Resorts World Casino Phase 2 Expansion

Draft Environmental Impact Statement

PREPARED FOR

Resorts World Casino New York City
110-00 Rockaway Boulevard
Jamaica, NY 11420

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RESORTS WORLD CASINO PHASE 2 EXPANSION
Draft Environmental Impact Statement (DEIS)

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Project Location:
110-00 Rockaway Boulevard
Jamaica, NY 11420

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Comments: Written comments on the DEIS will be received and considered by the Lead Agency until **June 6, 2025**. Written comments may be submitted to the Lead Agency at the contact address or email listed above. The DEIS is available at the following websites: **https://franchiseoversightboard.ny.gov/aqueduct-racetrack** and **www.rwnewyork.com.** A hard copy of the DEIS is available at the Queens Public Library at Ozone Park, 92-24 Rockaway Blvd., in Ozone Park, Queens.

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Introduction

The Applicant, Genting New York, LLC, d/b/a Resorts World Casino New York City, is seeking approval for modification of the existing ground lease of State-owned property and issuance of a Gaming Facility license from the New York State Gaming Commission (the Gaming Commission), in conjunction with a proposed expansion of the existing Resorts World New York City (RWNYC) casino and installation and operation of live table games (the Proposed Actions). RWNYC is located at 110-00 Rockaway Boulevard (Block 11543, part of Lot 2) in the Jamaica neighborhood of Queens, New York. A portion of the site is currently occupied by the existing casino and a 400-key (approximately 249,500-gross-square-foot [gsf]) hotel (the Hyatt Regency JFK Airport at RWNYC). The casino facility includes accessory retail, restaurant/food and beverage space, and meeting and event space. Approximately 4,779 parking spaces are provided on the RWNYC property in surface and structured parking to serve the hotel and casino. Together, the existing development totals approximately 1,888,535 gsf, including the 803,900-gsf structured parking facility.

Under a long-term ground lease through the New York State Franchise Oversight Board (FOB), RWNYC operates on an approximately 72.6-acre portion (the RWNYC Lease Area) of the larger State-owned property on Lot 2. Lot 2 totals approximately 172 acres in land area and, in addition to the RWNYC Lease Area, includes the Aqueduct Racetrack and the New York Racing Association, Inc. (NYRA) building (the 172-acre Aqueduct Site). The proposed expansion would be constructed on an approximately 62-acre portion (the Project Site) of the existing RWNYC Lease Area.

The Expansion Project involves the expansion of the existing RWNYC facility by approximately 3,442,665 gsf, resulting in a total of approximately 5,331,200 gsf (existing square footage, plus the proposed expansion) comprising the following elements:

› Up to approximately 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;

- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to approximately 11,000 gaming positions, which will include a mix of live gaming and will continue to include video lottery terminals (VLTs) and electronic table games;
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,300 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical/utility space;
- An approximately 97,500-gsf central utility plant (CUP);
- An approximately 79,700-gsf conservatory; and
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

The Proposed Actions would include the approval of a gaming license from the Gaming Commission, a decision that is subject to the State Environmental Quality Review Act (SEQRA), and the modification of the ground lease by the FOB. The FOB is the Lead Agency for the environmental review.

Project Site and Context

Project Site

The Project Site, as detailed above, encompasses an approximately 62-acre area within the RWNYC Lease Area on Queens Block 11543, Lot 2, located in the Jamaica neighborhood of Queens (see **Figure ES-1**). The Project Site is currently improved with the existing RWNYC facility and the Hyatt Regency JFK Airport at RWNYC hotel. The Project Site also contains retail and dining space, event space, lobby and public circulation, and surface and structured parking. **Table ES-1** provides a summary of the existing program and **Figure ES-2** shows the existing conditions site plan on the Project Site.

Figure ES-1 Site Location Map

Source: NYC MapPLUTO

Figure ES-2 Project Site Existing Conditions

Source: Perkins Eastman

Table ES-1 Project Site Existing Conditions

Use	Size
Hotel	**270,310 gsf (400 keys)**
Guest Rooms/Lounge/Admin	*230,296 gsf*
Support Space/Back of House (BOH) /Vertical Circulation	*40,014 gsf*
Lobby/Public Circulation	**42,113 gsf**
Retail/Dining	**149,030 gsf**
Retail	*5,271 gsf*
Dining	*65,972 gsf*
Retail/Food Support	*42,009 gsf*
BOH/Vertical Circulation	*35,778 gsf*
Casino/Gaming Facilities	**466,306 gsf (6,650 gaming positions)**
Casino	*260,538 gsf*
BOH/Vertical Circulation	*205,768 gsf*
Function/Event Space	**128,197 gsf**
Multi-Purpose Event Space	*87,802 gsf*
Meeting Rooms/Hospitality Suites	*9,619 gsf*
Support Space/BOH/Vertical Circulation	*30,776 gsf*
Mechanical and Electrical	**20,279 gsf**
Bus Drop-Off Area	**8,400 gsf**
Parking	**803,900 gsf (4,779 spaces)**
Surface parking	*2,414 spaces*
Garage parking	*2,365 spaces*
Total	**1,888,535 gsf**

The RWNYC facility is currently anchored by the grand entrance that serves as a central lobby for the existing facility, with a porte cochere that provides a vehicular drop-off and pedestrian access point (see the area marked as "5" in **Figure ES-2**). The grand entrance connects to the Hyatt Regency hotel ("4"), restaurant space (the Sugar Factory), and the existing casino ("2") (which occupies space on the ground through third floors). The casino is approximately 466,306 gsf and consists of 6,650 gaming positions. The third floor also contains approximately 70,000 gsf of meeting and event space. This space is subdividable and is a fully equipped facility that features private rooms and breakout rooms. The space hosts a variety of functions, including trade shows, conventions, concerts, business meetings, and more. A five-story structured parking facility (marked as "3" in **Figure ES-2**) is located just to the north of the casino and east of the hotel. Surface parking lots are also located to the west and north of the parking garage and immediately south of the restaurant. Generally, the existing RWNYC buildings are located on the interior of the Project Site, adjacent to and west of the existing racetrack, significantly set back from the surrounding properties and buffered by surface parking.

The balance of the 172-acre Aqueduct Site is improved with the NYRA Aqueduct Racetrack, a thoroughbred horse-racing facility that opened in 1894 and is the only racetrack in New York City. Aqueduct Racetrack consists of the racetrack, the NYRA building and grandstand (marked as "1" in **Figure ES-2**), and associated racing facilities in addition to surface parking. The horse track and pari-mutuel wagering (also known as pool betting) at Aqueduct Racetrack are run by NYRA. Current development at the property includes three horse racecourses (main, inner, and turf courses) and grandstand areas centrally located on the property, and 14 barns located to the southeast of the courses, as well as the NYRA building and associated surface parking located to the south of the RWNYC facility.

Vehicular access to the Project Site is provided from Rockaway Boulevard, with an access driveway connecting to the various surface and structured parking facilities. The Project Site is well served by public transit, including:

- The Aqueduct Racetrack stop along the A subway line located on the western edge of the Project Site, providing northbound access only toward Downtown Brooklyn and Manhattan;
- The Aqueduct North Conduit Avenue stop along the A subway line located to the south of the Project Site, providing both northbound access and southbound access to the Rockaways;
- The Q37 bus line with a stop at the Project Site immediately west of the parking garage, running through South Ozone Park and providing access to the north to Kew Gardens;
- The Q7 bus line running east-west along Rockaway Boulevard; and,
- The Q11 bus line running along Pitkin Avenue, providing access to Hamilton Beach to the south and Rego Park to the north.

RWNYC provides a direct connection to the Aqueduct Racetrack stop via an existing skybridge from the casino and runs a continuous shuttle bus to and from the Aqueduct North Conduit Avenue stop, operating seven days a week. Additionally, RWNYC runs a shuttle to and from Jamaica Station, which provides connection to John F. Kennedy International (JFK) Airport.

The Project Site is located primarily within a C8-1 zoning district, with small portions of the site located within R4 and R4-1 zoning districts. However, as the property is State-owned, it is not subject to local laws, including the New York City Zoning Resolution. Surrounding zoning districts are primarily low-density residential (R3A, R3-2, R3X, R4, R4A, and R4-2), with a large M1-1 manufacturing district located to the south of Belt Parkway, encompassing JFK Airport.

Surrounding Context

The Aqueduct Racetrack property is bounded by Rockaway Boulevard to the north, a 150,384-gsf Home Depot store to the northeast, a primarily residential neighborhood with single-family residences to the east, a Port Authority of New York and New Jersey (PANYNJ) parking lot and North Conduit Avenue to the south, and the A subway line on the site's western boundary with single family residences and open space uses beyond. The Project Site is largely buffered from the predominantly single-family residential neighborhood to the east by the racetrack and horse stables. Some limited multi-family development and mixed commercial/residential uses are located along Rockaway Boulevard. The Southern Fields open space and recreational resource is also located just south of North Conduit Avenue along Belt Parkway. There are more single- and multi-family residential uses north of the intersection of Linden Boulevard and the A subway line (to the northwest of the Project Site), with limited commercial and light industrial uses and a public school

interspersed. Finally, there is a mix of small commercial and multi-family residential uses located south of Rockaway Boulevard and north of Muriel Court. The Project Site is situated approximately 1.3 miles to the northwest of JFK Airport. RWNYC operates a shuttle bus to Jamaica Station, offering connection to JFK's AirTrain.

Background and Project Site History

The Aqueduct Racetrack opened in September 1894 on property that belonged to the former Brooklyn Water Works.[1] Over the years, the racetrack has been home to many of racing's landmark events, such as the Wood Memorial. The Aqueduct facilities were rebuilt from 1955 to 1959, with a new four-tier grandstand, racing strip, barns, and accessory buildings. Aqueduct opened its winterized 1-mile inner dirt track in 1975 and in 1981 opened one of the largest restaurants in New York City, the multitiered Equestris. Additional improvements were implemented in 1985 and 1989, including construction of mini-theaters; expansion of the backyard, paddock, and grandstand; and installation of a weather-insulated paddock.

In October 2011, the 415,000-square-foot (sf) multi-level RWNYC casino opened, occupying a portion of the former grandstand. The original development, supported by a New York State Full Environmental Assessment Form (EAF) and Supporting Studies prepared in 2010 by O'Brien & Gere, included interior and exterior renovations of the existing grandstand and clubhouse building to accommodate VLTs and food and beverage programs, repaving of existing surface parking lots and construction of the parking garage to the north of the grandstand, a new porte cochere at the building entrance, a pedestrian bridge (skyway) to connect the facility to the existing Aqueduct Racetrack subway station, and improvements to existing on- and off-site roadways consisting of on-site circulation improvements. The Gaming Commission served as lead agency for this environmental review, adopted findings and issued a negative declaration for the project, with the NYS Office of General Services (OGS) supporting with the technical review.

