost, I would like to thank all the Commissioners and city planning for hearing our application. I'm. Sergei Rivak i'm. One of the principals of the development, Llc. One thousand five hundred and seventy one development. Ah, Llc. We are the owner of the property at one thousand seven hundred and fifty-seven.

639

01:32:25.470 --> 01:32:36.079

xPH05 - *AT - Sergey Rybak: Mcdonald Avenue currently we are redeveloping the majority of the property into a world-class spot facility.

640

01:32:36.420 --> 01:32:44.760

xPH05 - *AT - Sergey Rybak: We've been developing this project since two thousand and seventeen, and we are approximately,

641

01:32:45.130 --> 01:32:53.860

xPH05 - *AT - Sergey Rybak: I would say, two months away from a soft opening from a soft block. We actually just recently passed our construction final inspection,

642

01:32:53.930 --> 01:33:05.280

xPH05 - *AT - Sergey Rybak: which was not an easy task. But but we did it approximately two years ago. Our adjoining lock, which was a furniture store.

643

01:33:05.290 --> 01:33:21.000

xPH05 - *AT - Sergey Rybak: Ah closed its doors, and this allowed us to contact our architect, and he proposed a possibility of rezoning the property to add much needed housing to the to the block.

644

01:33:21.030 --> 01:33:34.419

xPH05 - *AT - Sergey Rybak: Since the majority of the block we occupied the a substantial portion of block, we thought it would be a very good opportunity to pursue this application and to bring much needed housing.

645

01:33:34.460 --> 01:33:49.170

xPH05 - *AT - Sergey Rybak: Ah! That we felt the community needs. I would like to introduce to other members of our team, Rachel Sackle and Kan Fisher, and thank you again for the opportunity, and we will address any questions that you may have.

646

01:33:49.200 --> 01:33:50.530

xPH05 - *AT - Sergey Rybak: Thank you, Commissioners.

647

01:33:50.790 --> 01:33:58.809

xPH05 - *AT - Rachel Scall: Good morning, everyone. My name is Rachel Scall, and I'm an associate at code of Cousin O'connor. We're Land Use Council for the applicant next slide, please.

648

01:33:59.210 --> 01:34:16.010

xPH05 - *AT - Rachel Scall: The proposed rezoning areas on the east side of Mcdonald Avenue, between Avenues and N. The development site is just more like the entrance to the the avenue and subway station, and the station itself, as well as the above rate of train tracks, are adjacent to the site. Next slide, please.

649

01:34:16.660 --> 01:34:35.800

xPH05 - *AT - Rachel Scall: The proposed rezoning area is in Brooklyn, P. Or twelve, on the border of Midwood and Brook Park, within the special Ocean Ocean partway district which will not be affected by the proposed rezoning you're proposing. Theresa May, Mcdonald Avenue block from its current, R. Five, C, two, three to A. C, four, four L district, which is an R. Seven, A.

650

01:34:35.810 --> 01:35:03.699

xPH05 - *AT - Rachel Scall: The C. Four L. Zoning district is specifically tailored for commercial corridors, featuring elevated subway lines. It is intended to ensure adequate light and air reach the sidewalk below the elevated rail line by establishing an appropriate distance between a building software force and track. As part of this application we are also proposed in terms of the C. Two, three commercial overlay in the southwest corner of Avenue M. And the second street to bring zoning in line with the existing uses.

651

01:35:04.850 --> 01:35:22.309

xPH05 - *AT - Rachel Scall: The proposed rezoning would allow us to enlarge the existing spot building that Sergei mentioned on the development site, which is lots sixty out here in red. The remaining sites

within the rezoning area are individually owned. We are not aware of any redevelopment Events on those sites that would start with this freezoning next slide, please.

652

01:35:22.920 --> 01:35:40.740

xPH05 - *AT - Rachel Scall: Um! Here's an image of this box. It's actually a photo that was just taken um as Sergeant I mentioned construction was just completed, and this was about about twenty-two thousand four hundred square feet. It was still pursuant to a two thousand and eighteen bsa physical culture establishment special permit.

653

01:35:41.310 --> 01:36:00.289

xPH05 - *AT - Rachel Scall: The proposed rezoning would allow us to enlarge the small building to create an approximately one hundred and forty, three thousand seven hundred square foot of four point, five, eight of our next used building, with approximately one hundred and sixteen thousand square feet of residential use, and approximately twenty seven thousand seven hundred square feet of commercial use, which includes

654

01:36:00.300 --> 01:36:16.080

xPH05 - *AT - Rachel Scall: the proposed building would be eleven stories, or one hundred and eight feet tall. It would contain seventy, two required parking spaces on the second and third stories, thirty seven commercial parking spaces required for the spot, pursuant to the Bsa. Special permit, and thirty five residential spaces.

655

01:36:16.090 --> 01:36:23.599

xPH05 - *AT - Rachel Scall: This would allow us to let the buildings propose one hundred and four residential units above the above-created subway traffic next slide please

656

01:36:24.510 --> 01:36:38.990

xPH05 - *AT - Rachel Scall: pursuant to the C. Four L district regulations. The new ground floor portion of the building would set back five feet from the sidewalk, and the residential portion of the building would set back twenty feet from the street line, which would place it forty feet from the albeit a tree next slide please.

657

01:36:39.580 --> 01:36:55.829

xPH05 - *AT - Rachel Scall: Our environmental assessment statement found no significant outers impacts in any seeker analysis. Category, including traffic and transportation, and an E designation will be based on the site to require window attenuation that will create a a comfortable interior noise level, despite the train's presence.

658

01:36:55.850 --> 01:36:57.239

xPH05 - *AT - Rachel Scall: Next slide, please,

659

01:36:58.230 --> 01:37:11.059

xPH05 - *AT - Rachel Scall: and security. You can see an illustrative rendering of the building A. C. Four, four L. Zoning district is appropriate here, because it would encourage growth along a major neighborhood corridor, and as well, that is well served by public transit.

660

01:37:11.070 --> 01:37:22.189

xPH05 - *AT - Rachel Scall: The proposed seaport for Lzoning district will allow for a wider range of commercial uses and the existing sea-tree free, commercial overlay, and would therefore, enhance the diverse commercial character of Mandal Avenue,

661

01:37:22.200 --> 01:37:26.589

xPH05 - *AT - Rachel Scall: and now i'm going to post it. I'm. Fisher to speak more to the the neighborhood context.

662

01:37:27.420 --> 01:37:40.089

xPH05 - *AT - Ken Fisher: Good morning, vice-chair. So still morning vice chair knuckles, Commissioners. I'm gonna my name is Ken Fisher I'm, a member of

663

01:37:40.100 --> 01:37:49.540

xPH05 - *AT - Ken Fisher: philosophy Behind the approach that the developer has taken over the last ten years

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01:37:49.750 --> 01:38:00.359

xPH05 - *AT - Ken Fisher: Community Board twelve has added approximately thirteen thousand residents, but only one thousand one hundred and fifty new units of of housing.

665

01:38:00.550 --> 01:38:04.700

xPH05 - *AT - Ken Fisher: So it's certainly no surprise that

666

01:38:04.770 --> 01:38:15.549

xPH05 - *AT - Ken Fisher: the Furman center found in two thousand and seventeen who go to the next slide, please. That this had one of the most severe overcrowding rates in the entire city

667

01:38:15.570 --> 01:38:27.820

xPH05 - *AT - Ken Fisher: and the Community Board's statement of needs from two thousand and nineteen. The most reason that we could find was was that there was a specific need to accommodate large families at an affordable rate,

668

01:38:29.140 --> 01:38:36.219

xPH05 - *AT - Ken Fisher: the case of this project. As Rachel mentioned it's going to be one hundred and four units.

669

01:38:36.460 --> 01:38:46.110

xPH05 - *AT - Ken Fisher: There will be no studios, no one bedrooms as currently proposed. It will be entirely two bedrooms and three bedrooms.

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01:38:46.120 --> 01:38:56.710

xPH05 - *AT - Ken Fisher: Um! I should add that at the Community board there was some sentiment suggested for four bedroom apartments. It's something that we're We're we're looking at

671

01:38:56.990 --> 01:39:16.659

xPH05 - *AT - Ken Fisher: um. The apartments themselves, as currently designed, would be twenty, five to thirty percent larger than the minimum sizes required by Hbd. For permanently affordable housing, and we should also note that there has been no permanently affordable housing.

672

01:39:16.670 --> 01:39:27.779

xPH05 - *AT - Ken Fisher: At this Am. I proposal option two since the city began tracking this data in two thousand and fourteen

673

01:39:27.830 --> 01:39:30.840

xPH05 - *AT - Ken Fisher: we are proposing option two

674

01:39:31.130 --> 01:39:50.600

xPH05 - *AT - Ken Fisher: which would allow an average ami of eighty. We have not yet determined what the actual unit mix would be in terms of the affordable units, and we have not yet said what the likely free market rents

675

01:39:50.610 --> 01:40:09.369

xPH05 - *AT - Ken Fisher: going to Ah are going to be, but we think that this approach will create an opportunity to alleviate some of the pressure. It's certainly not going to be a solution to everything that the neighborhood needs to meet its growth.

676

01:40:09.380 --> 01:40:11.489

xPH05 - *AT - Ken Fisher: We go to our next slide, please.

677

01:40:14.300 --> 01:40:18.210

xPH05 - *AT - Ken Fisher: There are some buildings of comparable height.

678

01:40:18.220 --> 01:40:39.819

xPH05 - *AT - Ken Fisher: Ah! In the in the area. Ah! Principally on the other side of Mcdonald Avenue. That's a function of how the special Ah district works. Ah, on the other side. But I think you you saw from the aerial. There are many number of six-story buildings intermixed directly behind us. Next, please

679

01:40:49.550 --> 01:41:05.150

xPH05 - *AT - Ken Fisher: i'm not sure what that slide isn't isn't showing up. But let me just say, and we can. We'll send the corrected version of. But let me just say that in the last four years there have been rezonings in this council district,

680

01:41:05.160 --> 01:41:23.660

xPH05 - *AT - Ken Fisher: with similar heights at eighteen eighty, one Mcdonald Avenue, which is a ninety, five foot approval, fifty, nine to Fourteen Bay Parkway, which is one hundred and fifteen feet fifteen, and one Sixtieth Street, which is ninety, five feet,

681

01:41:23.670 --> 01:41:36.179

xPH05 - *AT - Ken Fisher: and most recently the Commission Ah approved twenty, eighty. Mcdonald Avenue who walks down from us is, and that's currently at the City Council

682

01:41:36.450 --> 01:41:37.890

next slide, please.

683

01:41:39.820 --> 01:41:46.669

xPH05 - *AT - Ken Fisher: So we did get some push back at the community board,

684

01:41:46.740 --> 01:41:48.080

xPH05 - *AT - Ken Fisher: and

685

01:41:48.380 --> 01:42:05.690

xPH05 - *AT - Ken Fisher: I think it. It's a couple of things that I think are important. One was that that the unanimous vote at the Community Board itself did not reflect the robust discussion within the Land Use Committee,

686

01:42:06.370 --> 01:42:13.820

xPH05 - *AT - Ken Fisher: which actually your time is up. But you know you'll likely have questions. So

687

01:42:13.890 --> 01:42:16.810

Vice-Chair Knuckles: stay where you are. Um.

688

01:42:18.240 --> 01:42:21.480

Vice-Chair Knuckles: Their questions from the Commission, the

689

01:42:23.480 --> 01:42:26.410

Vice-Chair Knuckles: Uh Commissioner Dweck

690

01:42:26.890 --> 01:42:30.040

Vice-Chair Knuckles: to be followed by Commissioner Osorio.

691

01:42:30.260 --> 01:42:31.720

Vice-Chair Knuckles: Thank you,

692

01:42:31.880 --> 01:42:35.030

*Comm. Douek: Ken. Can you continue along the line about the

693

01:42:35.070 --> 01:42:52.629

*Comm. Douek: what? What happened. What transpired the Land Use Committee. Sure, and thank you for the question, Commissioner. Let me decide at the at the end and work backwards, which was the vote was seventeen votes to deny nine votes against the resolution to deny, and

694

01:42:52.640 --> 01:42:59.850

xPH05 - *AT - Ken Fisher: there were six abstentions which I think you know, into the Charter Count. There's no vote so effectively. It was a seventeen to fifteen vote.

695

01:43:00.030 --> 01:43:01.990

xPH05 - *AT - Ken Fisher: Um!

696

01:43:02.000 --> 01:43:21.060

xPH05 - *AT - Ken Fisher: There were some people who were concerned about development, but all ah perfectly understandable. There were others that were concerned about the degree of it, and suggestions from several community Board members that perhaps an adjustment of the program would alleviate their concerns In response to that, we came back

697

01:43:21.070 --> 01:43:23.620

xPH05 - *AT - Ken Fisher: with a revised proposal.

698

01:43:23.910 --> 01:43:38.769

xPH05 - *AT - Ken Fisher: Basically, to take two floors off, we would lose about twenty units. Ah increase the amount of parking, which was something that a number of members talked about. Um, and potentially include some four bedroom requirements. Unfortunately,

699

01:43:38.780 --> 01:43:55.360

xPH05 - *AT - Ken Fisher: the Community Board declined to let us make a presentation of that at the full board meeting they declined to have a second land Use Committee meeting, and so we were not able to formally put this in front of them.

700

01:43:55.370 --> 01:44:13.780

xPH05 - *AT - Ken Fisher: The vote that they took was based on our original. We're in conversations with the Council member. He wants to see how the process plays out. We recently received the of our President's recommendation. I think that the Council Member will

701

01:44:13.790 --> 01:44:26.189

xPH05 - *AT - Ken Fisher: make some suggestions to us about the program as we get closer to the Council Review. So that's the that's the context. On the one hand, this is a community board that says they had needed that

702

01:44:26.200 --> 01:44:33.790

xPH05 - *AT - Ken Fisher: need of housing. On the other hand, there was some suggestion that perhaps the

703

01:44:33.810 --> 01:44:36.660

xPH05 - *AT - Ken Fisher: this was not the solution that they were looking for.

704

01:44:38.430 --> 01:44:49.990

*Comm. Douek: And thank you, I I think the major concern was promptly behind and just to chime, and I do believe that some four bedroom units might be appropriate in this area.

705

01:44:52.930 --> 01:44:55.280

xPH05 - *AT - Ken Fisher: Okay, Commissioner Osaudio.

706

01:44:55.300 --> 01:45:10.660

*Comm. Osorio: They thank you, Vice chair, and thank you for the presentation. I think that that was really clear, and I and I appreciate the response to Commissioner Duke's question. It was important to understand your response to the questions concerns that have been raised

707

01:45:10.670 --> 01:45:40.630

*Comm. Osorio: building on that. I was wondering if you can explain or or testify regarding your position on the request from the Board President to retain a nonprofit administering agent for the affordable housing lottery. That's the first question, and and and to highlight the second question Um. Another request, or a recommendation for our President regarding the sustainability measures I mean the renders that were shared with us to begin to highlight what your intention is in that regard. But I was wondering if

708

01:45:40.640 --> 01:45:45.009

*Comm. Osorio: you can be more specific and help us understand what that entails

709

01:45:45.560 --> 01:45:56.589

*Comm. Osorio: so first of all, with respect to engaging a not for profit for the rent-up administration of the income restricted units, the

710

01:46:04.100 --> 01:46:15.289

xPH05 - *AT - Ken Fisher: but you know, on on my short list, at least to recommend to the developer is the housing partnership. This is a very diverse

711

01:46:15.300 --> 01:46:31.909

xPH05 - *AT - Ken Fisher: area, where we want an organization that isn't identified necessarily as being with one part of the community or another, as far as the sustainability measures are concerned. And I also want to include in this the sidewalk treatments of the bio swells.

712

01:46:31.920 --> 01:46:47.069

xPH05 - *AT - Ken Fisher: That's something that the developer will will be talking with his team about, and obviously we'll have to work out those details. But as far as the voters pavement plan, but in terms of the rooftop, it's the intention that the rooftop will be

713

01:46:47.080 --> 01:46:52.400

xPH05 - *AT - Ken Fisher: a combination of green space, and and also solar

714

01:46:52.410 --> 01:47:08.870

xPH05 - *AT - Ken Fisher: the technologies in those areas both are changing very quickly. So you know, we haven't made a final selection of equipment, but it's a firm commitment by the developer that there will be sustainability measures occupying the

715

01:47:11.020 --> 01:47:12.109

*Comm. Osorio: Thank you.

716

01:47:13.070 --> 01:47:16.520

Vice-Chair Knuckles: All Righty. Thank you. Other questions

717

01:47:16.970 --> 01:47:18.380

Vice-Chair Knuckles: for the team.

718

01:47:21.240 --> 01:47:23.330

Vice-Chair Knuckles: I don't believe I see any,

719

01:47:23.860 --> 01:47:27.750

Vice-Chair Knuckles: so we can go to our public speakers now,

720

01:47:28.780 --> 01:47:36.500

Vice-Chair Knuckles: and we will follow our usual procedure of five speakers in opposition

721

01:47:37.240 --> 01:47:44.449

Vice-Chair Knuckles: to be followed by five speakers in support, and we'll go back and forth until the Speaker list is exhausted.

722

01:47:45.280 --> 01:47:47.710

Vice-Chair Knuckles: So uh

723

01:47:48.310 --> 01:47:50.800

Vice-Chair Knuckles: the list of speakers that I have

724

01:47:52.360 --> 01:47:54.290

Vice-Chair Knuckles: is uh,

725

01:48:02.340 --> 01:48:05.979

Vice-Chair Knuckles: I believe I saw Kayer Iskowitz. What's the first speaker?

726

01:48:08.810 --> 01:48:10.090

Host : Yeah, we have.

727

01:48:10.100 --> 01:48:11.160

Host : Yes,

728

01:48:12.610 --> 01:48:16.740

Vice-Chair Knuckles: to be followed by Jacob Landau.

729

01:48:19.620 --> 01:48:22.239

Vice-Chair Knuckles: Well, let's have the Cisco, which proceed, and

730

01:48:22.390 --> 01:48:24.480

Vice-Chair Knuckles: we'll have the other speakers come after.

731

01:48:25.320 --> 01:48:27.219

PH05 - 11 - Chava Itzkowitz: Yes, I

732

01:48:27.420 --> 01:48:29.260

PH05 - 11 - Chava Itzkowitz: Good morning. Do you hear me?

733

01:48:29.270 --> 01:48:30.190

Vice-Chair Knuckles: Yes,

734

01:48:30.200 --> 01:48:41.630

Host : yeah, it's It's It's it's good. I live in the neighborhood of Borough Park. The housing here is there's mult to the I work very nearby, and for Saudi Arabia,

735

01:48:41.640 --> 01:48:52.810

PH05 - 11 - Chava Itzkowitz: and as a single mother or four children, I just think that this development with the housing level it would afford us would be tremendous. Thank you very much.

736

01:48:56.350 --> 01:48:57.410

Vice-Chair Knuckles: Okay.

737

01:48:57.820 --> 01:48:59.789

Vice-Chair Knuckles: So these are speakers in favor.

738

01:48:59.800 --> 01:49:06.989

Host : The project at this point, Brian, just to be clear. Yeah, yeah, it looks like we have speakers in favor of.

739

01:49:07.000 --> 01:49:09.640

Vice-Chair Knuckles: Okay, uh Jacob Landau.

740

01:49:15.390 --> 01:49:17.729

Vice-Chair Knuckles: I think you're muted, Mr. Landau.

741

01:49:21.360 --> 01:49:23.290

Okay, Can you hear me now?

742

01:49:23.300 --> 01:49:37.779

PH05 - 12 - jacob landau: Yes, thank you. Okay. Thank you very much for giving me this opportunity. Um, just want to say that I live in this neighborhood. I was a block away, and as Ken Fisher mentioned before,

743

01:49:37.790 --> 01:49:49.839

PH05 - 12 - jacob landau: the the explosion of our growth in this neighborhood and the housing provided is a tremendous It doesn't it. It's one thousand one hundred houses

744

01:49:49.980 --> 01:49:59.679

PH05 - 12 - jacob landau: built for almost thirteen thousand families, which we grew over here. I think it's very, very important that this thing should be really developed.

745

01:49:59.690 --> 01:50:17.279

PH05 - 12 - jacob landau: And um! It should be approved. Now I also think that it's Ah, it's! It's great that this is a developer that could really deliver on the promises, as you could see, that they started with one part of the building, which is the spot. I think it's a state of the art,

746

01:50:17.290 --> 01:50:38.509

PH05 - 12 - jacob landau: and it's beautiful, so I think they are a developer, which is something we should trust in our neighborhood, and they should be allowed to have as big and as huge as possible. I think it's only going to enhance the beauty of our neighborhood and moving forward that whatever they need, it should be approved. Thank you.

747

01:50:39.310 --> 01:50:42.760

Vice-Chair Knuckles: Thank you. Any questions for Mr. Landau.

748

01:50:45.200 --> 01:50:46.330

Vice-Chair Knuckles: Thank you,

749

01:50:47.460 --> 01:50:49.400

Vice-Chair Knuckles: Mayor Deutsch

750

01:50:50.560 --> 01:50:52.300

Vice-Chair Knuckles: Mayor Deutsch.

751

01:50:53.770 --> 01:50:55.719

xPH05 - 13 - mayer deutsch: Hi! Good morning,

752

01:50:58.470 --> 01:51:06.830

xPH05 - 13 - mayer deutsch: Proceed, sir. I I just want to say one one small thing that I live like three blocks away, and I am very much

753

01:51:07.170 --> 01:51:13.270

xPH05 - 13 - mayer deutsch: support of this project. We need more housing, and we need bigger housing. Thank you

754

01:51:14.460 --> 01:51:16.899

Vice-Chair Knuckles: any questions for Mr. Deutsch.

755

01:51:17.950 --> 01:51:19.099

Vice-Chair Knuckles: Thank you.

756

01:51:19.390 --> 01:51:21.480

Vice-Chair Knuckles: Moshe Herskowitz

757

01:51:21.930 --> 01:51:23.389

Vice-Chair Knuckles: fresco it's

758

01:51:24.110 --> 01:51:26.100

Vice-Chair Knuckles: moshe Hirsch Woods,

759

01:51:29.320 --> 01:51:34.449

Host : Mr. Hersk, which is in the zoom uh let's see if we can get him.

760

01:51:38.520 --> 01:51:39.599

Host : Speak.

761

01:51:45.380 --> 01:51:47.949

Vice-Chair Knuckles: There, there he is! I see him,

762

01:51:49.610 --> 01:51:53.810

Host : Mr. Which we don't seem to be able to hear you.

763

01:51:54.590 --> 01:51:55.840

Host : Um!

764

01:51:57.780 --> 01:52:06.790

Host : It looks like it. There may have been a connection error. Sure. Do we want to try and get him back in, Tom?

765

01:52:06.800 --> 01:52:10.589

Co-Host 2 : Yeah, I think it just reconnects. It should take care of itself.

766

01:52:10.600 --> 01:52:11.620

Host : Okay,

767

01:52:11.630 --> 01:52:14.689

Host : Okay, um. Do you want to move to a

768

01:52:14.700 --> 01:52:28.229

Host : Yeah, let's call the and we'll. We'll work? Oh, he's connecting his audio. Hold on just a second, and we'll get um. We'll get the next speaker uh team up so that we're not losing any time,

769

01:52:31.890 --> 01:52:34.580

Host : Mr. Her school with

770

01:52:35.800 --> 01:52:40.690

Host : Okay, we'll try again with him. Let's call the next speaker, and we'll

771

01:52:40.700 --> 01:52:42.780

Vice-Chair Knuckles: okay, E. From Weber,

772

01:52:44.820 --> 01:52:46.760

Vice-Chair Knuckles: he from Weber.

773

01:52:50.900 --> 01:52:52.230

Vice-Chair Knuckles: Is he

774

01:52:52.280 --> 01:52:58.349

Host : the queue? Yes. Joining. Yes. Can you hear me?

775

01:52:58.360 --> 01:53:05.989

Vice-Chair Knuckles: Yes, I can. Thank you. Yeah. Thank you for giving me the opportunity. As a neighbor. We need more housing. It's all I can say.

776

01:53:07.220 --> 01:53:09.410

xPH05 - 15 - EFRAIM WEBER: We need more housing.

777

01:53:09.860 --> 01:53:11.989

xPH05 - 15 - EFRAIM WEBER: We have large families, and

778

01:53:12.340 --> 01:53:14.710

xPH05 - 15 - EFRAIM WEBER: thank you for the opportunity to speak.

779

01:53:15.430 --> 01:53:17.109

Vice-Chair Knuckles: Thank you, Mr. Weber.

780

01:53:17.580 --> 01:53:19.810

Vice-Chair Knuckles: Any questions for Mr. Weber.

781

01:53:20.820 --> 01:53:23.090

Vice-Chair Knuckles: I don't believe so. Thank you, sir,

782

01:53:23.140 --> 01:53:25.850

Vice-Chair Knuckles: is uh Mr. Herskabitz

783

01:53:28.040 --> 01:53:35.290

Host : Looks like he's still having some some audio issues. We're gonna give him a call and see. Okay,

784

01:53:35.300 --> 01:53:38.020

Vice-Chair Knuckles: we're going to move to Isaac Schwartz,

785

01:53:41.650 --> 01:53:43.650

Vice-Chair Knuckles: Isaac Schwartz.

786

01:53:46.100 --> 01:53:48.509

Host : Yes,

787

01:53:49.100 --> 01:53:57.389

xPH05 - 21 - isaac: I just wanted to say, I live in this neighborhood, and that's a very crowded neighborhood, and we are a growing community

788

01:53:57.460 --> 01:54:02.720

xPH05 - 21 - isaac: people and uh, and more housing the better it will be to the community.

789

01:54:05.910 --> 01:54:08.059

Vice-Chair Knuckles: Thank you, Mr. Schwartz.

790

01:54:09.420 --> 01:54:10.950

Vice-Chair Knuckles: Maltese,

791

01:54:11.110 --> 01:54:12.760

Vice-Chair Knuckles: Sela Kobitz

792

01:54:12.860 --> 01:54:15.230

Vice-Chair Knuckles: Maliki Zalikovic,

793

01:54:22.100 --> 01:54:23.689

Co-Host 2 : We are promoting now.

794

01:54:23.700 --> 01:54:24.940

Host : Yeah, Okay,

795

01:54:24.950 --> 01:54:26.139

xPH05 - 23 - joseph rubinfeld: All right. You

796

01:54:29.020 --> 01:54:34.900

Host : okay, Malcolm Turnbull's: Yeah, we're getting getting that person in the room there.

797

01:54:41.050 --> 01:54:45.990

Co-Host 2 : He's here. But he may not actually be at his computer at the moment.

798

01:54:46.000 --> 01:54:47.240

Host : Okay? Oh,

799

01:54:47.250 --> 01:54:49.140

Co-Host 2 : he just he's here.

800

01:54:50.030 --> 01:54:53.349

Vice-Chair Knuckles: Please proceed. Time is of the essence.

801

01:55:03.700 --> 01:55:04.990

xPH05 - 22 - Malkie Zelikovits: Okay, Can you hear me now?

802

01:55:05.000 --> 01:55:11.679

Host : Yes, yes, okay. She wanted to also say, as living in the neighborhood, that I think it sounds like a great plan,

803

01:55:11.860 --> 01:55:15.720

xPH05 - 22 - Malkie Zelikovits: and we'd love to see more housing. Thank you for the opportunity.

804

01:55:16.240 --> 01:55:17.520

Vice-Chair Knuckles: Thank you.

805

01:55:17.710 --> 01:55:20.710

Vice-Chair Knuckles: I see Joseph Joseph Reuben fell. The

806

01:55:22.940 --> 01:55:25.629

Host : you guys are muted. Yeah,

807

01:55:26.150 --> 01:55:28.789

Vice-Chair Knuckles: you hear me now? Yes, I can.

808

01:55:28.800 --> 01:55:38.290

xPH05 - 23 - joseph rubinfeld: Yeah, hi. My name is Joseph Rubenfeld. I live in the neighborhood a couple of streets away, and my dream is to be able to have my children eventually living within

809

01:55:38.330 --> 01:55:51.100

xPH05 - 23 - joseph rubinfeld: close proximity. So this is Ah, ah! Undeniably a crucial need. I'm? Very excited hopefully, to have this project come as soon as possible. Thank you for the opportunity.

810

01:55:51.330 --> 01:55:52.669

Vice-Chair Knuckles: Thank you, sir.

811

01:55:52.940 --> 01:55:54.790

Host : Um. What's your?

812

01:55:56.290 --> 01:56:07.370

Host : I don't believe. So. Okay. Thank you. We have him on the line. Okay, Star Six, Mr. Herskib. It's on your phone.

813

01:56:14.120 --> 01:56:15.920

Vice-Chair Knuckles: Mr. Hirskovich.

814

01:56:24.940 --> 01:56:33.869

Host : Any signs if you, Mr. Herskovich, if you press Star Six on your telephone, you you are also in on on audio

815

01:56:34.100 --> 01:56:35.810

Host : on the phone, so

816

01:56:42.060 --> 01:56:44.990

Host : he may not be able to hear us. Uh, I'm sure quite sure what's going on,

817

01:56:51.590 --> 01:56:53.660

Vice-Chair Knuckles: the Nashi Schwartz.