In 2014, the RWNYC facility was proposed for expansion by 1,050 new VLTs over the approximately 5,000 VLTs that were already installed at that time. To support this expansion, Philip Habib & Associates prepared additional traffic analyses to evaluate the ability of the transportation network to accommodate this increase (Proposed VLT Expansion – Technical Memorandum, dated December 27, 2014, revised April 1, 2014). The Technical Memorandum found that an increase of 1,050 new VLTs would not cause a significant traffic impact, facilitating a total of up to 6,050 VLTs at the RWNYC facility. The Gaming Commission served as lead agency for this environmental review and adopted the findings of the technical memorandum.

Given the success of RWNYC, another expansion was proposed in 2017, to include the following additional program (the Approved 2017 Plan):

- 504,180 gsf of hotel (two hotels with a total of 600 rooms);
- A 28,005-gsf grand lobby;
- 5,988 gsf of retail;
- 12,214 gsf of dining;
- 10,253 gsf of retail/food and beverage support space;

[1] https://www.nyrainc.com/uploads/wysiwyg/assets/uploads/NYRA_A_Short_History_PROOF.pdf

- 56,108 gsf of gaming (600 additional VLTs for a total of 6,650);
- 94,411 gsf of function/event space;
- 7,110 gsf of mechanical and electrical space; and
- A 2,847-gsf bus drop-off area.

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C. (VHB) prepared a Full EAF and Expanded Environmental Assessment (the 2017 EEA, dated April 2017, revised October 2017) with the Gaming Commission[2] serving as lead agency and the NYS OGS serving as expert review, to study the proposed expansion of the RWNYC facility, which involved two phases. Phase I included construction of the grand lobby, expanded gaming area, the first hotel, retail, dining, food and beverage support space, and the reconfigured surface parking and bus drop-off area; Phase II included the second hotel and a separate event space adjacent to the grand lobby. The Gaming Commission adopted the SEQRA findings and issued a negative declaration for the 2017 EEA. The Phase I portion of the proposed expansion was constructed in 2021. This included the 28,005-gsf grand lobby space; the 56,108-gsf gaming space (6,650 VLTs); 270,310 gsf of hotel space (400 keys); 28,455 gsf of retail, dining, food, and beverage support space; and the 2,847-gsf bus drop-off area. Although approved, the remaining Phase II components of the 2017 EEA project were never constructed. The 2021 expanded facility (Phase I) represents today's existing conditions on the Project Site, with the Expansion Project serving as a revised and expanded Phase II.

It is anticipated that the horse racing currently held at the Aqueduct Racetrack will be moved to Belmont Park, which is undergoing renovation to make it suitable for year-round racing and training. When complete, the redevelopment will allow NYRA to consolidate all downstate racing and training activities at the new Belmont Park, unlocking the balance of the State-owned land at Aqueduct Racetrack for redevelopment opportunities, potentially including housing, additional open space and other uses that will be defined through a competitive request for proposals process.

Proposed Actions

The Applicant is seeking approval from the Gaming Commission for the issuance of a Gaming Facility license to facilitate live gaming operations at, and expansion of, the existing RWNYC casino, as well as the modification of the Applicant's ground lease through the FOB (the Proposed Actions), in support of developing a world-class integrated resort and casino in New York City.

Expansion Project and With-Action Condition

The Applicant is proposing a two-stage conversion and expansion of the existing facilities at the Project Site to construct a world-class integrated resort and casino. Upon issuance of the Gaming Facility license, RWNYC would undertake an initial interior renovation to convert the existing event and exposition space on the third floor to live gaming, as well as renovations to the existing VLT areas of the casino on the lower floors, accommodating a total of 6,650 gaming positions.[3] This initial

[2] The lead agency for the 2017 EEA was the New York State Lottery Division, now merged into the Gaming Commission.

[3] The initial stage conversion of the existing RWNYC facility to live gaming would involve interior renovations only on the Project Site. No additional gross square footage would be constructed. It is anticipated that the existing exposition and event space on the third floor would be converted for gaming purposes as a first step, followed by renovations on the lower levels, in order to provide continuous gaming operations during the initial stage and minimize disruption as much as possible. There would be no increase in gaming positions beyond the 6,650 studied and permitted under the 2017 EEA.

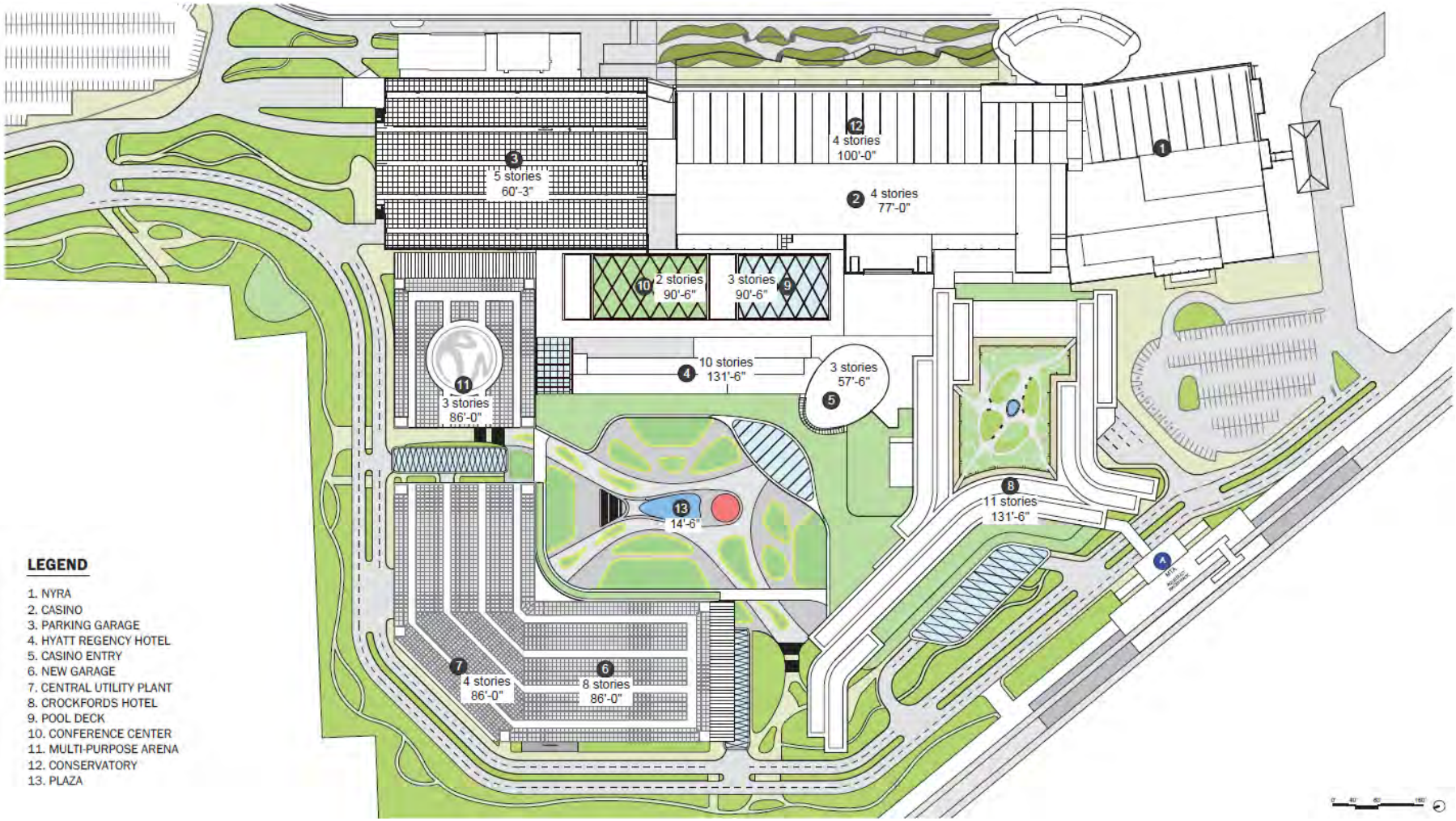
conversion is expected to be completed in 2026 and would allow RWNYC to quickly deliver live gaming to the NYC market.

Following the conversion of existing space to live gaming, the Proposed Actions would facilitate the expansion of the RWNYC facility through the construction of a new hotel and facility space featuring a pool and ballroom/multi-purpose event space; expanded retail and dining offerings, including new restaurants, a bar/stage area, and club; expanded casino and gaming facilities and required support spaces (count room, surveillance room, employee lounges, etc.); a new 7,000-seat arena; a CUP to service the proposed new buildings; a new central plaza and conservatory; and a new parking garage in the location of the existing surface parking nearest to the main casino entrance. See **Figure ES-3** and **Table ES-2** for a summary of the Expansion Project improvements and the total development projected on the Project Site.

Figure ES-3 shows the site plan for the Expansion Project, which is generally representative of the proposed components of the RWNYC expansion. **Figure ES-3** is conceptual and meant to depict the individual project components.

Each of the program components of the Expansion Project is described in more detail below.

Figure ES-3 Expansion Project Site Plan



Source: Perkins Eastman

Table ES-2 summarizes the total development proposed on the Project Site.

Table ES-2 Expansion Project[1]

Use	Size
Hotel	**1,376,900 gsf (2,000 keys)**
Guest Rooms/Lounge/Admin	*1,041,700 gsf*
Spa/Fitness Center	*23,100 gsf*
Support Space/BOH/Vertical Circulation	*312,100 gsf*
Lobby/Public Circulation	**232,900 gsf**
Retail/Dining	**213,900 gsf**
Retail	*14,000 gsf*
Dining	*43,100 gsf*
Retail/Food Support	*30,800 gsf*
Bar/Stage	*48,500 gsf*
Club/Lounge	*9,200 gsf*
Support Space/BOH/Vertical Circulation	*68,300 gsf*
Casino/Gaming Facilities	**725,900 gsf (11,000 gaming positions)**
Casino	*398,700 gsf*
Support Space/BOH/Vertical Circulation	*327,200 gsf*
Function/Event Space	**73,900 gsf**
Ballroom	*19,300 gsf*
Meeting Rooms/Hospitality Suites	*24,300 gsf*
Pre-Function	*6,000 gsf*
Office/Support Space/BOH/Vertical Circulation	*24,300 gsf*
Pool Deck	**53,300 gsf**
Arena	**187,900 gsf**
Other Support Space	**323,000 gsf**
Mechanical and Electrical	*145,800 gsf*
Central Utility Plant	*97,500 gsf*
Conservatory	*79,700 gsf*
Parking	**2,143,500 gsf (7,309 spaces)**
Surface parking	*1,217 spaces*
Garage parking	*6,092 spaces*
Total	**5,331,200 gsf**
Central Plaza	**148,300 sf**

[1] Includes existing gsf on the Project Site. The reported Expansion Project gross square footage is approximate.