818

01:56:54.470 --> 01:56:55.750

Host : There we go.

819

01:56:58.100 --> 01:57:03.049

Host : Should be. I built the unmute and turn on your camera. And Mr. Shorts.

820

01:57:03.470 --> 01:57:05.969

Host : Hi! Can you hear me? Yes, yes,

821

01:57:06.420 --> 01:57:10.809

PH05 - 24 - Menashe schwartz: okay, As everybody was saying, I also lived in the community.

822

01:57:10.890 --> 01:57:16.700

PH05 - 24 - Menashe schwartz: I'm a little bit more aware of the need of housing because I'm. Involved with community.

823

01:57:16.950 --> 01:57:31.720

PH05 - 24 - Menashe schwartz: I know that we have a lot of people that are looking for larger housing they live in. Ah! One or two bedroom apartments in the neighborhood, and the family's grown, and they don't have where to relocate, because there is no housing,

824

01:57:31.790 --> 01:57:40.209

PH05 - 24 - Menashe schwartz: and I wouldn't understand why somebody would not have a positive attitude towards this project where it's only gonna

825

01:57:40.260 --> 01:57:42.539

PH05 - 24 - Menashe schwartz: increased the quality of life.

826

01:57:42.700 --> 01:58:00.120

PH05 - 24 - Menashe schwartz: And besides, the neighborhood that it's being built in is a neighborhood that can use some revival. So i'm going to download the avenue, and it's. Ah, what they put up here with the world's fire makes the neighbor look beautiful, and I saw before they talked the slide of the rendering of the house that's going to be built of the building that's going to be going up.

827

01:58:00.180 --> 01:58:05.959

PH05 - 24 - Menashe schwartz: It looks amazing. It looks great. So I think it's only going to improve the community.

828

01:58:06.500 --> 01:58:07.629

PH05 - 24 - Menashe schwartz: Thank you.

829

01:58:07.970 --> 01:58:09.150

Vice-Chair Knuckles: Thank you.

830

01:58:10.620 --> 01:58:12.870

Vice-Chair Knuckles: Jacob Rosenfeld.

831

01:58:12.880 --> 01:58:15.569

PH05 - 24 - Menashe schwartz: Yeah, Google

832

01:58:16.110 --> 01:58:17.290

PH05 - 24 - Menashe schwartz: and

833

01:58:21.060 --> 01:58:23.780

Vice-Chair Knuckles: Road, Rosenfeld.

834

01:58:27.130 --> 01:58:32.300

Host : We have Mr. Rosenfeld in the room, guys.

835

01:58:32.310 --> 01:58:34.989

Co-Host 2 : It does not appear that we have Mr. Rosenfeld.

836

01:58:35.000 --> 01:58:35.889

Host : Okay,

837

01:58:35.900 --> 01:58:36.740

Host : Okay,

838

01:58:37.110 --> 01:58:41.010

Vice-Chair Knuckles: uh It's Mr. Hirskov it's still. Uh he

839

01:58:42.070 --> 01:58:43.460

Host : Ah,

840

01:58:45.190 --> 01:58:51.560

Host : we can give him another try. And, Mr. Kovitz, if you press Star six, you will unmute your phone.

841

01:58:56.500 --> 01:58:59.519

Host : We'll: uh, yeah, we're not.

842

01:59:00.200 --> 01:59:02.050

Host : Let's look with that

843

01:59:13.090 --> 01:59:15.109

Vice-Chair Knuckles: Selma Klein

844

01:59:15.380 --> 01:59:21.899

Co-Host 2 : we have from a Klein Pruma, please press Star six to unmute.

845

01:59:24.900 --> 01:59:26.220

Host : Here we go.

846

01:59:35.170 --> 01:59:37.950

xPH05 - 31 - Fruma Klein - 1347****402: Fruma, you're unmuted. You may begin

847

01:59:38.830 --> 01:59:50.050

Host : hi! Um! I so to say that um! I live within the community, and I think it's a beautiful thing to create more housing um, and for people a little more comfortably.

848

01:59:51.030 --> 01:59:52.110

xPH05 - 31 - Fruma Klein - 1347****402: Thank you.

849

01:59:53.130 --> 01:59:54.370

Vice-Chair Knuckles: Thank you

850

01:59:56.310 --> 02:00:00.250

Vice-Chair Knuckles: shrewdly, Walner. Truly, Walner,

851

02:00:01.880 --> 02:00:03.629

Host : they're in the room. We can.

852

02:00:03.640 --> 02:00:04.730

Host : There we go.

853

02:00:04.950 --> 02:00:07.090

Host : Oh, hello,

854

02:00:07.600 --> 02:00:26.919

Vice-Chair Knuckles: hi! Guys! Thanks for having me on um, as you probably guess. I also live in the community, and it's no secret that every community, not only ours, needs more housing, and it's a problem all all over the place. But in this situation most of the housing

855

02:00:26.930 --> 02:00:35.190

PH05 - 32 - Sruly Wolner: being built in generally all over the place is studios and two bedrooms and smaller stuff over here.

856

02:00:35.290 --> 02:00:39.829

PH05 - 32 - Sruly Wolner: This is really going to help us if they're going to do bigger housing,

857

02:00:44.360 --> 02:00:52.020

PH05 - 32 - Sruly Wolner: So that's going to be very positive. And additionally, I work as a local real estate broker.

858

02:00:52.230 --> 02:00:53.400

PH05 - 32 - Sruly Wolner: Um

859

02:00:53.460 --> 02:00:57.169

PH05 - 32 - Sruly Wolner: the Bar Park, Midward Flatbush areas the

860

02:00:57.330 --> 02:01:00.600

PH05 - 32 - Sruly Wolner: I do mainly commercial stuff, but

861

02:01:00.760 --> 02:01:06.680

PH05 - 32 - Sruly Wolner: but I can tell you that much as every time that I put up my sign, or anything by a

862

02:01:06.810 --> 02:01:11.679

PH05 - 32 - Sruly Wolner: should it be a storefront or medical space, or whatever it is, I get the

863

02:01:12.180 --> 02:01:21.550

PH05 - 32 - Sruly Wolner: for every one call that that's interested in the space. I get twenty people asking me if there's an apartment for rent specifically in that area,

864

02:01:21.900 --> 02:01:23.130

Host : so

865

02:01:23.150 --> 02:01:40.630

PH05 - 32 - Sruly Wolner: we desperately need it, and, known as the developers are the top developers, they'll for sure deliver something beautiful as something that the community will only benefit from. So I wish and hope that you give them the go ahead for it. Thank you.

866

02:01:41.950 --> 02:01:43.250

Vice-Chair Knuckles: Thank you.

867

02:01:44.310 --> 02:02:01.210

Host : Ah, Brian, I don't see any additional speakers you want to check with Mr. Hirskovits one last time. Uh, it seems like Mr. Hirskovits is is up the zoom. Will, We'll ask him to follow up with somebody in writing. Didn't you do have a question from a Commissioner

868

02:02:01.220 --> 02:02:03.039

Vice-Chair Knuckles: Alrighty? Let me

869

02:02:03.240 --> 02:02:04.739

Host : and she's Black

870

02:02:06.150 --> 02:02:07.639

*Comm. Douek: Commissioner. Us.

871

02:02:07.730 --> 02:02:09.890

*Comm. Douek: Is the last speaker or so on.

872

02:02:09.900 --> 02:02:20.190

Host : Yes, just wondering guys. Really, you said you live in the community. What proximity to the building, do you the both? Do you live? How far do you live?

873

02:02:21.070 --> 02:02:24.310

*Comm. Douek: So I live four blacks up,

874

02:02:25.670 --> 02:02:30.489

PH05 - 32 - Sruly Wolner: and my entire extended family that's around

875

02:02:31.070 --> 02:02:36.880

PH05 - 32 - Sruly Wolner: um. Fifteen relatives live in the same area over there,

876

02:02:37.600 --> 02:02:43.789

PH05 - 32 - Sruly Wolner: so as far as using the training or anything. We're right there, and that's our community. That's our neighborhood.

877

02:02:43.800 --> 02:02:44.929

*Comm. Douek: Thank you

878

02:02:46.590 --> 02:02:50.220

*Comm. Douek: Other questions for Mr. Roller.

879

02:02:54.160 --> 02:03:08.570

Host : I don't see any. Are there any further sweepers on this item. Right? I see no further speakers, and we'll we'll rejoin his first of it's about possible.

880

02:03:08.900 --> 02:03:12.699

Vice-Chair Knuckles: Thank you. If there are no further speakers on the item, the hearing is closed. The

881

02:03:15.820 --> 02:03:29.679

Calendar Officer: Ah, Brooklyn Calendar number is twenty, three through twenty, six, innovative urban Village, Cd. Five Calendar, number twenty, three, c. Two, two, zero, three, one, two, zm. K. Calendar number twenty, four in two, two, zero, three, one, three

882

02:03:31.980 --> 02:03:49.159

Calendar Officer: on the number twenty, five, c, two, two, zero, three, one, four, Gsk: counter number twenty, six, c. Two, two, zero, three, one, one as Gsk. Public hearing in the matter of an application for Zodi, map and Sony text amendments and special permit concerning innovative urban village notice. A public hearing is being held by the city planning commission in conjunction with

883

02:03:49.310 --> 02:03:53.889

Calendar Officer: euler appearings to receive comments related to a draft environmental impact statement.

884

02:03:53.900 --> 02:04:00.019

Calendar Officer: This hearing is being held pursuant to the State Environmental Quality review act and the city environmental quality.

885

02:04:03.480 --> 02:04:08.349

Vice-Chair Knuckles: Okay, this is a ten minute team Presentation.

886

02:04:08.840 --> 02:04:10.059

Vice-Chair Knuckles: Ah!

887

02:04:12.290 --> 02:04:22.380

Vice-Chair Knuckles: The team consists of Melanie Myers Reverend A. R. Bernard, David Meleez, Kirk Goodridge, Brian, Kelly,

888

02:04:23.180 --> 02:04:25.410

Vice-Chair Knuckles: Simeon Malay

889

02:04:25.440 --> 02:04:28.380

Vice-Chair Knuckles: and Bishaan, Chuck, Rabati,

890

02:04:31.790 --> 02:04:33.969

Vice-Chair Knuckles: among others.

891

02:04:35.310 --> 02:04:37.130

Vice-Chair Knuckles: Are we ready to proceed?

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02:04:37.950 --> 02:04:40.459

PH06 - *AT - Melanie Meyers: I believe we are ready to proceed.

893

02:04:40.640 --> 02:04:42.259

Vice-Chair Knuckles: Okay, please do

894

02:04:42.300 --> 02:04:57.930

PH06 - *AT - Melanie Meyers: thank you for having us. My My name is Melanie Myers land. Use partner at Fred Frank, representing the applicant for a series of land use actions to facilitate the creation of an approximately two thousand unit of portable mixed use development in this New York,

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02:04:57.940 --> 02:05:11.440

PH06 - *AT - Melanie Meyers: As you know, it is a project that has received the support of the Local Community Board and the Brooklyn Borough President, and, when complete, will provide an a portable, inviting anchor to the neighborhood to complement the existing Christian cultural center.

896

02:05:11.570 --> 02:05:24.339

PH06 - *AT - Melanie Meyers: We thank the Commissioners for their thoughtful questions at the time of certification, and that review session, and we'd like to spend our time addressing a few of them to do so. Reverend A. R. Bernard will first speak to the broad goals of the project,

897

02:05:24.350 --> 02:05:39.179

PH06 - *AT - Melanie Meyers: and Bashan Chop-evardi of How architects will speak to the design intent for the project, including its public spaces and the relationship to the surrounding neighborhood. And finally, Richard Rich of Monadnock Development. We'll discuss the affordable program ambition for them.

898

02:05:39.680 --> 02:05:50.059

PH06 - *AT - Melanie Meyers: We also have a number of team members available to respond any questions following the presentation. So I thank you for your time. Next slide, please, and I will turn it over to Reverend.

899

02:05:51.400 --> 02:05:57.199

PH06 - *AT - A. R. Bernard: Good morning, everyone, and and thank you for the opportunity to present the Urban Village Development Project.

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02:05:57.210 --> 02:06:14.270

PH06 - *AT - A. R. Bernard: Ah! The vision of the urban village is an affordable quality. Urban living experience with approximately two thousand mixed income residences, retail commercial, educational, recreational and community service basis, and it includes both rental and home ownership

901

02:06:14.280 --> 02:06:27.609

PH06 - *AT - A. R. Bernard: allow for upward mobility within the same community. It has been a six-year journey for a Christian cultural center to find the right partners which we have in Gotham how architects and

902

02:06:27.620 --> 02:06:41.189

PH06 - *AT - A. R. Bernard: and to hear from community stakeholders and find the right balance between affordability and feasibility. Our project is based upon four pillars, environment, people, programs, and sustainability.

903

02:06:41.200 --> 02:07:04.269

PH06 - *AT - A. R. Bernard: The first slide we just want to present that. You know it's an income-based intergenerational, affordable housing there's going to be neighborhood focused retail community facilities and amenities, education and jobs, reliving spaces and a cultural arts and performing Arts center as well as open spaces. Next slide, please.

904

02:07:06.550 --> 02:07:29.889

PH06 - *AT - A. R. Bernard: So the Master Plan Community is on our ten and a half acre East New York campus, which will consist of ten new buildings, open space and and street network to be constructed in phases over approximately ten year period creation of approximately one thousand nine hundred and seventy five units of one hundred percent red, stabilized, intergenerational income-based workforce housing.

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02:07:29.900 --> 02:07:49.609

PH06 - *AT - A. R. Bernard: Residential plan affords the plan a mix of new community facilities, neighborhood, commercial and recreational uses to create a what we call a twenty first century urban

community walkable, livable space that can be enjoyed by the community and become a destination for those outside of the community. Next slide, please.

906

02:07:52.680 --> 02:08:21.310

PH06 - *AT - A. R. Bernard: Ah, again just a development overview. We're talking about convenience, neighborhood retail, including fresh food, grocery, cultural resources, including a performing art center focus on green living and and increase in publicly accessible open space, including children's playground, active rooftop, recreation, space and central quad, and something special to me are the following three items: The workforce training center

907

02:08:21.320 --> 02:08:43.060

PH06 - *AT - A. R. Bernard: that will train in Hvac. Ah, carpentry, electrical and plumbing, as well as a cyber cafe to bridge the digital gap and create spaces for learning and homework, et cetera, for the community, and a twenty, four, seven daycare and adjacent Children's playground

908

02:08:43.070 --> 02:08:58.970

PH06 - *AT - A. R. Bernard: we're looking at a shuttle service to nearby subway stations to access public transportation. As you know, our community has always been a two-fear zone since the rebuilding of Sarat City and the Towers next. Likely

909

02:09:00.970 --> 02:09:08.100

PH06 - *AT - A. R. Bernard: here our architect, the Shawn will take over and share with you the site.

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02:09:08.510 --> 02:09:26.830

PH06 - *AT - Vishaan Chakrabarti: Hello, Vice-chair Commissioner, is always a pleasure to see you it's a thrill to work on this project. I think you probably all know the development site. It is in East New York. It is on Flatlands, between Pennsylvania and Louisiana, with a number of different contexts around it, from the high Steric City buildings

911

02:09:26.840 --> 02:09:33.510

PH06 - *AT - Vishaan Chakrabarti: to nit your projects, as well as lower buildings to the west. Next, please

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02:09:35.470 --> 02:09:46.310

PH06 - *AT - Vishaan Chakrabarti: the magnet. Here is the River Neo Bernard's congregation. It's a very active site. It's about a ten and a half acre site, and you see scarcity in the background. Next, please.

913

02:09:48.490 --> 02:10:10.940

PH06 - *AT - Vishaan Chakrabarti: And the original concept for this light was always to create a destination, to integrate the street grid around it, to make sure that all of the existing streets plugged into this new project, and that we would create as a part of this project something that would have not just public space, but also the various social infrastructure pieces that the rubber

914

02:10:12.960 --> 02:10:31.439

PH06 - *AT - Vishaan Chakrabarti: Ah, we've worked very hard to create. An active ground floor claim that adds to a sense of security and a sense of community using a lot of Jane Jacob's basic tenants, such as mixed, use small walks, mixing, existing and new structures and activating streetscapes next please.

915

02:10:33.580 --> 02:10:50.550

PH06 - *AT - Vishaan Chakrabarti: And in response to community concerns. We've actually lowered the heights quite a bit from our original proposal, and if you go to the next slide you'll see that We are currently at the tallest building and about fourteen stories, and you see to the south the starred city buildings, which are upwards of twenty stories.

916

02:10:50.730 --> 02:11:07.449

PH06 - *AT - Vishaan Chakrabarti: We've also created a variety of different building heights, a two-story performing arts center in the center at the quad as well as those smaller buildings which are maze, and that you can see. And at a public space after corner of Louisiana and Flatlands, as well as in the heart of the site next piece.

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02:11:09.250 --> 02:11:28.730

PH06 - *AT - Vishaan Chakrabarti: Ah, just in terms of the site plan. We wanted to make sure that there were two major open spaces, one on the corner of Flatlands in Louisiana, the second at the heart of the site that was protected from these very large streets around it, but was still inviting to the public by opening up to the street Grid and Steric City

918

02:11:28.740 --> 02:11:42.429

PH06 - *AT - Vishaan Chakrabarti: to answer some of Commissioner Rosario's questions from about those are your questions from the Review session. We've incorporated a number of resiliency measures such as that open space of Flatlands and Louisiana which one of the low points of the site.

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02:11:42.440 --> 02:11:58.250

PH06 - *AT - Vishaan Chakrabarti: Um! We've ah Ah planned to put many of the building mechanicals Ah! In an elevated location off the ground for potentially on the roof. And we are looking at making sure that on the perimeter of the site, that there are no residential units on the ground floor.

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02:11:58.260 --> 02:12:14.879

PH06 - *AT - Vishaan Chakrabarti: Also, in terms of trees, we are increasing the number of trees from ah one hundred and twenty-five to about one hundred and fifty, and changing the amount of planted area on the site, from about twenty-eight thousand nine hundred square feet to forty-six thousand per feet of forest area.

921

02:12:14.890 --> 02:12:39.440

PH06 - *AT - Vishaan Chakrabarti: Um, And so we're very excited about this site. Plan. Next piece one of the things that the site plan promises is again this extension of the street right into the site, and a great porosity to the public. Uh, we really want this to be a destination that stays active. Uh, and you can see that there are nearly three acres that are open uh to the sky uh, and uh, six acres. If you include the streets and sidewalks.

922

02:12:39.450 --> 02:12:49.520

PH06 - *AT - Vishaan Chakrabarti: Ah, next, please, I think now I'm going to turn it over. Oh, i'm just going to walk you through the renderings. This is just a view of that public fog with the performing Arts Center next

923

02:12:51.430 --> 02:12:54.569

PH06 - *AT - Vishaan Chakrabarti: the corner of Pennsylvania and Flatlands

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02:12:54.580 --> 02:12:55.469

PH06 - *AT - Vishaan Chakrabarti: next.

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02:12:57.110 --> 02:13:15.029

PH06 - *AT - Vishaan Chakrabarti: Ah, the internal street we're creating is you're going to feel very much like public streets. You'll notice this is the two-story Maisonette character we've been working with city planning staff as well as the local community. Ah! And we want to make sure that we created a breakdown of scale as well as the potential for home ownership units. Next, please,

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02:13:16.340 --> 02:13:27.549

PH06 - *AT - Vishaan Chakrabarti: and a view down Georgia. So from Pennsylvania this very porous opening is arcade that opens to the performing Arts Center in the public space beyond. To make sure this feels public next. Please.

927

02:13:28.090 --> 02:13:32.180

PH06 - *AT - Vishaan Chakrabarti: Now i'm going to turn it over to Kirk. Who's going to talk about affordability? Thank you.

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02:13:32.190 --> 02:13:55.340

PH06 - *AT - kirk goodrich: You know Time is short greetings. Vice-chair knuckles, planning commission members. So on affordability. We try to strike a balance between creating affordability for people in Cd. Five and upward mobility, and we think we've done that With this proposal all the rental units are below eighty percent ami, and the proposed the form of home ownership are between eighty and one hundred percent next slide.

929

02:13:56.850 --> 02:14:10.399

PH06 - *AT - kirk goodrich: You know the the certification, Amis. We had fifty percent of the units below sixty, twenty, five to sixty to eighty, and then twenty, five at eighty to one hundred after feedback

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02:14:10.410 --> 02:14:19.059

PH06 - *AT - kirk goodrich: um Prior to euler certification, we had eliminated the one hundred to one hundred and twenty percent. Am I bracket

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02:14:19.070 --> 02:14:36.789

PH06 - *AT - kirk goodrich: um, and at certification, as I said before, we had fifty, thirty to sixty post certification. We got the feedback that we want in more units and less than sixty. Ah! And we heard that even the one hundred percent Mi brands were two. Ah, were too high next slide.

932

02:14:37.770 --> 02:14:48.700

PH06 - *AT - kirk goodrich: So where we ended up we ended up at sixty percent of the units below. Fifty percent Am I? Fifteen percent and fifty to sixty and twenty, five percent

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02:14:48.710 --> 02:14:59.889

PH06 - *AT - kirk goodrich: at sixty to eighty, with no rental units above eighty percent, and we ended up with one hundred percent of the home ownership between eighty and one hundred. And

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02:15:00.220 --> 02:15:05.689

PH06 - *AT - kirk goodrich: and in addition to that, you know, to be a senior in one Hundred Home Ownership.

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02:15:05.700 --> 02:15:07.090

Vice-Chair Knuckles: Okay, Thank you, sir.

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02:15:07.100 --> 02:15:08.429

Vice-Chair Knuckles: Um,

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02:15:08.610 --> 02:15:12.929

Vice-Chair Knuckles: i'm sure. There'll be questions from the Commission. Let me just see.

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02:15:16.520 --> 02:15:18.139

Vice-Chair Knuckles: Uh,

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02:15:26.130 --> 02:15:27.660

Vice-Chair Knuckles: I think you're muted.

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02:15:32.580 --> 02:15:45.299

PH06 - *AT - kirk goodrich: Thank you. My audio is a little bit wacky. I'm actually doing it from my phone, so i'm not sure if you can hear me? Ah, well, but my question is, if this all looks great,

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02:15:45.630 --> 02:15:56.239

*Comm. Goodridge: and my question is, if there's any. If there was any consideration for making the Ami lower beyond the thirty percent because of the area.

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02:15:56.290 --> 02:16:10.970

*Comm. Goodridge: It's a very low income area. And so obviously one of the feedbacks and criticisms would be that even the thirty percent ami might be too much for the

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02:16:11.210 --> 02:16:22.189

*Comm. Goodridge: of the actual income of that particular neighborhood. But overall I love the project. I'm very familiar with the area. But that's my one question, in which I also think that people may have the same question as well.

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02:16:22.200 --> 02:16:24.189

So I wanted to give you an opportunity to answer.

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02:16:24.200 --> 02:16:38.920

PH06 - *AT - kirk goodrich: Sure. Thank you, Commissioner Goodrich, as an excellent plan. It's a point that was made repeatedly by the Council, Member and Community Board, and part of the reason that we've been far more aggressive here on affordability than

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02:16:38.930 --> 02:16:49.189

PH06 - *AT - kirk goodrich: is typically the case in under this particular Hpd program. So under the typical Hpd program. Fifty percent of the units are targeted

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02:16:49.200 --> 02:17:01.169

PH06 - *AT - kirk goodrich: um to households at fifty percent, Mi or lower, we're at sixty percent there, and even beyond that we have twenty percent of the units at thirty, twenty at forty

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02:17:01.180 --> 02:17:09.339

PH06 - *AT - kirk goodrich: in a twenty and fifty. So the the biggest challenge we have with going under thirty percent

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02:17:09.350 --> 02:17:21.860

PH06 - *AT - kirk goodrich: is that once you go below forty percent, the units no longer pay even the operating expenses. And so the further down you go in terms of affordability. You have to balance that

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02:17:21.870 --> 02:17:35.960

PH06 - *AT - kirk goodrich: with units at a higher level. So what we tried to do here was really go as larger Tranche units at low Amis. But the truth of the matter is that you end up serving a lot more people than you think

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02:17:35.969 --> 02:17:56.019

PH06 - *AT - kirk goodrich: at under thirty percent, because people are coming off the street with rental subsidy and through um and separately through the homeless system, there'll be about fifteen percent

of the in which will be homeless on average. So the bottom line is we are actually serving people below thirty in a significant way.

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02:17:56.030 --> 02:18:08.450

PH06 - *AT - kirk goodrich: Um, but they are coming in with rental subsidy, and that's typical for affordable housing projects, but will be especially true here. Given the degree of affordability we have prescribed.

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02:18:11.490 --> 02:18:14.290

*Comm. Goodridge: Thank you. That was a very helpful Thank you.

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02:18:14.790 --> 02:18:17.199

Vice-Chair Knuckles: Other questions, Commissioner Goodridge.

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02:18:18.910 --> 02:18:20.410

*Comm. Goodridge: Ah, no, thank you.

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02:18:20.730 --> 02:18:22.789

*Comm. Goodridge: All right, because it looks great.

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02:18:22.840 --> 02:18:31.649

Vice-Chair Knuckles: All Righty Commissioner Osaudio. Be followed by Commissioner Bernie to be followed by Commissioner Kirmani

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02:18:31.840 --> 02:18:33.469

*Comm. Osorio: and thank you. Vice Chair.

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02:18:34.180 --> 02:18:51.449

*Comm. Osorio: Thank you. Last year. Yes, and thanks so much for highlighting some of the questions that came up as part of the presentation. I thought that that was very useful. What triggered some of those questions has to do with. Oh, and before I started I also wanted to commend you for the quality of the Ddis. I found it really really useful and really clear.

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02:18:51.459 --> 02:19:11.370

*Comm. Osorio: But what triggered some of those questions have to do with? Obviously, you're in the coastal zone you complete the Wp. Um, and you acknowledge that you're in a special natural water from area. And so, even though I I now understand some of the rationale in the site plan for the treatment that you've given to Flatlands and Louisiana

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02:19:11.379 --> 02:19:24.460

*Comm. Osorio: by the corner of the layout, which you know in terms of the permeability makes a little sense. But in terms of the building layout opens some of that potential five hundred-year flooding to come in.

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02:19:24.469 --> 02:19:40.559

*Comm. Osorio: I think that the I do want to recognize the importance of the landscape design that you've created in that area, as well as the creation of the plot which internally makes a little sense. The The question that I have really is on the treatment that you've given to flatten,

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02:19:40.570 --> 02:19:48.220

*Comm. Osorio: which is where the five hundred-year flood plane is mostly going to affect. I mean the corner, but also Flatlands itself

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02:19:48.230 --> 02:20:02.800

*Comm. Osorio: um, and and and specifically given the the the location in a special natural waterfront area. I'm: I'm. Concerned with the amount of trees that you're relocating from that side mark which in the picture that you show

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02:20:02.810 --> 02:20:21.430

*Comm. Osorio: a corner Flatland Louisiana shows a double line of trees on both sides of the sidewalk, where where we meet them the most. And so, even though you're increasing the number of trees, as you express here. I want to understand. Why are we moving trees away from the area that is going to be potentially flooded?

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02:20:21.440 --> 02:20:35.069

*Comm. Osorio: Ah! Inwards, where, where we need that the most not to mention the fact that there's also a potential storm flooding coming from Pennsylvania, according to the city maps and also vulnerable heat in this policy.

967

02:20:36.070 --> 02:21:05.770

*Comm. Osorio: Ah, commissioners, are we really? Um? We really appreciate your detailed look at all of this, and we care about many of the very same issues that you do. And there's a lot of competing issues here. There is a massive water main that sits right under flatlands, and that is part of the issue, but I think we should stress that we are dramatically increasing the amount of forest area across the site, both in terms of the corner of Flatlands and Louisiana, which is the low point of the site.

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02:21:05.780 --> 02:21:07.689

And so we actually

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02:21:08.070 --> 02:21:15.370

PH06 - *AT - Vishaan Chakrabarti: we want to take when there's a flood condition we want to make sure that that acts like the sponge right at that low point.

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02:21:15.380 --> 02:21:34.270

PH06 - *AT - Vishaan Chakrabarti: And then, of course, then in the center of the site there is this new open space that we think will help a great deal, as well as green roofs and other things that we are planning across the site for that five hundred year flood condition. We are increasing the number of trees, as you mentioned, but we also have to work with the building conditions. Flatlands

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02:21:34.280 --> 02:21:44.070

PH06 - *AT - Vishaan Chakrabarti: um, you know, but Flatlands today we really felt from the beginning, and even that little hands get shown that the Flatlands deserves a significant street wall.

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02:21:44.320 --> 02:22:01.290

PH06 - *AT - Vishaan Chakrabarti: And so without that street Wall presence was very important. We are expanding the sidewalk there as well. So there's a lot of different things going on. We are going to have street trees on islands, and we are increasing the overall number of ah trees. But you know it's just balancing all of these different factors.

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02:22:01.830 --> 02:22:18.190

*Comm. Osorio: I Thank you. I appreciate the response, and and I really encourage you to think about. How can you maintain the environmental quality of that sidewalk as a public space. I mean you're creating a series of internal spaces that will be open to the public inside, but that sidewalk it's critical.