Hotel, Conference Center, and Pool Deck

The Expansion Project would provide additional hotels and event space on the Project Site to support the expanded casino and gaming facilities and the proposed arena. The Expansion Project would include up to approximately 2,000 hotel keys, with a new 11-story building (131 feet, 6 inches in height) to accommodate guest rooms and high-end hotel amenities, in addition to an expanded casino area (detailed below) to be located just south of the existing casino entrance (marked as "8" in **Figure ES-3**). A new conference center with a 19,300-gsf ballroom and other smaller meeting rooms ("10" in **Figure ES-3**) and a 53,300-gsf pool deck ("9" in **Figure ES-3**) would be constructed (both to a height of 90 feet, 6 inches) just east of the existing Hyatt Regency hotel to support a variety of events and meetings.

Lobby and Public Circulation

The lobby and public circulation areas are critical components of the Expansion Project, as they would provide central gathering locations and access between the various programmed areas of the RWNYC facility, including family corridors that would provide access around the casino floors. This space includes the main entry and central corridors that would serve the hotels, casino space, ballroom, and retail and dining offerings, along with various pedestrian connectors between the main entry, the publicly accessible central plaza, the new parking facility, and the arena and new hotel and casino areas.

Retail and Dining

Retail and dining offerings at RWNYC would be upgraded and expanded under the Expansion Project. The casino would feature a new food court, 360-degree bar, and various lounges on the first and second floors. Two new fine dining restaurants would be introduced in the new casino, and smaller dining options and retail spaces would also be provided elsewhere throughout the RWNYC facility.

Casino and Gaming Facilities

Through the Proposed Actions, the Expansion Project would involve a conversion of the existing exposition space and casino as well as expanded casino space to accommodate live gaming and table games. A new wing would be constructed that would extend from the existing casino, located in place of the existing surface parking area just south of the existing main lobby ("8" in **Figure ES-3**). The Expansion Project would feature approximately 725,900 gsf of casino and gaming facilities (including the existing casino space), accommodating a total of up to approximately 11,000 gaming positions. The upgraded facilities would provide high-end gaming features and specialized areas that include a poker room, sports betting facilities, and high-limit gaming areas.

Arena

A new 7,000-seat arena would be constructed just north of the existing Hyatt Regency hotel and west of the existing parking garage at the north end of the Project Site (marked as "11" in **Figure ES-3**). The three-story arena (86 feet in height) would host various concerts, comedy shows, and sporting and other events throughout the year. The venue would allow for flexible seating configurations to tailor the space depending on the need and attract a variety of event types.

Parking

The Expansion Project would increase parking capacity on the Project Site to a total of approximately 7,309 spaces, including approximately 1,217 surface parking spaces and approximately 6,092 structured parking spaces. The surface parking would be concentrated within the northern parking area adjacent to Rockaway Boulevard as well as a small surface lot under the proposed open space plaza. The Expansion Project would involve the construction of a new eight-story parking garage (86 feet in height) on the northwest portion of the Project Site (marked as "6" in **Figure ES-3**).

In addition to the parking facilities, existing bus access would be reconfigured on the Project Site, to be located at ground level under the proposed plaza (described below) in order to provide more direct access to the main entry.

Open Space and Other Site Features

The Expansion Project would feature extensive open space and publicly accessible features in addition to enhanced interior gathering spaces. A proposed, approximately 148,300-sf elevated central plaza (14 feet, 6 inches in height) would serve as a pedestrian connector and publicly accessible passive open space between all of the programmed spaces on the Project Site (marked as "13" in **Figure ES-3**). Additionally, the project would feature a cohesive site-wide landscaping and circulation plan, including a publicly accessible walking path that would extend along the western site boundary and would provide a pedestrian connection through the Project Site and between neighboring residential areas. The trackside portion of the existing casino building would also be converted to a three-level conservatory space (100 feet in height), providing an interior landscaped circulation and gathering space to serve visitors to the site. This area would include bars and lounges ("12" in **Figure ES-2**).

In addition to the Expansion Project program categories detailed above, other site features incorporated into the project include the following:

- A publicly accessible pocket park located northeast of the proposed parking garage to be incorporated into the broader publicly accessible walking path (the pocket park, walking path, and plaza would be fully accessible to the public);
- Upgraded site infrastructure and circulation plan, featuring a new central connector road that provides access to the various program areas;
- An approximately 97,500-gsf, four-story (86 feet in height) CUP ("7" in **Figure ES-3**);
- Enhanced connection to the Aqueduct Racetrack subway station via a replacement sky bridge to connect to the expanded hotel/casino building; and
- Extensive sustainability features—including a photovoltaic solar array on the proposed parking garage.

Finally, the Applicant is exploring the potential to provide a new southbound platform at the Aqueduct Racetrack stop along the A subway line, which currently only has northbound service. Under this scenario, access to the southbound platform would be provided via an overpass over the tracks. Though still in the concept phase, this scenario is considered as part of this environmental review for conservative analysis purposes.

Project Purpose and Need

The Proposed Actions would facilitate the construction of an integrated resort that includes new hotel space, dining, shopping, an arena and event center, live gaming, and an expanded casino area at the existing RWNYC facility. The Applicant believes the Expansion Project would solidify RWNYC as a destination for entertainment, dining, and shopping in New York City and support new workforce development opportunities and economic activity in the region.

The Expansion Project would capitalize on the existing investments at the site to continue to build job opportunities and invest in the local community. The Proposed Actions would enable more certainty for the Project Site, allowing for long-term and cohesive planning on the site to benefit existing and future on-site employees. There are currently 859 jobs located on the Project Site; however, with the Proposed Expansion, the site would be able to accommodate approximately 5,000 jobs. The diversity in job types would allow for a range of employee skill sets and opportunities, ranging from family-sustaining union jobs to senior managerial-level jobs. The Expansion Project would also directly support approximately 5,000 jobs throughout the 4-year construction duration.

Overall, the proposal would continue the investment made at this location and supported by previous Gaming Commission decisions and would leverage that investment to provide new community amenities in the form of new publicly accessible open spaces on the site, including multi-use paths and passive open spaces.

Chapter 3, Socioeconomic Conditions, includes a detailed description of the Expansion Project economic benefits and impacts, including job generation, tax revenue generation, and community benefits incorporated into the project.

Analysis Framework

The potential environmental effects of the Expansion Project are analyzed based on an analytical framework that compares the incremental differences between a future condition without the Proposed Actions in place (No-Action condition) and the future with the Proposed Actions in place and the associated development operation (With-Action condition). It is important to note that the Expansion Project includes as-of-right elements that were fully analyzed in the 2017 EEA (the Approved 2017 Plan) and that RWNYC will complete regardless of the outcome of the Proposed Actions.

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 Expansion Project (or With-Action condition) is compared to determine the potential for significant adverse environmental impacts. The difference between the No-Action and With-Action conditions represents the increment to be analyzed in the environmental review.

Future No-Action Condition

As detailed above, the full program analyzed in the Approved 2017 Plan was determined to have no significant adverse impacts. Therefore, though certain components of the Approved 2017 Plan program were never constructed on the Project Site, namely a second proposed hotel, the full program as approved in 2017 is considered the baseline No-Action future condition for the purposes of this

analysis. If the Applicant is not awarded a license for live gaming, the approved and unbuilt program would be constructed on-site. The Approved 2017 Plan program is outlined in **Table ES-3** below.

Future With-Action Condition and Increment for Analysis

The With-Action condition is the same as the Expansion Project, detailed above in **Table ES-2**. The With-Action condition would include a total of approximately 5.3 million gsf of development and an incremental increase of approximately 3,167,534 gsf over the No-Action condition. **Table ES-3** provides the increment for analysis.

Table ES-3 Future No-Action and With-Action Comparison

	Existing Condition	Approved 2017 Plan (No-Action Condition)	With-Action Condition	Increment
Hotel	**270,310 gsf**	**504,180 gsf**	**1,376,900 gsf**	**+872,720 gsf**
Keys	*400 keys*	*600 keys*	*2,000 keys*	*+1,400 keys*
Guest Rooms/Lounge/Admin	*230,296 gsf*	*387,447 gsf*	*1,041,7 00 gsf*	*+654,253 gsf*
Spa/Fitness Center	*-*	*12,234 gsf*	*23,100 gsf*	*+10,866 gsf*
Support Space/BOH/Vertical Circulation	*40,014 gsf*	*104,499 gsf*	*312,100 gsf*	*+207,601 gsf*
Lobby/Public Circulation	**42,113 gsf**	**35,526 gsf**	**232,900 gsf**	**+197,374 gsf**
Retail/Dining	**149,030 gsf**	**134,253 gsf**	**213,900 gsf**	**+79,647 gsf**
Retail	*5,271 gsf*	*7,413 gsf*	*14,000 gsf*	*+6,587 gsf*
Dining	*65,972 gsf*	*53,364 gsf*	*43,100 gsf*	*-10,264 gsf*
Retail/Food Support	*42,009 gsf*	*42,253 gsf*	*30,800 gsf*	*-11,453 gsf*
Bar/Stage	*-*	*-*	*48,500 gsf*	*+48,500 gsf*
Club/Lounge	*-*	*-*	*9,200 gsf*	*+9,200 gsf*
Support Space/BOH/Vertical Circulation	*35,778 gsf*	*31,223 gsf*	*68,300 gsf*	*+37,077 gsf*
Casino/Gaming Facilities	**466,306 gsf**	**473,731 gsf**	**725,900 gsf**	**+252,169 gsf**
Gaming Positions	*6,650*	*6,650*	*11,000*	*+4,350*
Casino	*260,538 gsf*	*277,108 gsf*	*398,700 gsf*	*+121,592 gsf*
Office/Support Space/BOH/Vertical Circulation	*205,768 gsf*	*196,623 gsf*	*327,200 gsf*	*+130,577 gsf*
Function/Event Space	**128,197 gsf**	**193,719 gsf**	**73,900 gsf**	**-119,819 gsf**
Multi-Purpose Event Space	*87,802 gsf*	*91,772 gsf*	*-*	*- 91,772 gsf*
VIP Skyboxes	*-*	*3,346 gsf*	*-*	*- 3,346 gsf*
Meeting Rooms/Hospitality Suites	*6,051 gsf*	*10,066 gsf*	*24,300 gsf*	*+14,234 gsf*
Ballroom	*3,568 gsf*	*-*	*19,300 gsf*	*+19,300 gsf*
Pre-Function	*-*	*-*	*6,000 gsf*	*+6,000 gsf*
Office/Support Space/BOH/Vertical Circulation	*30,776 gsf*	*88,535 gsf*	*24,300 gsf*	*-64,235 gsf*
Pool Deck	**-**	**-**	**53,300 gsf**	**+53,300 gsf**
Arena	**-**	**-**	**187,900 gsf**	**+187,900 gsf**
Other Support Space	**29,079 gsf**	**18,357 gsf**	**323,000 gsf**	**+304,643 gsf**
Mechanical and Electrical	*20,279 gsf*	*7,110 gsf*	*145,800 gsf*	*+138,690 gsf*
Central Utility Plant	*-*	*-*	*97,500 gsf*	*+97,500 gsf*
Bus Drop-Off Area	*8,400 gsf*	*11,247 gsf*	*-*	*-11,247 gsf*
Conservatory	*-*	*-*	*79,700 gsf*	*+79,700 gsf*
Parking	**803,900 gsf (4,779 spaces)**	**803,900 gsf (4,960 spaces)**	**2,143,500 gsf (7,309 spaces)**	**+1,339,600 gsf (2,349 spaces)**
Surface Parking	*2,414 spaces*	*2,401 spaces*	*1,217 spaces*	*-1,184 spaces*
Garage Parking	*2,365 spaces*	*2,559 spaces*	*6,092 spaces*	*+3,533 spaces*
Total	**1,888,535 gsf**	**2,163,666 gsf**	**5,331,200 gsf**	**+3,167,534 gsf**

Analysis (Build) Year

Assuming approval of the gaming license in late 2025, the first phase conversion of the existing casino facilities for live gaming operations is expected to be complete in 2026. The second phase of the Expansion Project, to expand the existing RWNYC facility as part of an integrated resort, is expected to be complete in 2030.