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02:22:18.200 --> 02:22:26.140

*Comm. Osorio: Not only it's it's critical to maintain sort of like the the probability of flatmans, and and not, you know, reduce it.

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02:22:26.150 --> 02:22:45.900

*Comm. Osorio: Ah! But also think about the importance of those trees which I don't think that we should be relocating from that sign in terms of the proximity of these additional residential units that are going to be built across the street from an industrial area. So this is an important, the natural barrier that I think that we should enhance, not reduce.

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02:22:45.910 --> 02:22:48.870

*Comm. Osorio: We'll absolutely take a further and look at this Commissioner.

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02:22:55.100 --> 02:23:13.159

*Comm. Burney: Oh, thank you, my chair. Um! I want to say I appreciate the provision of the Performing Arts Center and the quad. I think two very welcome public amenities. I'm a little bit concerned that they're sort of buried inside the development. I'm not really visible from the street, and i'm wondering whether

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02:23:13.170 --> 02:23:22.989

*Comm. Burney: they wouldn't be better place on Ah, Louisiana, or Flatlands, and and Visha and i'm sure you've given consideration to this. I've been to to hear your thoughts on that,

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02:23:23.000 --> 02:23:38.380

Vice-Chair Knuckles: Mr. Vernon. Thank you. And we have heard this concern. Ah, and ah! You know there are a couple of different things going on in terms of the major claw in the public space we are giving that public space on Flatlands and Louisiana.

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02:23:38.390 --> 02:23:51.750

PH06 - *AT - Vishaan Chakrabarti: We felt that we wanted a not more privatized but more protective public space, because the issue here is that Flatlands, Louisiana and Pennsylvania are heavily trafficked streets,

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02:23:51.890 --> 02:24:12.340

PH06 - *AT - Vishaan Chakrabarti: and to have an open space that's just really hanging out here. We don't think that open space would ever feel like that great outdoor room that would feel uh protected from the noise and the traffic. Uh, we are about a less than a mile from the parkway, so there's a lot of uh commuter traffic that move to this area, so we want to protect that open space.

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02:24:12.350 --> 02:24:26.539

PH06 - *AT - Vishaan Chakrabarti: We then wanted to associate, as is the tradition in many cultures, the great cultural building as well as the spiritual center with that open space which led it to be in the center of the site.

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02:24:26.550 --> 02:24:49.539

*Comm. Burney: Um, The other thing I would just say uh two things on this um if we flipped it. If we, for instance, had the performing Arts center on flatlands that had the residential building that's sitting there on the open space, then the open space would be hit with the shadow of that residential building all day long, as opposed to having the benefit of that relatively low performing Arts Center uh sitting there.

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02:24:49.550 --> 02:25:19.139

PH06 - *AT - Vishaan Chakrabarti: The last thing I just want to say about this is we've designed the site, and it was actually very much uh working with the staff at Tcp. To make sure that it was for us to see our city as well, so that that southern boundary of the site we don't consider a wall. We consider it a a gateway to our neighbors to the south, and so it's also very important that those amenities are accessible from the southern end, where there are many residents, want to take advantage of those

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02:25:19.150 --> 02:25:20.430

amenities.

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02:25:21.640 --> 02:25:39.739

*Comm. Burney: Okay. So so if the performing that center and the chord remain on the interior of the site are the ways in which you can ensure that they appear to be publicly accessible, but they don't

appear to be private, because I think that's the danger that they will be somewhat hidden from the street. People won't feel comfortable

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02:25:39.750 --> 02:25:44.689

*Comm. Burney: going into them, feeling that they're entering a private domain, and I think that's it. That's my concern,

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02:25:44.700 --> 02:26:08.619

PH06 - *AT - Vishaan Chakrabarti: sure, and I I I appreciate. I mean, I tried to show that view on so Georgia, which is an existing street to the south of the platform. We've extended Georgia, Uh. And extended as many of the existing streets as possible in order to address this very issue, and also on Georgia again, working with the defense that we've opened up in our paid, so that we really open the aperture of the

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02:26:08.630 --> 02:26:24.690

*Comm. Burney: into the public space, so that there's a very clear and open view of order. The buildings are also set back from that view. Quarter so light and air come into that before. And so, you know, we absolutely hear the concern

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02:26:24.700 --> 02:26:44.460

PH06 - *AT - Vishaan Chakrabarti: that the Reverend from the outset has talked about the desire for this, not just to be a spiritual destination, but to be an everyday own destination that becomes a kind of third place in addition to work at all. And so it's our every desire in terms of the design of the ground floor of the buildings

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02:26:44.470 --> 02:27:05.509

*Comm. Burney: uh the streetscape that we make this as public and as inviting as possible, and that includes designing the streets to dot standards. So, even though they are not technically public streets, they feel very much like New York City public streets. So there! There's no threshold condition as you move from uh the surrounding neighborhood into the site

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02:27:05.520 --> 02:27:06.289

*Comm. Burney: right

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02:27:06.300 --> 02:27:17.929

*Comm. Burney: and and lastly, in terms of the programming and the maintenance and control of the quad. Is that going to be close at night? Or how will it help that arrange how that being a

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02:27:17.940 --> 02:27:21.690

*Comm. Burney: someone else should answer that

995

02:27:21.700 --> 02:27:44.019

PH06 - *AT - Melanie Meyers: there will be a restricted but restricted declaration on the site, and it will include provisions regarding the open space. Um! So the hours that we've been talking to city planning are extensive. They're from six in the morning until one Am. At night. Um! We'll be in, and so the ideas that the streets themselves, and the private

996

02:27:44.030 --> 02:27:57.759

*Comm. Burney: and twenty-four hours a day, and with the open spaces, the central quad and the entry area at the corner of black plans in Louisiana open between six A. M. And one A. M. So

997

02:27:58.000 --> 02:27:59.670

available for

998

02:27:59.680 --> 02:28:02.099

PH06 - *AT - Melanie Meyers: many activities from the gallows of the day.

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02:28:03.130 --> 02:28:04.939

*Comm. Burney: Okay, I appreciate it. Thank you,

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02:28:05.760 --> 02:28:07.720

Vice-Chair Knuckles: Commissioner Kimani.

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02:28:07.960 --> 02:28:27.340

*Comm. Kirmani: Thank you, vice chair, and thank you to the whole team for your presentation and for your thoughtfulness and in the in your responses. Um! I just want to lift up, and this is related to Commissioner Goodridge's question. But on the homeownership side, and looked up something that the community board mentioned in terms of

1002

02:28:27.350 --> 02:28:38.690

*Comm. Kirmani: of workshops on home ownership, and we know that the down payments can be such a barrier. And if that has been considered or thought about in your

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02:28:38.700 --> 02:28:43.650

*Comm. Kirmani: planning and talking with the community, and just your thoughts on that.

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02:28:43.870 --> 02:28:58.410

PH06 - *AT - kirk goodrich: So, um thank you for the question. Commissioner and Home ownership happens to be an area that affordable home ownership has to be an area which we've done a tremendous amount of in East New York. So we've done

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02:28:58.570 --> 02:29:09.950

PH06 - *AT - kirk goodrich: our company man. We've done one thousand one hundred and fifty one house ah! All affordable between Spring Creek and and once the Pennsylvania Avenue, and

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02:29:09.960 --> 02:29:38.579

PH06 - *AT - kirk goodrich: and we're really sensitive to this issue. Um, I think the biggest thing I would say is it's really a couple of things one the the the Down payment assistance program through Hpd. Hubbard, and like thirty thousand or so for many years, and is now over one hundred thousand, which is critical. Um! And I think that's that. That's a really important piece to this when you're talking about um people just trying to make ends meet and um, and then working class folks. The second thing

1007

02:29:38.590 --> 02:30:07.489

PH06 - *AT - kirk goodrich: is, we we spend a tremendous amount of time um really focusing on affordability. And the conversations about ami levels here, And the thing that's ah really clear to us is concentrating affordability. Only at the eighty percent level creates a situation where inevitably you end up leaving people out who are a few dollars over and sell. The

1008

02:30:07.500 --> 02:30:09.250

The ability to have

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02:30:09.260 --> 02:30:31.369

PH06 - *AT - kirk goodrich: a few a mi levels on a home ownership side is really critical. We found over the last twenty-five years in the neighborhood to be able to um to get people in at a range of incomes. And um Fundamentally, it's very hard to on new construction home ownership,

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02:30:31.380 --> 02:30:46.300

PH06 - *AT - kirk goodrich: to deliver home ownership to people at the sixty percent. Am I or below? I think, the better alternatives for people, the the better alternatives for people at those ami levels and lower. To to have a stake

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02:30:46.310 --> 02:31:03.569

PH06 - *AT - kirk goodrich: and a stepping stone is concepts like limited, limited equity collapsed Community Lan Trust. So in my mind as I think, a continuum of control and affordability. Um from rent-stabilized housing, which is what we're doing with all the rental housing

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02:31:03.580 --> 02:31:11.460

PH06 - *AT - kirk goodrich: incrementally when you look at people who are low income, having a Community Land Trust works for them, and then the next step up from that

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02:31:11.470 --> 02:31:37.519

PH06 - *AT - kirk goodrich: is what we're doing on the home ownership side here. And so from my perspective I see a continuum, and, you know, have been involved in sort of all steps here, and so I think the combination of the enhanced down payment assistance and the sort of pallet of affordability on home ownership really conforms to what we've seen. Work well in this particular neighborhood

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02:31:48.100 --> 02:31:49.449

Vice-Chair Knuckles: from the Commission.

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02:31:51.160 --> 02:31:56.550

Vice-Chair Knuckles: Don't see any, so I think we moved to public speakers. Ryan.

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02:31:57.630 --> 02:32:01.529

Host: Yes, we can move to speakers.

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02:32:03.870 --> 02:32:06.650

Vice-Chair Knuckles: First Speaker, I see, is Bill Wilkins

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02:32:07.040 --> 02:32:16.119

Host: be followed by Angela White. And then that consistent with us. Now, I have Randy Pears

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02:32:16.210 --> 02:32:18.190

Vice-Chair Knuckles: Okay, I I don't think i'm seeing those.

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02:32:18.200 --> 02:32:27.129

Host: Okay? Uh, yeah, Mr. Wilkins is is further down on the list, but you have them, but we have brandy piers, followed by John Tr.

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02:32:27.260 --> 02:32:29.679

Vice-Chair Knuckles: Okay, Mr. Pierce.

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02:32:36.720 --> 02:32:42.239

PH06 - 11 - Randy Peers: Good afternoon. Thank you for having me. I'm. Randy Pierce, President Ceo of Brooklyn, Chamber of Commerce,

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02:32:42.260 --> 02:33:11.379

PH06 - 11 - Randy Peers: Uh. We are the largest business association in New York State. We're an economic Development Oriented Chamber. We also have a Cdfi and a micro lending uh, particularly with uh, ipod communities and businesses throughout the borough. Um. We are in favor wholeheartedly with this proposal. Um, I will say that we have um a lot of business recovery staff that have been doing work throughout the borough uh, on the ground. We see things from a sort of global perspective.

1024

02:33:11.390 --> 02:33:40.080

PH06 - 11 - Randy Peers: This is probably one of the best examples of a comprehensive community, economic community and economic development uh planning project that we've ever seen. And um my full testimony will be submitted in writing. So i'm going to try and say some things that aren't in that testimony I am not disconnected from the community. Um! I grew up in canr. See, I work in Starred City growing up. I remember when Ccc. Um moved from Lyndon Boulevard, from a supermarket site

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02:33:40.090 --> 02:34:08.390

PH06 - 11 - Randy Peers: to where they are now. This is a wonderful evolution of an empowerment model. I want to also point out that it includes opportunities for entrepreneurship for additional detail, and it includes a workforce training center. And why that's important. I remember when we worked on a gateway project together. One of the challenges was local hiring, and this seeks to also address a long-term challenge for job training in that particular community.

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02:34:08.400 --> 02:34:36.829

PH06 - 11 - Randy Peers: Um, you know it has a lot to appreciate in this particular proposal. It has a good community partner that's been trusted for many decades in that community. Um! And like, I said, there's a lot happening throughout the world, but this is probably the best example of sort of live workplay. Ah! And engage in community building that we've seen Ah! Anywhere in terms of the projects that we sort of work on, and that way we weigh in on.

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02:34:36.840 --> 02:34:38.810

PH06 - 11 - Randy Peers: We are happy to partner

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02:34:38.820 --> 02:35:06.749

PH06 - 11 - Randy Peers: with Ccc and the developers in any way that we need. Ah! That we can ah! Could help and support this particular project. Ah! And once again we enthusiastically endorse this project, not just for the affordable housing which we all know is needed, but for the comprehensive nature of this particular proposal, and what it's going to mean for that particular community. Ah, and it's an approach to empowerment in general. So thank you very much. I appreciate your time.

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02:35:07.260 --> 02:35:10.569

Host: Thank you, Mr. Pierce our questions, for Mr. Piers,

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02:35:11.890 --> 02:35:13.970

Vice-Chair Knuckles: Commissioner Osorio.

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02:35:14.220 --> 02:35:33.590

*Comm. Osorio: Thank you very much, Mr. Pierce, for your testimony. I I think that your your perspective on the project is really important one of the observations that I've made as I've been reviewing the documents has to Do you know the extent to which the project is contributing to or is for its connection, its response to

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02:35:33.600 --> 02:36:03.140

*Comm. Osorio: the needs of the businesses in the Ibc. On the adjacent to the project site, and so and so i'm pleased to hear you talk about work first of all, and i'm wondering if you can expand a little bit in terms of where do you see the contribution of the project. What sectors? To what extent is this really serving the industrial businesses that are in the I. Dc. And and specifically, you know, given the the the location of the characteristics of this community. I was wondering. We can also talk a little bit about

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02:36:03.220 --> 02:36:09.280

*Comm. Osorio: what extent this is actually responding to by the needs of bypass communities in this area of Brooklyn the

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02:36:09.290 --> 02:36:20.219

PH06 - 11 - Randy Peers: So I I think it's a great it's a great great observation, and the one thing we didn't talk about is procurement opportunities, right? This is a very large project. There's going to be many opportunities for procurement, you know

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02:36:20.230 --> 02:36:50.150

PH06 - 11 - Randy Peers: whether it's on the construction side, whether it's at the end user side in terms of some of the retail. Um, So I think there's multiple opportunities to engage the local Id businesses. Uh, I think there needs to be a dedicated effort to outreach to those businesses and to take a census of what is available, and how that fits into the overall Development Project. Uh, we would be happy to work on something like that. Um, In addition, like I mentioned, I think, the best example of the workforce, the need for the workforce center, and how that responds to local residents

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02:36:50.160 --> 02:37:18.820

PH06 - 11 - Randy Peers: is when we opened up um, you know, Gateway um! The gateway center was really a game changer for that particular community. It had a significant, retail, significant job opportunities. We had some transportation challenges. How do we get the buses to go out here. Uh, but you know, Ccc. At the time actually did help to play a local organizing world uh in terms of uh trying to source for job seekers from that particular community. This is kind of the next evolution, right? It's about being very deliberate

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02:37:18.830 --> 02:37:40.920

PH06 - 11 - Randy Peers: in terms of the job training opportunities that are going to be needed by the way, whether it construction, whether it end to user retail, whether it's in some of the cultural amenities that are ultimately going to come online. Um, But you know, this is an opportunity for the community to have a say in what does that workforce planning and workforce development planning look like, and how that can help shape the future.

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02:37:41.360 --> 02:38:09.920

*Comm. Osorio: Thank you. Just a quick follow-up. I mean I appreciate the response, and I and I know that I mean you've mentioned construction. You've mentioned retail. You've mentioned the cultural initiatives, but i'm wondering if there's anything else that you can say specifically about industrial jobs in the Ibc. Like, for example, I'm. I'm. Excited to hear the the the African talk about sort of these um investments in improving the environmental quality of this site, but I don't see sort of like workforce development connected to it. It's also exciting to hear.

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02:38:09.930 --> 02:38:21.490

*Comm. Osorio: You know we can talk about community and interest. But I don't see how how could we engage with the industrial, or support the industrial jobs? As you said, so that people who work there can be live there.

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02:38:21.560 --> 02:38:50.879

PH06 - 11 - Randy Peers: So I I think Bill Logan's might be the better person to answer that even the fact that he manages the But that being said, I do think, on procurement side. There's a great opportunity to ensure that we're source of work right. I mean, if you've got metal fabricators, For example, if you've got uh, you know, lumber yards, if you've got the businesses that are already there that can that can provide uh the necessary goods and services uh to this particular project that we should make every effort to reach out to them, so that ultimately,

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02:38:50.890 --> 02:38:52.490

uh, they're more successful

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02:38:52.500 --> 02:38:53.530

PH06 - 11 - Randy Peers: overall.

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02:38:53.860 --> 02:38:56.689

*Comm. Osorio: Thanks. I really appreciate your perspective on this

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02:38:56.700 --> 02:38:58.029

PH06 - 11 - Randy Peers: great Thank you.

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02:38:59.430 --> 02:39:03.289

Vice-Chair Knuckles: Other questions for Mr. Pierce from the Commission.

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02:39:07.810 --> 02:39:09.590

Vice-Chair Knuckles: I don't see any.

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02:39:10.130 --> 02:39:16.860

Vice-Chair Knuckles: Our next speaker is John Trit, John Tritt, who will be followed by Kate Cunningham.

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02:39:19.390 --> 02:39:37.539

xPH06 - 12 - John Tritt: Hello! Good afternoon. My name is John Trid. I'm. The Deputy political director for Ciu thirty, two Bj. And I want to thank. Thank you. Vice chair, knuckles, and members of the planning Commission for the opportunity to speak here today on behalf of the eighty five thousand members of F Ciu thirty, two Bj. In New York

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02:39:37.550 --> 02:39:41.790

xPH06 - 12 - John Tritt: here today to speak in strong support of the innovation. Urban village project.

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02:39:41.840 --> 02:40:01.229

xPH06 - 12 - John Tritt: Thirty-two Bj. Is happy to show a support for developers who invest in the communities where they build, that our union supports development that will hold the standard, the industry standard, and provides opportunities that will give working families an opportunity not to just to survive, but thrive. And that's why i'm here in support today of the developers of the project

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02:40:01.590 --> 02:40:09.289

xPH06 - 12 - John Tritt: reached out early to our union in the planning stages and made a commitment to create prevailing wage jobs for the future building service workers

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02:40:09.300 --> 02:40:18.689

xPH06 - 12 - John Tritt: who will be employed at the development. It is our estimate that over thirty such jobs will be created, and we are special encouraged because these jobs are typically filled by local community members,

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02:40:18.700 --> 02:40:24.010

xPH06 - 12 - John Tritt: and we'll pay families sustaining wages which are crucial to families moving into the middle class.

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02:40:24.180 --> 02:40:41.719

xPH06 - 12 - John Tritt: We are also happy to express our support for the badly needed affordable housing that this project will create. We all know that affordable housing is needed in every corner of New York City, especially in Central Brooklyn. So, in short, this project will create good jobs badly needed, affordable housing and numerous other community benefits.

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02:40:46.150 --> 02:40:49.350

Vice-Chair Knuckles: Thank you, Mr. Tritt. Questions for Mr. Trick,

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02:40:51.890 --> 02:40:54.530

Vice-Chair Knuckles: don't see any Kate Cunningham,

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02:40:57.130 --> 02:41:07.430

PH06 - 13 - Kate Cunningham: Speaker. One good afternoon. My name is Kate Cunningham. I'm the director of Government and external relations at the New York Building, Congress, and I'll be testifying today on behalf of our President and Ceo Carlo, a Sashura,

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02:41:07.440 --> 02:41:24.989

PH06 - 13 - Kate Cunningham: on behalf of more than five hundred and fifty constituent organizations, and two hundred and fifty thousand skilled trades, people, including architects, engineers, contractors, and labor. We testified to in support of the innovative urban village project, as we firmly believe, the plan will be extremely beneficial for each of the organized residents.

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02:41:25.000 --> 02:41:35.889

PH06 - 13 - Kate Cunningham: As all of you know, New York City is currently facing the dire realities of a housing crisis. More housing development is needed now more than ever, and the Christian cultural center is the perfect candidate to lead that charge.

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02:41:35.960 --> 02:41:50.040

PH06 - 13 - Kate Cunningham: The Christian cultural center under the dedicated and magnificent leadership of the reverend Bernard, with whom Carla had to dedicate had the pleasure of working closely with in the past is a reputable long-standing community member that has the best interests of the community at heart

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02:41:50.050 --> 02:42:06.729

PH06 - 13 - Kate Cunningham: throughout their partnership with Gotham organization and Monadnock development, and over the course of their engagement with the community. The center has incorporated community feedback, including reducing the heights of some buildings and eliminating higher income tiers above eighty percent ami for rental housing, as you've heard before,

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02:42:06.920 --> 02:42:22.359

PH06 - 13 - Kate Cunningham: The innovative urban villages plan will create housing opportunities for families of various sizes and incomes, including plans for over one thousand eight hundred and fifty

units of income, restricted rental housing, of which two hundred will be set aside for seniors. One of our most vulnerable populations.

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02:42:22.450 --> 02:42:31.939

PH06 - 13 - Kate Cunningham: The plan also includes one hundred affordable home ownership units which will allow residents to gain financial security and build equity for the next generation.

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02:42:32.400 --> 02:42:48.560

PH06 - 13 - Kate Cunningham: The project will also include many benefits that will be available to the public, such as the Performing Arts Center, a school public playground, twenty, four over seven, Child Care, Green Space, and other community facility services, which is a one for the direct community, and New York City as a whole.

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02:42:48.790 --> 02:43:01.190

PH06 - 13 - Kate Cunningham: Additionally, the residents of the London Boulevard, Pink and work and houses all within the vicinity of the project. Benefit from the Gd. Programs Child care services, career counseling and vocational training services that are included in the plan.

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02:43:01.200 --> 02:43:14.329

PH06 - 13 - Kate Cunningham: The project has a potential to create real economic opportunity for members of our community by creating new locations for local businesses, community amenities, and we'll bring both local retail and jobs to East New York.

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02:43:14.340 --> 02:43:19.040

PH06 - 13 - Kate Cunningham: The New York Building Congress is private for the innovative Urban Village Project. Thank you.

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02:43:19.230 --> 02:43:22.130

Vice-Chair Knuckles: Thank you. Questions for Miss Cunningham.

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02:43:25.650 --> 02:43:27.869

Vice-Chair Knuckles: I don't believe I see any. Thank you.

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02:43:28.090 --> 02:43:29.900

Vice-Chair Knuckles: Aaron Sanders,

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02:43:31.580 --> 02:43:33.490

Vice-Chair Knuckles: Aaron Sanders.

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02:43:33.500 --> 02:43:37.219

PH06 - 14 - Aaron Sanders: Good morning, Vice chair, knuckles, and members of the city planning Commission

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02:43:37.230 --> 02:43:48.919

PH06 - 14 - Aaron Sanders: My name is Aaron Sanders, and I am the public policy director at the Association for better New York. Thank you for the opportunity to deliver testimony on behalf of Abney and support their innovative urban village project

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02:43:48.930 --> 02:44:04.649

PH06 - 14 - Aaron Sanders: and me is a non-profit organization, representing community stakeholders, including corporations, nonprofits, unions, government authorities and educational cultural and health institutions dedicated to the advancement and support of New York City's people, community, and businesses.

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02:44:04.660 --> 02:44:17.840

PH06 - 14 - Aaron Sanders: Our mission is to promote connection between public and private sectors to make New York City a better place to live, work, and visit for all. I want to begin my testimony today by discussing why this project is vital to the community of East New York, Brooklyn,

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02:44:17.850 --> 02:44:36.979

PH06 - 14 - Aaron Sanders: causing insecurity and affordability, are problems that persist in New York City. Aggregately, However, neighborhoods like East New York are facing the brunt of this crisis, according to a May two thousand and twenty-two report from the association for a neighborhood and housing development. The rate of evictions for every one thousand following filings was twenty, five point, two percent

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02:44:36.990 --> 02:44:41.639

PH06 - 14 - Aaron Sanders: community board, five in Brooklyn ranks and the top twenty, and invictions

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02:44:41.920 --> 02:44:51.749

PH06 - 14 - Aaron Sanders: additional data suggests that only nine percent of affordable housing stock was available to residents who live in East New York. In other words, there is a scarcity of housing for those who need it most.

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02:44:51.810 --> 02:45:07.750

PH06 - 14 - Aaron Sanders: I would also like to highlight that in the same year thirty-three percent of households were categorized as severely rendering, and twenty or so twenty nine percent of all households surveyed was analyzed. To be rendered. This data suggests that a housing crisis is negatively impacting. East New York,

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02:45:07.810 --> 02:45:18.059

PH06 - 14 - Aaron Sanders: after reviewing the merits of this project, and thoughtful recommendations from various stakeholders providing this development, Adney supports the innovative urban village project for the aforementioned and reasons.

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02:45:18.140 --> 02:45:20.370

One important fact is to consider is that

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02:45:20.500 --> 02:45:26.120

PH06 - 14 - Aaron Sanders: the project has received overwhelming support from Community Board, five. During its review. At the upper stage

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02:45:26.310 --> 02:45:28.990

PH06 - 14 - Aaron Sanders: the project received a vote of twenty, two to one.

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02:45:29.000 --> 02:45:34.429

PH06 - 14 - Aaron Sanders: A favorable vote of this man. It so clearly shows the ending. This and willingness to support this project.

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02:45:35.000 --> 02:45:51.690

PH06 - 14 - Aaron Sanders: Another important component of this project is that nearly all two thousand new housing units will be set aside for affordable housing. So this project puts an emphasis on housing low and middle income residents, prospective residents who earn between thirty percent to eighty percent of the ami will have priority access.

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02:45:52.180 --> 02:46:02.919

PH06 - 14 - Aaron Sanders: There is also a component of this project which is advanced home ownership, and it is important because it will allow East New Yorkers to develop develop generational wealth and equity through home ownership.

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02:46:02.940 --> 02:46:21.659

PH06 - 14 - Aaron Sanders: Lastly, the addition of twenty, four, seven daycare may develop, which residents will meet the needs of family non-standard work schedules and parents working nights. Amy supports the development of the innovative Urban village project. This project encourages economic growth, sustainable housing and innovative child care options for New Yorkers.

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02:46:21.670 --> 02:46:28.430

PH06 - 14 - Aaron Sanders: Encourage the city planning Commission to consider this comprehensive value. Add of this project to this Brooklyn community. Thank you for your time.

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02:46:29.600 --> 02:46:32.010

Vice-Chair Knuckles: Thank you, Mr. Sanders questions.

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02:46:34.350 --> 02:46:41.940

Vice-Chair Knuckles: I don't see any. Let me just say we are getting near the end of the public hearing. We have a few more speakers left

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02:46:42.050 --> 02:46:44.460

Vice-Chair Knuckles: uh on this matter, so

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02:46:44.470 --> 02:46:54.649

Vice-Chair Knuckles: you have not registered to speak, but have decided during the course of this hearing, that you would like to now is the time to register

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02:46:54.670 --> 02:47:05.129

Vice-Chair Knuckles: again. You can find instructions on how to register online, whether online or via the phone at Www. Nyc: Go,

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02:47:05.140 --> 02:47:14.810

Vice-Chair Knuckles: Nyc. Engage That's Www. Dot Nyc Gov. Slash, Nyc engage

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02:47:15.820 --> 02:47:17.740

Vice-Chair Knuckles: Our next speaker

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02:47:17.960 --> 02:47:20.649

Vice-Chair Knuckles: is uh Cynthia Mcknight

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02:47:24.610 --> 02:47:25.630

Vice-Chair Knuckles: a

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02:47:26.760 --> 02:47:28.449

Vice-Chair Knuckles: Cynthia Mcknight.

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02:47:32.250 --> 02:47:35.289

Host: You have.

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02:47:35.300 --> 02:47:36.670

Host: Yep, Yes, we do.

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02:47:37.110 --> 02:47:39.479

PH06 - 24 - Cynthia McKnight: Yes,

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02:47:41.140 --> 02:47:43.010

Host: Um hello. Can you hear me?

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02:47:50.600 --> 02:47:51.490

PH06 - 24 - Cynthia McKnight: She's

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02:47:51.500 --> 02:47:53.860

PH06 - 24 - Cynthia McKnight: take your time. Yes,

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02:47:59.040 --> 02:48:12.970

PH06 - 24 - Cynthia McKnight: good afternoon. Everyone. My name is Cynthia Mcknight, President of Community Education Council, thirteen Cec. Thirteen, and Union leader Ah, A. F. E. Local nine, one three of the United States Department of housing Urban development. Hud:

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02:48:12.980 --> 02:48:28.009

PH06 - 24 - Cynthia McKnight: I'm. Here to support the Christian cultural centers. Innovative Urban Village project in the East New York neighborhood of Brooklyn, New York, based on my engagement with the Christian Cultural center on their project. I believe its development is beneficial to East New York and its residents.

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02:48:28.020 --> 02:48:40.840

PH06 - 24 - Cynthia McKnight: First and foremost, the Christian cultural center, is an outstanding, long-standing community member who cares deeply for East New York residents This project would create housing opportunities for families of various sizes and incomes.