Principal Conclusions of Environmental Analysis

Land Use, Zoning, and Public Policy

The Proposed Actions would not result in new land uses but would introduce greater bulk and density than what currently exists on the Project Site. The uses would be compatible with the existing and historic use of the Project Site as a citywide and regional recreational and entertainment facility. The surrounding land uses are buffered from the proposed expansion on the northeast, east, south, and west (the elevated subway line) and the Applicant proposes an enhanced berm along the property line at the northwest corner of the site to provide a densely planted buffer between the Project Site and the adjacent residences. Additionally, the building bulk of the proposed development on the Project Site facilitated by the Proposed Actions would be comparable to existing development on the RWNYC Lease Area.

The requested discretionary actions are not subject to local zoning regulations. The Expansion Project would be consistent with many of the high-level goals and objectives set forth by the City in its citywide policy documents. The Proposed Actions would facilitate development that is well integrated with current built conditions and the existing uses on the Project Site. Therefore, the Expansion Project would not adversely affect surrounding land use, zoning, or public policy.

Socioeconomic Conditions

The preliminary analysis of the Expansion Project has determined that the Proposed Actions would not result in significant adverse impacts to socioeconomic conditions. The Expansion Project would not introduce new economic trends to the study area that would substantially alter existing economic patterns and trends. Since the site is used for commercial and entertainment activity, the Expansion Project would not result in direct displacement and, therefore, would not result in displacement of any uses that may directly or indirectly support businesses in the Study Area. Therefore, the Expansion Project would not result in significant adverse impacts due to indirect business displacement.

Community Services and Solid Waste

The *2021 City Environmental Quality Review (CEQR) Technical Manual* indicates that a significant adverse impact on health care, police and emergency services could occur when a proposed project would introduce a sizeable new population to the neighborhood or when it would displace a health care, police station, or emergency service facility. The Expansion Project would expand upon an existing use and would not introduce a sizeable new population to the neighborhood, nor would it displace the functions or facilities related to health care, police, and emergency services within the neighborhood. Therefore, no significant adverse impact is anticipated to these services.

The Proposed Actions would generate an increment above the Approved 2017 Plan of approximately 45.95 tons per week of solid waste. All solid waste generated on the Project Site would be handled by private carters. Overall, the uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately four commercial carter truck loads per week. This is considered a negligible increase relative to the approximately 9,000 tons of waste handled by commercial carters every day, and it would also represent approximately 0.02 percent of the City's anticipated future weekly commercial and the New York City Department of Sanitation–managed waste generation in 2025, as projected in the Solid Waste Management Plan. As such, the Proposed Actions would not result in an increase in solid waste that would overburden available waste management capacity. Therefore, the Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services.

Open Space

There are three open spaces, including parks and playgrounds, located within a quarter mile of the Project Site. Any additional demand for open space resources that may be generated by the future visitors and worker population on the Project Site could be accommodated by the proposed open space facilities that would be incorporated into the Expansion Project, including a plaza and a promenade as well as private spaces such as a trackside plaza and hotel amenities such as a garden. Therefore, no significant adverse impacts to open space resources are expected due to the Proposed Actions.

Shadows

A preliminary analysis was conducted for the Expansion Project, consisting of Tier 1 through Tier 3 screening analyses. The Tier 1 and 2 screening analyses identified four sunlight-sensitive resources within the area of potential shadow that would result from the Expansion Project. The Tier 3 screening showed that in the absence of intervening structures, the Expansion Project could cast shadows on portions of the State-owned Ozone Howard Little League Fields (O3) and the Aqueduct Racetrack (O4). No shadows would be cast on the City-owned John Adams High School Track Field (O1)[4] or the publicly accessible Al Stabile Playground (O2).

The Expansion Project would cast shadows on Ozone Howard Little League Fields (O3) during 3 of the 4 analysis days. The fields would receive shading from the Expansion Project for approximately 17 minutes on the March 21/September 21 analysis day, 53 minutes on the May 6/August 6 analysis day, and would receive approximately 1 hour and 13 minutes of shading from the Expansion Project on the June 21 analysis day. This resource would receive uninterrupted sunlight for a minimum of approximately 8 hours. Peak usage of the Ozone Howard Little League Fields occurs in the evenings on weekdays and weekends. Because the project-generated shadows for the three analysis days occur in the early morning hours, and due to the availability of uninterrupted sunlight for the balance of the day, shadows cast by the Expansion Project would not hinder the usage, the enjoyment of this resource, or the viability of vegetation on the fields.

The Aqueduct Racetrack (O4) would receive shading on all the analysis days. Shading from the Expansion Project would occur for a period of 22 minutes on the December 21 analysis day and would occur for a maximum of approximately 2 hours and 20 minutes on the June 21 analysis day.

[4] Although the John Adams High School Track Field is owned by the New York City Department of Education, it is only open to students at the adjacent John Adams High School and is not publicly accessible to the surrounding community.

The racetrack would receive uninterrupted sunlight for a minimum of approximately 5 hours. It should be noted that the racetrack is not publicly accessible. Project-generated shadows would not hinder the usage, the enjoyment of this resource, or the viability of vegetation. Further, it is anticipated that the activities on the racetrack will be transferred to Belmont Park by 2029 when the Expansion Project is fully operational. Future use of the site is not known at this time.

For the reasons described above, significant adverse shadows impacts are not anticipated for either of the resources that would experience incremental shading as a result of the Expansion Project.

Urban Design and Visual Resources

The Proposed Actions would not result in significant adverse impacts to urban design. The introduction of new amenities by the Expansion Project would further the use of the Project Site as a recreational facility. The uses are currently found in the Project Site and are only limited within the Project Site boundaries. In other words, the elements introduced by the Expansion Project other than slightly adjusted views into the Project Site are unlikely to be felt by pedestrians. As the views into the site are not to or from a visual resource, the analysis focuses on how the design of the Expansion Project would affect pedestrians in the neighborhoods immediately to the north and west of the Project Site, including from Centreville Street, 106th Street, and 107th Street. The Expansion Project includes enhancements to the planted buffer that separates the adjacent residences from the Project Site.

Infill development on the Project Site would facilitate several urban design improvements over the No-Action condition. The planning and design principles ensure a greater level of interaction between all elements of the site—from amenities and natural land features to the textures and colors of landscaping elements. The increased height and bulk of the proposed buildings overall is consistent with the higher density buildings that exist within the Project Site. The proposed buildings would be of a similar scale to the existing buildings and structures within the complex. In addition to scale, the proposed buildings would include features to integrate with the existing environment, such as the enhanced berm along the northwest perimeter and proposed green wall that would be built into the parking garage façade. By doing so, the Expansion Project would provide a densely planted buffer between the adjoining residential neighborhood and the Project Site, minimizing the effects on pedestrian views from the residential neighborhood to the Project Site.

Although the changes introduced by the Expansion Project would be limited to the Project Site, some of the proposed open spaces would provide needed community benefits in the form of publicly accessible open space, including a 3.25-acre “plaza park” and a linear pathway with seating and landscaping for walking and passive recreation, and would allow more access into the Project Site than under existing conditions. Compared to the No-Action condition, the With-Action condition would improve the built environment with an expansion of existing land uses and new open spaces that would improve the urban design of the Project Site.

Hazardous Materials

Based on the Recognized Environmental Conditions identified in the Phase I Environmental Site Assessment, a Remedial Investigation Work Plan has been submitted. The Phase II Remedial Investigation (RI) will be conducted to characterize the existing conditions of the Project Site and investigate specific sources of suspected contamination locations. If determined to be necessary, a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) would be prepared and implemented to address contaminants of concern identified. The Phase II RI and implementation

of the proposed remedial measures (if applicable) would need to be completed prior to the issuance of building permits by the NYS Office of General Services (OGS), acting on behalf of the New York State Gaming Commission (the Gaming Commission). Therefore, in complying with the conditions set forth by NYS OGS that testing be performed and mitigation measures be proposed (if applicable), no significant adverse impacts would occur related to hazardous materials as a result of the Proposed Actions. Further, the Proposed Actions would not affect disadvantaged communities or cause an inequitable burden within the environmental justice (EJ) study area, and therefore, no significant adverse EJ impacts are anticipated.

Water and Sewer Infrastructure

A preliminary assessment was conducted and determined that the Expansion Project would not result in a significant adverse impact on the City's water and sewer infrastructure. Although the Expansion Project 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.

The site is not located within a low-pressure area, and hydrant flow tests conducted indicated adequate water pressures to service the site without negatively impacting surrounding properties. It is anticipated that booster pumps would be incorporated at the proposed garage structure to ensure fire suppression demands are provided for the Expansion Project. As the site engineering design progresses, existing water pressures and flows within the New York City Department of Environmental Protection (NYC DEP) system would be obtained, and this data would be used to model the internal water distribution systems and identify the available water pressures and flows for building plumbing/sprinkler systems. The Expansion Project would result in an incremental daily water demand of approximately 0.626 million gallons per day in 2030. The projected increase would be approximately 0.05 percent (0.08 percent total) of New York City's average daily demand of 1.3 billion gallons per day (gpd). Therefore, no analysis of the water supply system is warranted.

The Proposed Actions would result in a net incremental increase of 3,167,534 gsf of hotel, casino, and other related new developments, as compared with the No-Action condition, in a combined sewered area. An analysis of the Expansion Project's potential impacts on the City's wastewater and stormwater conveyance and treatment system is therefore warranted. The preliminary analysis of sewers focuses on the potential effects of increased sanitary and stormwater flows on the City's infrastructure serving the site. The sanitary sewage generation and its impact on wastewater treatment are also analyzed in this chapter.

The Expansion Project is projected to generate an incremental sanitary sewage increase of 376,000 gpd, for a total sewage usage of approximately 593,000 gpd in 2030. This projected increase in wastewater flow would not have a significant adverse impact on the ability of the sewage collection system to convey water to the Jamaica Wastewater Resource Recovery Facility.

The Expansion Project is expected to result in an approximate 5.5 percent reduction in impervious surfaces compared to the existing condition. The proposed expansion will be designed to meet the water quality and detention requirements in accordance with the Unified Stormwater Rule (USWR) design manual. Stormwater discharges from the site are tributary to the existing 24-inch NYC DEP site connection that would be maintained as part of the project, and no new stormwater site connections are proposed. Based on preliminary calculations, the total Water Quality Volume and Sewer

Operations Volume that would be infiltrated/retained on-site is approximately 189,300 cubic feet and 287,100 cubic feet, respectively, which meets or exceeds the minimum storage volumes required.

The final value and treatment design would be determined during final design of the project. Treatment and detention methods are expected to include green roofs, rain gardens, detention/infiltration systems, or other green infrastructure practices. The previous phase of the project occurred prior to the implementation of the USWR, so it is expected that the Expansion Project would significantly reduce wet weather runoff volumes, thereby lessening the stormwater burden on the downstream combined sewer infrastructure.

Energy, Sustainability, Greenhouse Gas Emissions, and Climate Change

The Expansion Project would be consistent with the applicable emissions reduction and climate change goals, and there would be no significant adverse greenhouse gas (GHG) emission or climate change impacts as a result of the Expansion Project.

Following the methodology provided in the *CEQR Technical Manual* and the project's energy model report, it is estimated that the Expansion Project would result in approximately 8,709 metric tons of carbon dioxide equivalent (CO_2e) emissions from its annual operations and 23,694 metric tons a year of CO_2e emissions from mobile sources. This represents less than 0.07 percent of the City's overall 2020 GHG emissions of 48.4 million metric tons.

The Expansion Project is designed to comply with several City and State regulations. The GHG assessment concludes that the Expansion Project would comply with the 2020 Energy Conservation Construction Code of New York State, which governs performance requirements of heating, ventilation, and air conditioning systems (HVAC) as well as the exterior building envelope of new buildings. The Expansion Project is also designed to comply with New York City Local Law 97 of 2019 through its use of all-electric HVAC and domestic hot water and proposed on-site renewable energy systems in all new construction. The Expansion Project would incorporate various mitigation measures to reduce GHG emissions, including the use of electric heating and cooling systems; installation of a rooftop solar array; construction in accordance with both City and State 2020 Energy Conservation Construction Codes; water usage reduction measures; encouragement of public transportation and high-occupancy vehicle trips; and organics recycling, consistent with the State Climate Leadership and Community Protection Act.

Regarding climate change, the Project Site is located well outside of the City's Coastal Zone and is located in neither the 100-year floodplain nor the 500-year floodplain. Therefore, the Expansion Project would not be at risk of sea level rise or flood-related impacts now or in the future. As discussed in **Chapter 2, Land Use, Zoning, and Public Policy**, the Expansion Project would be in compliance with Local Law 97, introduced in 2019 for NYC to achieve reductions in GHG emissions by 2050, and would also comply with the 2020 Energy Code. The Expansion Project would also comply with NYC's Local Law 86, the "Green Building Law," through its anticipated qualification for Leadership in Energy and Environmental Design (LEED) certification, a program led by the U.S. Green Building Council to promote sustainable building construction and design. Overall, the assessment concludes that the Expansion Project supports the goal of moving toward carbon neutrality and clean energy sources and is supportive of and consistent with *PlaNYC: Getting Sustainability Done*. Therefore, significant adverse impacts to climate change are not anticipated as a result of the Proposed Actions.

Transportation

Intersection Traffic

The Proposed Actions would generate a total of 2,458 vehicles per hour (vph) (2,026 "ins" and 432 "outs") in the Friday PM peak hour, 2,533 vph (1,953 "ins" and 580 "outs") in the Saturday PM peak hour, and 2,548 vph (749 "ins" and 1,799 "outs") in the Saturday night peak hour. Of the 31 intersections analyzed, the Proposed Actions would result in significant adverse traffic impacts at ten intersections (at 18 movements) during the Friday PM peak hour, ten intersections (at 14 movements) during the Saturday PM peak hour, and nine intersections (at ten movements) during the Saturday night peak hour.

The identification and evaluation of traffic capacity improvements needed to mitigate potential significant adverse traffic impacts created by the Proposed Actions are presented in **Chapter 17, Mitigation**.

Highways

The Expansion Project is located in close proximity to the Belt Parkway and the Nassau Expressway, and analyses were performed at key highway segments that project-generated trips would use to access the Project Site. The highway segments analyzed are located on the Belt Parkway within the vicinity of the Lefferts Boulevard overpass and the Van Wyck Expressway Service Road/North Conduit intersection. No significant adverse impacts would occur at the 11 highway segments analyzed for the Friday PM, Saturday midday, and Saturday night peak hours.

Parking

The Expansion Project would provide a total of 7,309 onsite parking spaces, including construction of a new 3,727-space parking garage. The Proposed Actions' peak parking demand of 6,008 spaces would be expected on Saturday during the 8 PM to 9 PM hour. Overall, the Expansion Project would provide enough spaces to accommodate the Friday and Saturday peak project demand.

Transit

There are two subway stations located within the Aqueduct Racetrack property close to the Project Site—the Aqueduct Racetrack subway station and Aqueduct – North Conduit Avenue subway station (both stations are served by the A subway line). Analyses of the station elements at these two subway stations were performed for the weekday PM commuter peak hour, specifically for a Friday when weekday station activities are highest. The analysis determined that all station elements analyzed would operate at acceptable levels of service in the With-Action condition.

A subway line haul analysis was conducted for the A subway line and determined that the subway line would continue to operate within capacity during the Friday PM peak hour, and therefore, subway line haul impacts are not expected as a result of the Expansion Project.

Overall, the Expansion Project would not result in the potential for significant adverse transit impacts (neither for bus nor subway).

RWNYC is exploring the potential to provide a new southbound platform at the Aqueduct Racetrack station, which currently only has northbound service. Access to the southbound platform would be

provided via an overpass over the tracks, with one new stair along each platform. It is assumed that subway riders that access the Aqueduct Racetrack property from the Aqueduct – North Conduit Avenue Station would use the proposed southbound platform at the Aqueduct Racetrack station. Design and construction of the southbound platform would require MTA approval and coordination. An analysis of the proposed stairways was conducted and determined 60-inch-wide stairways would operate at acceptable LOS (level of service) C.

Vehicular and Pedestrian Safety

Five intersections have been identified as high-crash locations, according to New York City Department of Transportation (NYC DOT) criteria. The intersections of Rockaway Boulevard at Liberty Avenue/96th Street and North Conduit Avenue at Lefferts Boulevard had at least five bicycle and/or pedestrian crashes recorded within a consecutive 12-month period and were identified as high-crash locations. In addition to these intersections, three additional locations located along the Rockaway Boulevard, Woodhaven Boulevard, and Liberty Avenue corridors have been identified by NYC DOT as priority corridors as part of the NYC Vision Zero Program and experienced at least three bicycle and/or pedestrian crashes within a consecutive 12-month period. These intersections are therefore considered high-crash locations per NYC DOT's criteria.

Air Quality

The air quality analysis addressed emissions from mobile sources at intersections, parking facilities, and industrial sources.

Intersection Analysis

The number of incremental trips generated by the Proposed Expansion would be higher than the screening thresholds for carbon monoxide (CO) and particulate matter (PM) identified in the *CEQR Technical Manual*. As such, a mobile source screening assessment was undertaken, which indicated the need for additional analysis. Based on the screening analysis results, the intersection of Rockaway Boulevard and Aqueduct Road was selected as a worst-case location. A microscale analysis for CO and PM was conducted for this location using weekend traffic data. The highest predicted CO and PM concentrations were below respective National Ambient Air Quality Standards and the CEQR *de minimis* values. Therefore, no significant adverse air quality impacts are expected from mobile sources generated by the Expansion Project.

Parking Analysis

A parking garage analysis was undertaken for the proposed parking garage. The garage would have one sub-grade level that is mechanically ventilated and several above-grade levels that are naturally ventilated. The analysis determined that emissions from both portions of the parking garage would not result in a significant adverse air quality impact. Overall, no significant adverse air quality impacts are expected from the parking facilities.

Industrial Source Analysis

An industrial source analysis was conducted for sites emitting air toxics within a 400-foot radius of the Project Area. The analysis presented that there would be no potential for impacts from the

sources identified. Therefore, further analysis of industrial sources was not warranted, and no significant adverse air quality impacts are expected.

Noise

A noise assessment was conducted to determine whether (i) the Expansion Project would significantly increase sound levels from mobile and stationary sources at existing noise receptors, and (ii) the new noise receptors that would be introduced by the Expansion Project would be in an acceptable ambient sound level environment. The Expansion Project is not anticipated to result in significant adverse noise impacts. To ensure the effective implementation of the noise reduction commitments and mitigation measures outlined in this chapter, an enforceable legal mechanism will be established, in the form of a licensing agreement, prior to the issuance of a Gaming Facility license from the New York State Gaming Commission and would be a condition of the awarded license.

Existing Receptors

Mobile Source Analysis

Traffic-related impacts were evaluated at 31 intersections within the Expansion Project's study area during weekday PM, Saturday PM, and Saturday nighttime periods. The analysis considers existing, No-Action, and With-Action condition traffic volumes. The identified intersections were assessed to understand how traffic noise would change in the future With-Action condition by comparing the No-Action and With-Action passenger car equivalents (PCEs) to determine whether the CEQR impact threshold of 3 A-weighted decibels (dB(A)) is exceeded. The analysis concludes that, at the busiest intersection, noise levels are expected to increase by 2.1 dB(A) under the With-Action condition compared to the No-Action condition. As incremental noise levels at each of the identified intersections are not expected to exceed the CEQR impact threshold of 3 dB(A), no significant adverse mobile source noise impacts are anticipated as a result of the Expansion Project and no further analysis is warranted.

Stationary Source Analysis

The analysis includes the CUP Building, the parking garage, and the multi-purpose arena as stationary noise sources in the With-Action condition. Approximately 950 noise-sensitive receptors (NSRs) were identified within a 1,500-foot radius of the Project Site, with 19 receptor points used to represent receptors with a direct line of sight to the proposed CUP building. These receptors, all residential homes surrounding the Project Site, were identified using a geographic information system, satellite imagery, and field surveys conducted in October 2022. For the arena and parking garage assessments, no receptors were identified as the assessment determined that the construction of these buildings would sufficiently attenuate noise, ensuring compliance with the *CEQR Technical Manual* for all NSRs.

CUP Building

Predicted noise levels from the proposed CUP building at nearby existing NSRs indicate that during both daytime and nighttime hours, no noise levels would exceed the *CEQR Technical Manual* threshold of a 3 dB(A) L_{eq1hr} increase. Therefore, no significant adverse noise impacts are anticipated.