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02:48:40.850 --> 02:48:54.599

PH06 - 24 - Cynthia McKnight: Their plans call for upwards of two thousand units of housing, all of which will be income restricted, raging for thirty percent to one hundred percent of ami, and two hundred units of which will be set aside for seniors our most vulnerable population.

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02:48:54.610 --> 02:49:01.249

PH06 - 24 - Cynthia McKnight: They will also afford local entrepreneurs and business owners opportunities to open businesses and employ their neighbors.

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02:49:01.260 --> 02:49:15.469

PH06 - 24 - Cynthia McKnight: Secondly, the centers plan to operate to incorporate a whole services and amenities that will not only serve the residents of new buildings, but the broader community as well. This would benefit residents from across the street as well as the broader East New York neighborhood.

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02:49:15.480 --> 02:49:25.190

PH06 - 24 - Cynthia McKnight: These services include, as you will. So Gd: programs twenty, four over seven child care career, counseling, vocational training, performing Arts Center and open

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02:49:25.200 --> 02:49:32.520

PH06 - 24 - Cynthia McKnight: basic to name a few. I also urge the approval of the innovative urban village proposal for the following:

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02:49:32.570 --> 02:49:49.039

PH06 - 24 - Cynthia McKnight: As a person who grew up in Lyndon House in East New York, I know the importance of safe and affordable housing. As I said before, the innovative urban village project, to create a total of twenty two thousand and fifty units of housing, and the plans are all for these housing units to be increased and affordable.

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02:49:49.230 --> 02:49:57.050

PH06 - 24 - Cynthia McKnight: A large portion of these units will be reserved for households, with lower incomes ensuring that our East New York community members can afford to move in.

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02:49:58.060 --> 02:50:13.350

PH06 - 24 - Cynthia McKnight: And then, in closing, I look forward to continuing to work with person Cultural Center and Gotham organization on this project and furthering the needs aspiration of East New York residents. I urge you to vote to approve this project. Thank you.

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02:50:13.900 --> 02:50:18.470

Vice-Chair Knuckles: Thank you. Ms. Mcnight. Just hang on. Are there questions for Ms. Mcnight?

1117

02:50:19.130 --> 02:50:21.389

Thank you. Vice chair. I do have a question.

1118

02:50:21.640 --> 02:50:30.740

*Comm. Osorio: Commissioner Osorio. Thank you so much for your testimony as somebody who knows the community well, and somebody who just highlighted

1119

02:50:30.750 --> 02:50:52.859

*Comm. Osorio: the relationship between the project and the I was wondering if you can talk a little bit about where you see the contribution or the impact of the project on on traffic patterns and pedestrian pathways. This is something that has been sort of highlighted in previous comments, and I was wondering if you can tell us a little bit what you think.

1120

02:50:53.390 --> 02:51:11.390

PH06 - 24 - Cynthia McKnight: Um, when I had those discussions that wasn't an issue what I did from a lot of parents with a lot of the parents and my family members from East New York and Brownsville. They really stressed the need for affordable housing and the opportunity to have home ownership

1121

02:51:11.400 --> 02:51:20.370

PH06 - 24 - Cynthia McKnight: traffic. Yes, is an issue when it comes to schools and a safety. But those issues were addressed. So that's not

1122

02:51:20.780 --> 02:51:26.940

PH06 - 24 - Cynthia McKnight: concern of mine. The more appointments is that a lot of our families can't afford to stay in Brooklyn.

1123

02:51:28.100 --> 02:51:30.279

*Comm. Osorio: Thank you. I appreciate your response.

1124

02:51:31.550 --> 02:51:34.259

Vice-Chair Knuckles: Other questions for Ms. Mcnight.

1125

02:51:36.180 --> 02:51:37.850

Vice-Chair Knuckles: Thank you. Ms. Mcnight,

1126

02:51:42.440 --> 02:51:44.010

Vice-Chair Knuckles: Bill Wilkins.

1127

02:51:48.820 --> 02:51:53.360

PH06 - 21 - Bill Wilkins: Yes, let me try to start my video.

1128

02:51:54.320 --> 02:52:09.279

Vice-Chair Knuckles: There you are. Okay? So Um, As stated, my name is to Wilkins I'm. The executive director of the Ldc. Of East New York, East Brooklyn, bid East Brooklyn Housing Development Corporation. By virtue of these multiple affiliates

1129

02:52:09.290 --> 02:52:34.179

PH06 - 21 - Bill Wilkins: provides me with a unique perspective on both economic and housing development. Additionally, not only have I worked in these New York for the last twenty-one years. I've also lived in East New York for three decades. The Ldc. Has been in service for the East Brooklyn community for over forty plus years, And I've managed economic development programs for the New York City Department of Small Business Services

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02:52:34.190 --> 02:53:03.560

PH06 - 21 - Bill Wilkins: Economic Development Corporation, with the first in place, Industrial Park, New York State Empire Zone Development Zones program. The mission of the Ldc. Is to grow. Businesses, change lives and strengthening communities. Additionally, the East Brooklyn business improvement district is one of the oldest bids in New York City, and the first industrial bid in New York City. Lastly, as director of East Brooklyn Housing Development corporation. I've been a not for profit pardoning development of the box

1131

02:53:03.570 --> 02:53:33.199

PH06 - 21 - Bill Wilkins: units of housing in East New York and the Hdfc. Partner of one hundred and eight units currently in construction at one thousand five hundred and ten Broadway over the last three years, and on several occasions as a local stakeholder and expert in economic and housing development. I've reviewed, analyzed critique and edified the innovative urban village, and today, without hesitation or reservation, I fully support this project for multiple

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02:53:33.210 --> 02:53:41.189

PH06 - 21 - Bill Wilkins: reasons and submit. It has the potential to be the gold standard of local bottom-up development.

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02:53:42.500 --> 02:53:57.049

PH06 - 21 - Bill Wilkins: Um, As we know, the manhattanization of Brooklyn has finally reached the shores of East New York, and it's incumbent that the residents, the businesses and institutions that are indigenous to East New York

1134

02:53:57.060 --> 02:54:20.840

PH06 - 21 - Bill Wilkins: develop and shape the impending transformation. This project is homegrown and reflective of our local needs. Secondly, this project is well conceived, and checks all of the boxes centered on improving the quality of life in our community. No East New York is void of having a performing on center and be mindful. The arts speak to the soul.

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02:54:20.850 --> 02:54:27.780

PH06 - 21 - Bill Wilkins: To this point Cranes recently released an article that reflects cultural institutions, play a major role

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02:54:27.910 --> 02:54:56.550

PH06 - 21 - Bill Wilkins: in reducing crime, and, as many of the Commissioners know, the seventy fifth present has always been an impact precinct. Lastly, it is about time and past due that representatives that have a proven track record and a commitment to our community. Given the opportunity to transform lives. I submit. We must move away from top-down development. More importantly, we need to stop letting outsiders, interlopers and cultures,

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02:54:56.560 --> 02:55:07.430

PH06 - 21 - Bill Wilkins: exploit our urban villages and fully embrace local bottom of development. This project definitely brings the secret source to a much deserving community.

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02:55:08.970 --> 02:55:10.659

Vice-Chair Knuckles: Thank you, Mr. Wilkins.

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02:55:10.730 --> 02:55:13.259

Vice-Chair Knuckles: The timing is uh pristine

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02:55:13.570 --> 02:55:16.690

Vice-Chair Knuckles: questions for Mr. Wilkins.

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02:55:18.780 --> 02:55:21.279

*Comm. Osorio: Yes, Mike shares I I have a question,

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02:55:21.290 --> 02:55:22.289

Vice-Chair Knuckles: Please

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02:55:22.300 --> 02:55:48.290

*Comm. Osorio: thank you, Mr. Wilkins. I wanted to start by first acknowledging your leadership. It's it's really a privilege to hear your perspective on the project, and as somebody who has been, as you said, working for decades in the community Ah, but specifically Ah! With and on behalf of industrial businesses, I I wanted to repeat a question that I I raised earlier in the in the hearing

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02:55:48.300 --> 02:56:02.940

*Comm. Osorio: about Where do You see, I mean, I think, that we all agree there's a lot of opportunities. But where do you see the contribution? Have the conversations evolved in specific commitments or specific plans to

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02:56:03.000 --> 02:56:16.050

*Comm. Osorio: address, either through workforce development or any other opportunity support to the industrial businesses there, not just in terms of

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02:56:16.060 --> 02:56:45.019

*Comm. Osorio: the physical amenities and so forth. But in terms of the potential economic development of these investments in supporting those businesses and or creating operable housing, connecting the affordable housing of opportunities here with the people who work across the street from the site. That's the first question. And then the second question has to do again with another question that I raise, which is concerns that have come up in terms of the impact of the project on traffic um patterns and so forth, and given your expertise

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02:56:45.030 --> 02:56:51.080

*Comm. Osorio: in terms of the industrial area and so forth. I was wondering if you can help us understand that.

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02:56:51.090 --> 02:57:10.069

PH06 - 21 - Bill Wilkins: Okay, Um. Well, first, I mean, your question is spot on um, and it's something that's near and dear to my heart by being an industrial service provider. Um in our industrial park. Um, One of our core industries happens to be companies in the building strait,

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02:57:10.080 --> 02:57:25.539

PH06 - 21 - Bill Wilkins: and maybe ten or fifteen years ago, some of the owners and these are tried and true middle market clients entities that are two and three generational family-run businesses, and we started to see

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02:57:25.550 --> 02:57:35.320

PH06 - 21 - Bill Wilkins: um an increase in the amount of housing starts and development in East New York taking place in our backyard, and they raised their hand and said, Well, how can we participate

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02:57:35.370 --> 02:57:42.739

PH06 - 21 - Bill Wilkins: from my vantage point? It makes sense, because we're just a few blocks away from the project site,

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02:57:42.990 --> 02:57:48.980

so it helps to to your point about traffic and congestion. It helps to reduce congestion

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02:57:48.990 --> 02:58:18.200

PH06 - 21 - Bill Wilkins: um, and also pollution. But one of our core industries happens to be companies in the building trade. We have tried into suppliers. Um, whether it be um Lewis Shiftman, the electrical, so-called for farming, legal international performing. We have the last wood mill in New York City. We have cement manufacturers. We have our steel supplier has been in business since the one thousand nine hundred and thirtys, so we have a proliferation of steel fabrication.

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02:58:18.210 --> 02:58:37.799

PH06 - 21 - Bill Wilkins: But the way it works is to have a meet the developer, and by meeting the developer, and then giving us an opportunity to bid on some of the projects and secure some of the contracts then helps to increase their revenue and remember these businesses hire Locally,

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02:58:37.810 --> 02:59:06.590

PH06 - 21 - Bill Wilkins: then, individuals spend locally, so we're able to create a circular economy and or a micro-stimulus plan. For example, if the project budget is, let's say, four hundred million, and even if a one hundred million dollars goes to local businesses, and then they spend locally. We are now created a project that's north of a half a billion dollars. So it's just taking common sense to high places

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02:59:06.600 --> 02:59:28.890

PH06 - 21 - Bill Wilkins: to try to ensure businesses that have a a local um to the project site which makes sense or multiple reasons that hire locally will then spend locally and makes us actually a unique community. Now the difficulty becomes that you know developers and general contractors. They already have their team,

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02:59:28.900 --> 02:59:47.970

PH06 - 21 - Bill Wilkins: and it only happens when we have that sincere participation which has been demonstrated by this project, and a willingness to change the model, to do things differently and to empower and change our community because for a lot of people that are presented today, this is a legacy project.

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02:59:48.370 --> 02:59:51.100

PH06 - 21 - Bill Wilkins: This is a transformative project

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02:59:51.280 --> 03:00:04.460

PH06 - 21 - Bill Wilkins: just by definition of being an innovative urban village makes it inviting to a community that is definitely in need of this type of anchor development, and to extend

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03:00:04.560 --> 03:00:30.369

PH06 - 21 - Bill Wilkins: the opportunities to some of the most industrial businesses that you mentioned to your second point, as it relates to traffic Um. Several years ago, when Congressman Towns was in office, he got a large grant um to improve our byways in our transportation network. Um for a particular traffic, and and i'll tell you a secret. There's very little. I've been in the community over thirty years.

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03:00:30.380 --> 03:00:35.150

PH06 - 21 - Bill Wilkins: There are very few times in which we have traffic congestion.

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03:00:35.370 --> 03:01:05.160

PH06 - 21 - Bill Wilkins: Now, what's going to have to be looked at, I think, with a deeper dive, and I know they study this is. Now there's going to be an increase in pedestrian traffic there. Really isn't a lot of pedestrian traffic when you're going up um Pennsylvania, you head in south to the Belt Parkway, or coming more from the Belt Parkway and traffic on our flylands. App that not a lot of pedestrians crossing, and by the designing and the openness, I think it creates some safety mechanisms for you in our pedestrians.

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03:01:06.500 --> 03:01:25.999

*Comm. Osorio: Thank you. I appreciate your responses, and and and encourage you to encourage the developer or the applicant to to reflect or make more explicit some of the the initiatives that you that you hinted to, and the need for additional studies to make sure that that's accomplished. But that's a great vision. Thank you. You're welcome

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03:01:26.330 --> 03:01:30.999

Vice-Chair Knuckles: other questions for Mr. Wilkins from the Commission.

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03:01:33.980 --> 03:01:39.010

Vice-Chair Knuckles: I don't think I see any. Thank you, Mr. Wilkins. Thank you.

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03:01:39.600 --> 03:01:42.990

Vice-Chair Knuckles: Our next speaker is

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03:01:44.780 --> 03:01:51.349

Vice-Chair Knuckles: Angela White, to be followed by Sharon Haynes, Angela White.

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03:01:54.600 --> 03:01:57.189

xPH06 - 22 - Angela White: I see you. Okay,

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03:01:57.200 --> 03:02:07.689

xPH06 - 22 - Angela White: uh good afternoon, Members of the City Planning Commission. Uh, my name is Doc by Angela White, and I have been a member of Christian Cultural Center for over fifteen years.

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03:02:07.700 --> 03:02:25.400

xPH06 - 22 - Angela White: I appreciate the opportunity to speak to you, Regard my support of the innovative urban village in proposed Christian cultural center. The proposed urban village will not only provide new income based affordable housing for over two thousand income based residences,

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03:02:25.410 --> 03:02:30.189

xPH06 - 22 - Angela White: but it will also give the community numerous purpose-built services

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03:02:30.200 --> 03:02:48.289

xPH06 - 22 - Angela White: as an educator for over thirty five years. I know the value of providing not only young people, but adults of all ages the opportunity to experience the cultural arts, and this will be accomplished with the inclusion of the performing Art Center for the theatre, that music,

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03:02:48.300 --> 03:02:53.609

xPH06 - 22 - Angela White: film, lectures, and panel discussions reflecting the local community.