The impact determination assumes that the CUP building would incorporate the specific measures which are outlined in the **Project Commitments** section below. With the provision of these measures, no significant adverse noise impacts due to stationary sources from the CUP building are anticipated.

An assessment was conducted in accordance with §24-227 (Circulation Devices) of the NYC Noise Code, confirming that all predicted noise levels comply with the 45 dB(A) criterion.

Arena

The proposed arena design would be fully enclosed, and the building would be designed to ensure noise does not adversely affect the surrounding environment. The building envelope, including the roof, would use materials with a high Sound Transmission Class (STC) and the design would require that all seams and joints are tightly sealed to avoid noise breakout. Additionally, the internal acoustic design would ensure sound energy and reverberation is limited with acoustic panels distributed across the arena.

The design measures outlined above and in the **Project Commitments** section below would sufficiently attenuate noise, such that no existing NSRs would experience incremental noise increases exceeding 3 dB(A) compared to No-Action noise levels. Additionally, the design would be developed such that noise levels at proposed NSRs on the Project Site do not exceed 65 dB(A) L10 during the day or 55 dB(A) L10 at night, in order to meet 'Acceptable General External Exposure' levels as defined by the *CEQR Technical Manual*. Given these measures, the noise generated by the multi-purpose arena is not anticipated to result in a significant adverse noise impact.

Parking Garage

The Expansion Project would include a new accessory parking garage to be built on the western portion of the Project Site, connected to the CUP Building. Various noise reduction measures would be implemented during the detailed design phase of the parking garage, which are outlined in the **Project Commitments** section below.

By incorporating noise reduction measures, noise from the proposed parking garage would be significantly minimized. The combination of structural design improvements and operational controls are anticipated to result in acceptable noise levels at nearby receptors, and, as such, no significant adverse noise impacts are anticipated.

New Future Receptors

An assessment of potential significant adverse noise impacts on proposed new sensitive receptors (project-generated NSRs) is provided and concludes that the anticipated incident noise levels on the proposed hotel façade fall under the "Acceptable General External Exposure" category. Therefore, no significant adverse noise impacts on project-generated NSRs are anticipated and no further analysis is warranted.

Public Health

The Expansion Project would not result in any significant adverse public health impacts as defined by CEQR. Nor would the Expansion Project result in unmitigated significant adverse impacts in the areas of air quality, noise, water quality, or hazardous materials. In addition, through the implementation of a comprehensive Responsible Gaming/Problem Gambling Prevention Plan, the Proposed Actions

would advance the goals of the New York State Responsible Play Partnership to reduce harm associated with problem gambling and promote general public health and welfare.

Neighborhood Character

The Expansion Project would not result in a significant adverse impact to neighborhood character. As outlined in the *CEQR Technical Manual*, the assessment of neighborhood character is based on the analyses of other technical areas. The Expansion Project would not result in significant adverse impacts in the technical areas of land use, zoning, and public policy; community services and solid waste; socioeconomic conditions; open space; urban design, and visual resources; shadows; or noise. The Expansion Project would result in traffic impacts. Therefore, a preliminary assessment of neighborhood character is provided. The assessment concludes that, while there would be increased transportation activity because of the Expansion Project, the resulting traffic conditions would be similar to those seen in the urban neighborhoods defining the study area and would not result in density of activity or service conditions that would be out of character with the surrounding neighborhood.

Construction

Governmental oversight of construction in New York City is extensive and typically involves a number of City, State, and Federal agencies, each with specific areas of responsibility. However, as this project is being constructed on State land, it would follow State guidance with close coordination and review by the NYS OGS, on behalf of the New York State Gaming Commission (the Gaming Commission). The Expansion Project would also comply with the requirements of the New York City Noise Code.

This chapter includes a discussion of construction regulations and general practices, a description of the development construction schedule, and an assessment of the potential for the Expansion Project to result in temporary significant adverse construction-period impacts.

Transportation

Traffic

Activities related to construction would generate construction worker and delivery trips. Although construction-related vehicle traffic would be less than the vehicle trips generated by the Expansion Project, peak construction travel occurs during different times of the day and, as such, needs to be evaluated for its potential to result in significant traffic impacts. To assess the potential for construction traffic impacts, 11 intersections were analyzed during the weekday AM and PM construction peak hours. These intersections include all nine intersections with unmitigated traffic impacts identified in **Chapter 17, Mitigation**, as well as the north entrance to the Project Site where operational improvements are proposed and at the intersection of North Conduit Avenue and the Belt Parkway Westbound Off-Ramp where a new traffic signal is proposed to mitigate a project-related traffic impact.

Construction activities are expected to peak during the second quarter of 2029 (Q2 2029). It is anticipated that construction of the Expansion Project would generate approximately 330 construction worker auto trips and 38 construction truck trips during the AM construction peak hour; and 329 construction worker auto trips and eight construction truck trips during the PM construction

peak hour. Construction trucks would be required to use the NYC DOT–designated truck routes to travel to the project area and would then use local streets to access the construction site entrances.

Of the 11 intersections analyzed, significant construction traffic impacts were identified at one intersection during the AM construction peak hour and four intersections during the PM construction peak hour. Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, could fully mitigate traffic impacts at the one significantly impacted intersection during the AM construction peak hour and two of the four significantly impacted intersections during the PM construction peak hour. Significant traffic impacts to the intersections listed below would remain unmitigated during the PM construction peak hour.

- Linden Boulevard and Southbound Van Wyck Service Road
- Linden Boulevard and Northbound Van Wyck Service Road

Parking

Construction workers would generate an estimated maximum daily parking demand of 412 spaces during the Q2 2029 peak quarter. Parking for construction workers would be provided in the approximately 1,109 on-site surface spaces in the north lot (Lot C) of the Aqueduct Racetrack property, which would be able to accommodate this demand. Construction workers would not be allowed to park at the remaining parking facilities, which would remain open during construction for use by RWNYC staff and visitors. The new 3,309-space parking garage would be opened in Q3 2027, during the second phase of construction, providing additional parking supply for visitors. Parking provided would, therefore, be sufficient to accommodate the construction worker parking demand.

Transit and Pedestrians

It is anticipated that approximately 26 percent of construction workers would travel to the Project Site by subway or bus. Construction-related transit trips would be significantly lower than transit trips generated during the operational peak hours and, as these trips would occur outside of the commuter peak hours, significant construction transit impacts are not expected. While the total number of pedestrian trips would exceed the *2021 CEQR Technical Manual* threshold of 200 or more pedestrians, no public sidewalk, corner or crosswalk space would attract 200 or more pedestrian trips, as the majority of walk trips to and from subway stations or bus stops would be confined within the Project Site. Therefore, the Expansion Project would not result in pedestrian impacts during the construction period.

Air Quality

Potential construction air quality impacts on surrounding sensitive uses were assessed using the NYSDOT's *Transportation Environmental Manual (TEM)* guidance and the consideration of pollutant emission control measures. The NYSDOT *TEM* requires further analysis for construction that would cause detours/diversions for more than 5 years in any one location. The construction of the project would not result in traffic diversions or detours. Therefore, further analysis of construction air quality from mobile sources is not required. Furthermore, emission control measures would be implemented that include but are not limited to the suppression of fugitive dust through watering at the construction site, use of on-site equipment meeting U.S. Environmental Protection Agency's (EPA's) Tier 3 with diesel particulate filters or Tier 4 standards, and truck idling restrictions. Considering the temporary nature of construction

and the commitment to pollutant emission control measures, further analysis of construction air quality was not required, and adverse impacts are not expected.

Noise

The construction activities for the Expansion Project would temporarily increase noise levels for nearby sensitive receptors, with peak levels anticipated during the construction of the parking garage and CUP Building through Q2 2026.

Construction activities would be limited to 7:00 AM to 3:00 PM, avoiding noise-sensitive evening and nighttime periods. Construction-related vehicle trips would result in a maximum noise level increase of 1.0 dBA at nearby intersections, which is below the 3 dBA *CEQR Technical Manual* significant adverse impact threshold.

While construction noise levels exceed the *CEQR Technical Manual* screening thresholds at multiple receptors, no temporary significant adverse impacts are identified, as the duration of these exceedances are unlikely to last longer than 2 years or more. For the existing hotel, building characteristics and mechanical ventilation systems help maintain internal noise levels below applicable thresholds during construction. Additionally, the construction contractor will implement the noise reduction measures listed below in the **Project Commitments** section to further reduce noise levels for those receptors.

A noise abatement plan would be implemented throughout construction, including equipment maintenance and noise reduction requirements, operational controls, restricted work hours, and site management practices. Additional case-specific measures, such as sound screens or berms, will be implemented where necessary.

Vibration

Construction activities can generate ground-borne vibrations, potentially causing structural or architectural damage, or annoyance to nearby residents. However, the proposed construction methods would not produce high vibration levels, as no impulsive equipment like pile drivers or drill rigs would be used.

Additionally, there are no buildings within 90 feet of the Project Site listed by the New York City Landmarks Preservation Commission (LPC) or the State and/or National Register of Historic Places (S/NR) that would require special protections from potential damage due to vibration. There is the potential for construction vibration from some construction equipment to cause annoyance in nearby residences. However, these construction activities would only occur for limited periods of time at any particular location and are considered standard for construction sites. The Applicant would follow all applicable regulations regarding required notifications to surrounding property owners. Therefore, there would be no significant adverse impact as a result of construction vibration.

Other Technical Areas

In terms of construction effects on land use, historic resources, neighborhood character, socioeconomic conditions, community facilities, and open space, preliminary analyses found that no significant adverse impacts would occur due to construction of the Expansion Project.

With respect to hazardous materials, the completion of a RAP and associated CHASP would be a condition of the awarded Gaming Facility license from the New York State Gaming Commission to

ensure investigation, mitigation, and remediation of any hazardous materials would be completed in a safe and comprehensive manner. Compliance with the conditions set forth in the agreement made with NYS would preclude the potential for significant adverse hazardous materials impacts to occur during construction and operation of the Expansion Project.

With respect to Water and Sewer Infrastructure, the Expansion Project would require a State Pollutant Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. In addition, the Applicant would be required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that meets criteria set forth by New York State Department of Environmental Conservation (NYSDEC). With the implementation of a SWPPP, there would be no significant adverse impacts to water resources due to construction of the Expansion Project.

Mitigation

In accordance with the *CEQR Technical Manual*, where significant adverse impacts are identified, mitigation to eliminate the impacts to the fullest extent practicable is developed and evaluated.

Traffic Mitigation

Of the 31 intersections analyzed, the Expansion Project would result in significant adverse traffic impacts at ten intersections (at 18 movements) during the Friday PM peak hour, ten intersections (at 14 movements) during the Saturday PM peak hour, and nine intersections (at ten movements) during the Saturday Night peak hour. The majority of the intersections analyzed would either not be significantly impacted or could be fully mitigated with traffic improvement measures.

Four of the 31 intersections would remain unmitigated during the Friday PM peak hour (two of the four intersections would be partially mitigated) and five intersections would remain unmitigated during the Saturday PM peak hour, and five intersections would remain unmitigated during the Saturday Night peak hour. In terms of impacted movements, eight of 18 movements, eight of 14 movements, and six of ten movements would remain unmitigated during the Friday PM, Saturday PM, and Saturday Night peak hours, respectively. Mitigation measures identified later in the chapter, specifically signal timing changes, are standard traffic capacity improvements that are typically implemented by the NYC DOT.

Alternatives

No-Action Alternative

The No-Action Alternative is the future without the Proposed Actions (the No-Action condition), described in **Chapter 1, Project Description** and analyzed in **Chapter 2, Land Use, Zoning, and Public Policy** through **Chapter 16, Construction**. Absent the Expansion Project, it is assumed that the full program analyzed in the Approved 2017 Plan would be built out, namely a second proposed hotel, and that existing uses on-site would continue to operate. The No-Action condition would total 2,163,666 gsf including 600 hotel keys, 473,731 gsf of casino and gaming facilities, 134,253 gsf of retail and dining, 35,526 gsf of lobby and public circulation space, 18,357 gsf of other support space, and 4,960 parking spaces.

While the No-Action Alternative would not result in any significant adverse impacts, it would only moderately increase the number of gaming positions and hotel rooms, and it would not introduce

new amenities and infrastructure such as the arena, pool deck, CUP, conservatory, or public plaza space. Without these features of the Expansion Project, the No-Action Alternative would not achieve the same economic benefits and would not meet the purpose and need of the Expansion Project to solidify RWNYC as a destination for entertainment, dining, and shopping in New York City and the region.

No Unmitigated Significant Adverse Impacts Alternative

The No Unmitigated Significant Adverse Impact Alternative identifies those modifications to the Proposed Actions that would be required to eliminate all the Proposed Actions' unmitigated significant adverse impacts. The Expansion Project would result in significant adverse impacts to traffic elements that could not be fully mitigated.

While this alternative considers development that would not result in any unmitigated significant adverse impacts, 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.

The Expansion Project would result in significant adverse traffic impacts that could not be fully mitigated with standard traffic capacity improvement measures during the Friday PM, Saturday PM, and Saturday night peak periods. A sensitivity analysis was conducted at critical intersections where unmitigated traffic impacts were identified and determined that the critical intersection would be the intersection of North Conduit Avenue and Lefferts Boulevard/Old South Road. A development increment equivalent to 22 percent of the full Expansion Project development program would result in significant adverse traffic impacts that could not be fully mitigated. Therefore, for the Expansion Project to not result in unmitigated significant adverse traffic impacts, the development increment would need to be reduced by more than 78 percent.

Unavoidable Significant Adverse Impacts

According to the *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. The Proposed Actions would have the potential to result in significant adverse traffic impacts at certain locations. In addition, certain unavoidable effects associated with construction would result from the Proposed Actions. 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. In other cases, mitigation has been proposed, but absent a commitment to implement the mitigation, or if the mitigation is determined to be impracticable upon further review between the Draft Environmental Impact Statement and Final Environmental Impact Statement, the impacts may not be eliminated.

Growth-Inducing Aspects of the Proposed Project

The Applicant is proposing a two-stage conversion and expansion of the existing facilities at the Project Site to construct a world-class integrated resort and casino. Upon issuance of the Gaming Facility license, RWNYC would undertake an initial interior renovation to convert the existing event and exposition space on the third floor to live gaming, as well as renovations to the existing VLT areas of the casino on the

lower floors, accommodating a total of 6,650 gaming positions. This initial conversion would allow RWNYC to quickly deliver live gaming to the NYC market.[5]

Following the conversion of existing space to live gaming, the Proposed Actions would facilitate the expansion of the RWNYC facility through the construction of a new hotel and facility space featuring a pool and ballroom/multi-purpose event space; expanded retail and dining offerings, including new restaurants, a bar/stage area, and club; expanded casino and gaming facilities as well as required support spaces (count room, surveillance room, employee lounges, etc.); a new 7,000-seat arena; a CUP to service the proposed new buildings; a new central plaza and conservatory; and a new parking garage in the location of the existing surface parking on the Project Site.

As discussed in **Chapter 3, Socioeconomic Conditions**, the Expansion Project would augment and enhance an existing facility with new entertainment and commercial space supporting similar uses and businesses to what exists on the Project Site and therefore would not introduce a new development trend. As documented in the socioeconomic conditions analysis, the development conditions and local economy of the area surrounding the Project Site have been relatively stable, with no clear trend occurring in recent years. The area did not experience a change in development trends following the expansion of the RWNYC casino that was constructed in 2021, which suggests that further expansion of operations at the Project Site would not introduce new trends that could affect nearby local businesses. Therefore, the Expansion Project would be consistent with the existing mix of uses at the Project Site and would not affect development conditions in the study area.

As discussed in **Chapter 9, 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 at the Project Site, it is not anticipated that the Proposed Actions would generate significant secondary effects resulting in substantial new development in nearby areas. Additionally, the Proposed Actions are limited in applicability to the boundaries of the Project Site and would not extend beyond the Project Site.

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

Irreversible and Irretrievable Commitments of Resources

The Proposed Actions would not result in an immediate or long-term loss of environmental resources, since the Project Site does not possess any natural resource of significant value, and the Project Site has been previously developed. The long-term commitment of land resources needed for the Expansion Project would be balanced by the project's beneficial aspects, including economic development, job creation, and community benefits.

Cumulative Impacts

Generally, cumulative impacts can occur when the incremental or increased impacts of an action, or actions, are added to other past, present, and reasonably foreseeable future actions. Many of the

[5] The initial stage conversion of the existing RWNYC facility to live gaming would involve interior renovations only on the Project Site. No additional gross square footage would be constructed. It is anticipated that the existing exposition and event space on the third floor would be converted for gaming purposes as a first step, followed by renovations on the lower levels, in order to provide continuous gaming operations during the initial stage and minimize disruption as much as possible. There would be no increase in gaming positions beyond the 6,650 studied and permitted under the 2017 EEA.

technical analysis areas included in this EIS by nature review the potential cumulative impacts of the Proposed Actions and the 2021 Phase I development on the Project Site. An assessment determined that the Expansion Project is not expected to result in cumulative impacts that would compound or increase other environmental effects.

Project Commitments

Detailed descriptions of project commitments associated with each chapter are provided below:

Land Use Zoning and Public Policy

- Significant new landscaping, including enhanced berms, are proposed along the northwestern portion of the property to provide screening between the adjacent residential neighborhood and the Expansion Project.
- The Expansion Project would be in compliance with Local Law 97, introduced in 2019 for NYC to achieve reductions in greenhouse gas emissions by 2050, as well as NYC's Local Law 86, the "Green Building Law," through its anticipated qualification for LEED certification.
- Landscaping and plantings throughout the Project Site would prioritize native plant species and pollinators over non-native species to support, promote, and protect future biodiversity and habitat.

Socioeconomic Conditions

- The Applicant is committed to continuing to hire a workforce that represents the demographics of Queens through the Workforce Development and Diversity Plan.

Community Services and Solid Waste

- The Applicant would maintain coordination with the local fire and police service providers as development occurs to address concerns raised and avoid impacts to the local community.
- The Applicant would implement an organics recycling program to divert organics from the waste stream.
- Solid waste collection on the Project Site would be handled out of public view and away from nearby residences.

Open Space

- The Expansion Project would include on-site public and private open space.

Shadows

- There are no project commitments specific to the shadows chapter.

Urban Design and Visual Resources

- Enhance the urban design by adding a densely planted buffer along the property line and by providing a green wall on the parking garage façade, promoting integration with the surrounding environment and creating a visual barrier between the Project Site and the neighboring residential area.

- Maintain the facade treatments of the proposed buildings in harmony with the existing complex, including the use of materials like plaster, wood, and glass.
- Introduce a variety of public and private open spaces, including a 3.25-acre plaza park, a linear promenade that runs the length of the property along the western property line that incorporates seating and landscaping for passive recreation, and a pocket park connected to the promenade near the intersection of 108th Street and Sutter Avenue.
- Incorporate thoughtful landscape elements, including plants (e.g., grasses and shrubs), new trees, and vegetated swales, to sequester carbon and improve ecological value, enhancing the local urban environment's comfort and appeal.
- Design roadways in accordance with Fire Department of New York (FDNY) requirements.
- Ensure sidewalks would be compliant with the Americans with Disabilities Act Standards for Accessible Design.
- Provide pedestrian ramps at corner quadrants with detectable warning surfaces. Striping and signage for crosswalks would be provided per NYS guidelines and the *Manual on Uniform Traffic Control Devices*.
- Include lighting features throughout the Expansion Project, including in the parking areas, along walkways, and throughout the various public and private open spaces. to prevent off-site light spill and to promote safety and support navigation throughout the Project Site. The Applicant will coordinate with the Federal Aviation Administration (FAA) and Port Authority of New York and New Jersey (PANYNJ) to provide lighting that is compliant with the relevant requirements and guidelines of these agencies.
- Adhere to industry best practices and standards of NYS and NYC regarding the preservation of tree critical root zones throughout construction.

Hazardous Materials

- The Phase II Remedial Investigation would be completed prior to completion of the Final Environmental Impact Statement and implementation of the proposed remedial measures (if applicable) would be completed prior to the issuance of a Gaming Facility license from the New York State Gaming Commission and would be a condition of the awarded license. In complying with the conditions set forth by the licensing agreement, no significant adverse impacts would occur related to hazardous materials as a result of the Proposed Actions.

Water and Sewer Infrastructure

- The Expansion Project would be designed to meet the water quality and detention requirements in accordance with the USWR design manual.

Energy Sustainability GHG and Climate Change

- The Expansion Project would include the construction of a CUP with simultaneous heating and cooling heat pump chillers as a primary stage of both heating and cooling. The efficient electrification of the heating and cooling equipment would result in a complete (100 percent) reduction in local fossil fuel usage and allow the building’s carbon footprint to be reduced as the grid gets greener. Together, these measures would aid in the State’s goals to reduce emissions by 40 percent by 2030.