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03:02:53.890 --> 03:03:05.249

xPH06 - 22 - Angela White: It should come as no surprise that I am a huge supporter of the vision that calls for enhanced economic opportunities through education.

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03:03:05.260 --> 03:03:15.800

The urban village will provide support to primary and secondary students. In addition to the much-needed occasional training,

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03:03:15.810 --> 03:03:29.029

xPH06 - 22 - Angela White: I want you to consider the benefits that will support the needs of the community. The urban village will support health facilities and central services that will have the potential providing twenty, four, seven days a week,

1177

03:03:29.040 --> 03:03:40.589

xPH06 - 22 - Angela White: child, care, senior citizen program, and walk in medical services. We know that people living in connected communities feel healthier and are happier about their lives.

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03:03:40.600 --> 03:03:53.629

xPH06 - 22 - Angela White: This will also be accomplished with necessary shops, dining options, destinations that the community will be able to rely on, such as fresh grocery stores and accessible retail

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03:03:55.280 --> 03:04:06.700

xPH06 - 22 - Angela White: the Urban village, and also provide services, much-needed services for seasoned singers, members of our senior community in a number of ways including

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03:04:06.820 --> 03:04:08.490

xPH06 - 22 - Angela White: education

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03:04:08.500 --> 03:04:35.669

xPH06 - 22 - Angela White: senior citizen program. It's important that we don't forget our seniors. It's important that we engage our senior community. The power of community involvement is well recognized by researchers and can help come back the sense of isolation that is often felt by our scenes. And finally, the young people of this community will benefit not only from the twenty-four hour day care,

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03:04:35.680 --> 03:05:04.429

xPH06 - 22 - Angela White: but a new community playground, recreational and athletic facilities, and accessible open grain spaces which will only strengthen positive engagement of our youth and adults. I urge you to please. Consider the necessary affordable housing that is so desperately needed that welcoming space for the entire community, the numerous benefits

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03:05:04.440 --> 03:05:14.599

xPH06 - 22 - Angela White: and the positive experiences that will be provided to the community residents of East New York. Thank you for your time and consideration.

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03:05:14.790 --> 03:05:16.369

Vice-Chair Knuckles: Thank you, miss. What

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03:05:16.390 --> 03:05:17.670

Vice-Chair Knuckles: questions

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03:05:19.720 --> 03:05:21.119

Vice-Chair Knuckles: questions

1187

03:05:23.860 --> 03:05:25.950

Vice-Chair Knuckles: don't see any. Thank you again.

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03:05:26.750 --> 03:05:33.949

xPH06 - 22 - Angela White: Thank you. It looks like our final speaker is Sharon Haynes Sharon Ames.

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03:05:38.380 --> 03:05:39.880

PH06 - 23 - Sharon Haynes: Can you hear me?

1190

03:05:40.080 --> 03:05:41.360

Vice-Chair Knuckles: Yes,

1191

03:05:42.070 --> 03:05:58.869

Host : Okay. Good afternoon, Thanks, Commissioner to you for this opportunity to testify this afternoon. My name is Sharon Haynes. I am a community member and a member of Christian Cultural Center.

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03:06:00.210 --> 03:06:04.389

PH06 - 23 - Sharon Haynes: This project is vital to the community.

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03:06:04.530 --> 03:06:20.230

PH06 - 23 - Sharon Haynes: If you know anything about East New York, you know that it's an underserved community. There are specific needs to be filled. Community members are desperately in need of quality, housing jobs, good commerce,

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03:06:20.240 --> 03:06:32.999

PH06 - 23 - Sharon Haynes: not just large fast food, chains, daycare, etc. This community of people they want to thrive, not just merely survive this project

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03:06:33.010 --> 03:06:41.400

PH06 - 23 - Sharon Haynes: I am in full support of. I know this project will support and fill many of the needs of the community members.

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03:06:42.650 --> 03:06:58.100

PH06 - 23 - Sharon Haynes: Prior to December, one thousand nine hundred and ninety nine. When Ccc. Moved to flat the Flatlands area and the East New York area, there was an infestation of drugs and prostitution in that community. I know it first hand for myself, because I used to work

1197

03:06:58.110 --> 03:07:13.580

PH06 - 23 - Sharon Haynes: through those coming back. Unity ccc has brought much-needed revitalization to the area with its face-based organization. This project, this early village project will further revitalize the

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03:07:16.970 --> 03:07:20.680

PH06 - 23 - Sharon Haynes: revitalization, would include the

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03:07:20.700 --> 03:07:35.849

PH06 - 23 - Sharon Haynes: our community members who are most deserving to live in a community that provides the resources that are much needed, and increase their quality of life for the people of that community.

1200

03:07:37.530 --> 03:07:49.990

PH06 - 23 - Sharon Haynes: Some of the things that the Community village movement. As I said, revitalization to the community, it's so welcome improvement, housing, affordability, as we already know, that housing and

1201

03:07:50.000 --> 03:07:52.559

PH06 - 23 - Sharon Haynes: is not affordable to everyone.

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03:07:52.870 --> 03:08:09.989

PH06 - 23 - Sharon Haynes: So this will provide affordable housing to the community members because it involves mixed housing. There will be economic opportunities. There will be educational opportunities, such as was mentioned before the trade school, which is a necessary option,

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03:08:10.000 --> 03:08:15.060

PH06 - 23 - Sharon Haynes: especially for those who are re-entering the community.

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03:08:17.870 --> 03:08:30.670

PH06 - 23 - Sharon Haynes: Also, commerce entrepreneurship. Small business owners would be welcome to have businesses in this community, and the urban village also inclusion

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03:08:30.680 --> 03:08:42.889

PH06 - 23 - Sharon Haynes: ensuring that people from the community are fully considered, as it relates to the benefits that are available to them. And this I know for a fact, will happen

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03:08:42.900 --> 03:08:47.130

ultimately, building generational wealth. It's an urban village.

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03:08:47.270 --> 03:08:49.670

PH06 - 23 - Sharon Haynes: Okay, sustainability

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03:08:49.900 --> 03:09:02.480

Host : parking, which is a major concern here in Brooklyn there will be parking for additional parking that will be available to take us.

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03:09:03.170 --> 03:09:07.740

Vice-Chair Knuckles: Ms. Haynes. You want to just conclude with a sentence

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03:09:07.830 --> 03:09:09.110

Vice-Chair Knuckles: or two.

1211

03:09:09.210 --> 03:09:14.410

Host : It's you. You may unmute yourself to do that. Sorry,

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03:09:21.570 --> 03:09:22.999

Host : I hope she

1213

03:09:23.280 --> 03:09:24.460

Vice-Chair Knuckles: she there.

1214

03:09:33.500 --> 03:09:52.049

PH06 - 23 - Sharon Haynes: Yes, thank you so kindly. The urban village is a comprehensive plan. I also believe that it will be a model plan for future communities. So I employ you to approve this project. In doing so you will affirm the community that their interest

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03:09:52.060 --> 03:09:56.920

PH06 - 23 - Sharon Haynes: and their well-being is of utmost importance. Thank you.

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03:09:56.930 --> 03:09:59.969

Vice-Chair Knuckles: Thank you. Other questions for Miss Haynes.

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03:10:03.650 --> 03:10:06.729

Vice-Chair Knuckles: I don't believe I see any.

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03:10:06.850 --> 03:10:11.520

PH06 - 23 - Sharon Haynes: Thank you again, Miss Haynes, you're lost. Are there

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03:10:11.580 --> 03:10:13.290

PH06 - 23 - Sharon Haynes: any additional speakers

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03:10:13.300 --> 03:10:16.629

Vice-Chair Knuckles: uh registered uh Ryan at this point?

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03:10:17.030 --> 03:10:22.819

Host : But there are no further speakers on this item.

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03:10:22.990 --> 03:10:26.549

Vice-Chair Knuckles: All right. Is there anyone present who would like to speak on the item

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03:10:28.310 --> 03:10:31.219

Host : any further? No, it's an up here. So

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03:10:31.680 --> 03:10:40.309

Vice-Chair Knuckles: okay, before I close the hearing, I just want to indicate that calendar numbers twenty, three through twenty, six,

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03:10:40.370 --> 03:10:50.810

Vice-Chair Knuckles: which we have just considered. The record will remain open through Tuesday, September the Sixth, for written submissions on this item.

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03:10:51.450 --> 03:10:52.869

Vice-Chair Knuckles: Ah!

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03:10:54.150 --> 03:10:55.760

Vice-Chair Knuckles: Are there any other

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03:10:55.860 --> 03:10:57.739

Vice-Chair Knuckles: items before us

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03:10:58.170 --> 03:10:59.350

Vice-Chair Knuckles: today?

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03:11:00.250 --> 03:11:06.449

Calendar Officer: No vice-chair there's no other business before the Commission. But I do have some public information to share

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03:11:06.600 --> 03:11:10.489

Calendar Officer: for those of you who are unable to or did not wish to testify.

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03:11:10.500 --> 03:11:12.089

Calendar Officer: You can submit written

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03:11:12.100 --> 03:11:13.650

testimony online.

1234

03:11:14.210 --> 03:11:18.489

Calendar Officer: I selected this hearing on the upcoming meetings. Page of the Nyc. Engage Portal

1235

03:11:18.500 --> 03:11:28.210

Calendar Officer: your Dp's website, or by mill, in your comments to City Planning Commission Calendar Information Office, one twenty Broadway, thirty first floor in New York, New York, one hundred and two,

1236

03:11:32.280 --> 03:11:33.449

Vice-Chair Knuckles: all Righty.

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03:11:33.640 --> 03:11:42.139

Vice-Chair Knuckles: There being no further business before us, the remote meeting held today is adjourned. Thank you, Commissioners, for your time and attention.

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03:11:42.200 --> 03:11:45.150

Host: Thank you. Vice chair.

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03:11:45.900 --> 03:11:47.090

*Comm. Osorio: It's her.

1240

03:11:47.100 --> 03:11:49.629

*Comm. Osorio: You have a great day.

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03:11:50.290 --> 03:11:52.669

Calendar Officer: Thanks, everyone. Have a good day.

Innovative Urban Village Foreword[1]

This document is the Final Environmental Impact Statement (FEIS) for the proposed Innovative Urban Village development project (the Proposed Action). Innovative Urban Living, LLC (the Applicant) is seeking discretionary approvals from the City Planning Commission (CPC) to facilitate the proposed large-scale development of a site located on Brooklyn Block 4430, Lot 1; and Block 4434, Lots 1 and 10 in the East New York neighborhood of Brooklyn, Community District 5 (the Development Site). These approvals include a zoning map amendment that would apply to the entire Project Area, which in addition to the Development Site includes de minimis portions of the north side of Block 4434, Lot 60 and Block 4431, Lots 70 and 100, and extends to the centerlines of Flatlands Avenue, Louisiana Avenue and Pennsylvania Avenue. Additional approvals include zoning text amendments to establish the Project Area as a Mandatory Inclusionary Housing (MIH) area and to expand the boundary of the Transit Zone to include the Rezoning Area, a large-scale general development special permit, and a special permit for a public parking garage (the Proposed Actions). A portion of the site is currently occupied by the 92,784-gross-square-foot (gsf) Christian Cultural Center (CCC) facility, which would remain on the site as part of the project.

The Department of City Planning, acting as lead agency on behalf of the New York City Planning Commission (CPC), determined the Draft Environmental Impact Statement (DEIS) for the Proposed Action to be complete and issued a Notice of Completion for the DEIS on May 6, 2022.

Public notices of the DEIS public hearing were published in the City Record, the Environmental Notice Bulletin, and the New York Post on August 9, 2022. CPC held a public hearing on the DEIS on August 24, 2022, which was accessible remotely via the NYC Engage Portal in support of the City's efforts to contain the spread of COVID-19. Comments were

[1] This foreword is new to the FEIS

accepted at that hearing and throughout the public comment period, which remained open through 5:00 PM on September 6, 2022.

This FEIS addresses all substantive comments made on the DEIS during the DEIS public hearing and subsequent DEIS comment period. Those comments are summarized and responded to in **Chapter 25, Response to Comments**. Written comments on the DEIS are included in a new **Appendix D**. Changes to the text from the DEIS were made in this FEIS, as necessary, in response to these comments. In addition, this FEIS also reflects all substantive changes to technical analyses resulting from agency reviews, and material changes in conditions since issuance of the DEIS.

Principal changes between the DEIS and this FEIS include:

- Transportation. As described in **Chapter 13, Transportation**, the Traffic Level of Service and corresponding summary tables were updated to clarify the eastbound approach at the intersection of Flatlands Avenue and Georgia Avenue. The chapter was revised to include the Applicant's commitment to conducting traffic signal and all-way stop warrant analyses at the intersection of Louisiana Avenue and the Site Driveway upon full buildout of the Proposed Project. The timing of the traffic monitoring program at the intersection of Flatlands Avenue and Sheffield Avenue was specified to be conducted after the completion of Buildings 1 through 6.
- Air Quality. As described in **Chapter 14, Air Quality**, the mobile source analysis in the FEIS was updated to reflect lower traffic speeds and more detailed links near the analyzed intersection. Additional refinements included explicit accounting for shuttle buses in the With Action fleet composition.
- Noise. As described in **Chapter 16, Noise**, the analysis was updated to include sound level measurements for the Sunday church service period. Two additional noise measurement locations were also added, and subsequent analysis was performed between the DEIS and FEIS in order to estimate noise levels generated by vehicular traffic that would traverse the interior roadway on Sundays before and after church services.
- Construction Analysis. As described in **Chapter 19, Construction**, the construction noise section has been revised to reflect that consideration of interior noise level within or above the acceptable limits has been included as part of determination of significant adverse construction noise impact. A discussion of noise reduction measures has also been included in the analysis.
- Mitigation. **Chapter 20, Mitigation**, has been revised to incorporate modifications to the transit mitigation measures identified in the DEIS and to reflect additional coordination with agencies and DCP.
- Alternatives. **Chapter 21, Alternatives**, has been revised to incorporate discussion of a third alternative, the Modified Application Before the City Planning Commission Alternative.
- Unavoidable Adverse Impacts. **Chapter 22, Unavoidable Adverse Impacts**, has been revised to reflect the revisions made to **Chapter 13, Transportation**, and **Chapter 20, Mitigation**.

- **Appendix C** has been created to include the following table, **2026 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service – Flatlands Avenue and East 108th Street**.
- **Appendix D** has been created to include the comments received during the public comment period for the DEIS.

Except where indicated, all text changes since publication of the DEIS are marked by double underlining and ~~strikethroughs~~ in this FEIS. No underlining is used for the **Foreword** or **Chapter 25, Response to Comments**, or Appendix C or D, all of which are entirely new.