- The Expansion Project's all-electric design fully aligns with the Scoping Plan for the 2019 Climate Leadership & Community Protection Act (CLCPA) and could take full advantage of the grid sourcing increasing renewable energy, resulting in less GHG emissions. This conversion would aid in the State's goals to reduce emissions by 85 percent in 2050.
- The Expansion Project includes installation of a rooftop solar array that is estimated to offset 8 percent of estimated energy use (6,245,000 kWh per year), and the Applicant would look to purchase renewable energy credits. Installing a solar array and purchasing renewable energy credits is in line with the Scoping Plan for the CLCPA task to transform power generation in the State to renewable sources.
- The Expansion Project would be built in accordance with the latest State and City codes, including the 2020 Energy Conservation Construction Codes of New York State and 2020 New York City Energy Conservation Code—both of which govern building efficiency in the choice of HVAC system and the exterior building envelope.
- As part of its commitment to New York City, the Applicant aims to comply with the intent and spirit of Local Law 97-even though the property is not subject to that requirement because it is State-owned. It would do so using the all-electric HVAC design and renewable energy installation mentioned above. The Expansion Project is projected to comply with Local Law 97 through 2034 without the need to procure any additional off-site resources; starting in 2035, the project can use off-site renewable resources to offset electricity use as would be required by Local Law 97.
- The Expansion Project would install low-flow flush and flow fixtures to reduce water usage and is evaluating using reclaimed stormwater for irrigation, flushing toilets, and HVAC make-up water.
- The Expansion Project is adjacent to a subway stop and would encourage public transportation and high-occupancy vehicle trips (shuttle or bus) to reduce single occupancy vehicle trips to the site and reduce mobile source emissions. These measures are in line with the Scoping Plan for the CLCPA call to promote mobility-oriented developments and mixed-used development near public transportation.
- The Expansion Project would include an organics recycling program to divert organics from the waste stream.
- Construction of the Expansion Project would follow federal and state regulations and codes for construction that limit equipment emissions by model year, limit idle time for vehicles and equipment on-site, and include other measures to reduce emissions.
- Construction equipment used on the Expansion Project would meet EPA's established emission limits (i.e., the use of equipment meeting EPA's Tier 3 emission standards in conjunction with diesel particulate filters and Tier 4 emission standards).
- Industry standard practices such as equipment engine maintenance would be employed to contribute to the overall goal of reducing GHG emissions from construction. Thus, construction of the Proposed Project would adhere to the State goals to reduce GHG.

Transportation

- Reconfiguration of the internal roadway network within the Project Site to accommodate the Expansion Project and provide new access connections to the project's buildings.

- Reconfiguration of the trackside roadway along the west side of the Aqueduct Racetrack between North Conduit Boulevard and the Expansion Project to accommodate the increase in vehicle traffic demand from the project.
- Operational improvements at the Rockaway Boulevard entrance, at the intersection of Rockaway Boulevard and Aqueduct Road, to accommodate the increase in vehicle traffic demand from the project. Implementation of the measures, summarized below, would be subject to NYC DOT's approval.
  - Restriping of the westbound Rockaway Boulevard approach to provide an additional left-turn lane.
  - Extension of the Aqueduct Road median to provide pedestrian refuge on the south crosswalk.
  - Modification of the intersection's signal timing and phasing plan.
- Potential measures to improve pedestrian safety at the intersection of Rockaway Boulevard/Liberty Avenue and 96th Street, such as signage identifying designated crosswalks at this intersection and at the adjacent intersection of Liberty Avenue and Rockaway Boulevard. Implementation of these measures would be subject to NYC DOT's approval and adoption.
- Potential safety improvements at the intersection of North Conduit Avenue and Lefferts Boulevard such as implementation of delineator poles, slow turn wedges and/or striping, and increased visibility for motorists during the dark hours. Implementation of these measures would be subject to NYC DOT's approval and adoption.
- The New York State Franchise Oversight Board considered input from NYC DOT, an involved agency, and has not come to agreement with the Applicant, RWNYC, on information in the draft transportation chapter pertaining to trip generation rates associated with the casino use as well as the Applicant's exclusion of weekday traffic analysis. RWNYC used 2019 traffic counts from the site whereas NYC DOT suggests a trip generation rate based on 2013 and 2016 traffic counts from the site as well as those from other off-site casinos. Though mitigation is proposed within the DEIS, additional traffic studies and mitigation may be required prior to initiation of the project.

Air Quality

- Use of all-electric space and water heating systems at a CUP with distributed hydronic loops to all the new buildings.
- Use of electric HVAC systems for all new buildings.
- Use of natural gas boilers for backup only to the electric heating system and diesel generators for emergency power use.

Noise

- Contractual Obligations: The Applicant must include the noise reduction requirements as contractual obligations for all design, construction, and operational contractors.
- CUP Building:
  - Mechanical equipment within and on the rooftop of the CUP building will be designed to maintain noise levels below the allowable limits outlined in the following section for all octave band levels between 31.5Hz to 8kHz.

- The Applicant must install acoustic louvres on the building façade where ventilation openings are required.
- The Applicant must install acoustical silencers on the cooling towers fan discharges.

› Multi-Purpose Arena:

- Fully Enclosed Design: The arena will have a fully enclosed structure to attenuate noise breakout into the surrounding environment.
- High STC Materials: The building envelope, including the roof, will utilize materials with a high STC to attenuate noise effectively.
- Sealed Construction: All seals and joints in the building structure would be sealed to prevent noise breakout.
- Internal Acoustic Treatments: Acoustic panels would be strategically distributed inside the arena to limit sound energy and reduce reverberation.

› Parking Garage:

- Incorporate sound absorbing materials in the construction of the parking garage walls ceilings and floors to help reduce the reflection and transmission of noise both within and outside the parking garage.
- Design the wall to be semi-enclosed with a "green wall" on the external façade that would help absorb sound emissions from the parking garage.
- Enforce a No Tailgating or No Partying policy: If necessary, provide designated areas for fans to congregate before and after events at the arena.
- Enforce low-speed limits within the parking garage to reduce noise from vehicle acceleration, braking and tire friction.
- Allocate parking spaces for larger or noisier vehicles, such as trucks or sport utility vehicles, in areas of the parking garage that are farther from NSRs.

› Screening Wall: A 9-meter (29-foot) high screening wall is proposed above the rooftop to provide visual and acoustic benefits for cooling towers, generator stacks, and air source heat pumps, which should be constructed to achieve an absorption coefficient of at least 0.6 across the frequency spectrum.

Public Health

› The Applicant will continue to maintain a Responsible Gaming/Problem Gambling Prevention Plan.

Neighborhood Character

› While there are no project commitments specific to the neighborhood character chapter, certain project commitments would be implemented, including new visual buffers from neighboring properties in the form of an enhanced berm and landscaping (as described in **Chapter 2, Land Use, Zoning, and Public Policy** and **Chapter 7, Urban Design and Visual Resources**), to better integrate the Expansion Project into the existing neighborhood character context.

Construction

Traffic

- Construction trucks would be required to use NYCDOT-designated truck routes and service the construction site at the designated loading zones.
- Modifications to the signal timing at specific intersections are recommended to mitigate traffic impacts.

Noise

- A 16-foot-tall perimeter sound wall will be installed prior to the commencement of construction works. The sound wall will follow the existing boundary fence line and will be in situ for the duration of the construction. To ensure a sufficient STC[6] rating, the sound wall should be constructed to meet the following criteria:
  - A surface density of at least 10 kg/m^2;
  - A fully closed surface with no large cracks or gaps; and
  - Sufficient width and height to minimize sound diffraction around or over the barrier.

  Additionally, the noise reduction coefficient (NRC)[7] of the sound wall facing the construction site should be at least 0.7 to minimize reflections.
- Temporary acoustic barriers approximately 2 meters high will be installed around construction areas, combining solid fencing with noise-absorbing curtains.
- Equipment that meets the sound level standards specified in Subchapter 5 of the NYC Noise Code would be utilized from the start of construction.
- As early in the construction period as logistics allow, diesel- or gas-powered equipment would be replaced, to the extent feasible and practicable, with electrical-powered equipment such as welders and water pumps (i.e., early electrification). Where electrical equipment cannot be used, diesel or gas-powered generators and pumps would be located within buildings to the extent feasible and practicable and in accordance with all applicable statutes, rules, regulations and executive orders, including but not limited to Executive Order 22.
- Where feasible and practicable, construction sites would be configured to minimize backup alarm noise. In addition, trucks would not be allowed to idle more than 3 minutes at the construction site, per Title 24, Chapter 1, Subchapter 7, Section 24-163 of the New York City Administrative Code.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.
- Additional measures specified within **Chapter 16, Construction** will be implemented where practicable.

[6] Sound Transmission Class (STC) is a rating that measures how well a material or structure, such as a wall or partition, reduces airborne sound transmission. A higher STC rating indicates better sound insulation, meaning less sound passes through a sound wall.

[7] Noise Reduction Coefficient (NRC) is a rating that measures how much sound a material absorbs rather than reflecting it back into a space. It is expressed as a value between 0 and 1, where 0 means no absorption (total reflection) and 1 means complete absorption (no reflection). The NRC is determined by averaging a material's absorption coefficients at four key mid-range frequencies (250, 500, 1000, and 2000 Hz). Higher NRC values indicate better sound absorption.

Air Quality

- Emission control measures would be implemented—including, but not limited to, the suppression of fugitive dust through watering at the construction site, use of on-site equipment meeting U.S. EPA's Tier 3 with diesel particulate filters or tier 4 standards, and truck idling restrictions.

Mitigation

- Modifications to the signal timing at specific intersections are recommended to mitigate traffic impacts.
- A new traffic signal at the intersection of North Conduit Avenue and the Belt Parkway Westbound Off-Ramp is proposed to accommodate increased traffic volumes. The installation will be consistent with the *MUTCD* and NYSDOT standards.
- Implementing right turns on red along the Nassau Expressway Eastbound Off-Ramp approach to Lefferts Boulevard to improve traffic flow and reduce congestion.
- Engaging with the NYC DOT and the NYSDOT for approvals and implementation of the proposed and additional mitigation measures as necessary to ensure compliance and appropriate integration with the existing transportation infrastructure.

Alternatives

- There are no project commitments specific to either the No-Action or No Unmitigated Significant Adverse Impacts Alternatives.

Unavoidable Significant Adverse Impacts

- There are no project commitments specific to the unavoidable significant adverse impacts chapter.

Growth Inducing Aspects of the Expansion Project

- There are no project commitments specific to the growth inducing aspects of the expansion project chapter.

Irreversible and Irretrievable Commitments of Resources

- There are no project commitments specific to the irreversible and irretrievable commitments of resources chapter.

Cumulative Impacts

- There are no project commitments specific to the cumulative impacts chapter.

1

Project Description

Introduction

The Applicant, Genting New York, LLC, d/b/a Resorts World Casino New York City, is seeking approval for modification of the existing ground lease of State-owned property and issuance of a Gaming Facility license from the New York State Gaming Commission (the Gaming Commission), in conjunction with a proposed expansion of the existing Resorts World New York City (RWNYC) casino and installation and operation of live table games (the Proposed Actions). RWNYC is located at 110-00 Rockaway Boulevard (Block 11543, part of Lot 2) in the Jamaica neighborhood of Queens, New York. A portion of the site is currently occupied by the existing casino and a 400-key (approximately 249,500-gross-square-foot (gsf) hotel (the Hyatt Regency JFK Airport at RWNYC). The casino facility includes accessory retail, restaurant/food and beverage space, and meeting and event space. Approximately 4,779 parking spaces are provided on the RWNYC property in surface and structured parking to serve the hotel and casino. Together, the existing development totals approximately 1,888,535 gsf, including the 803,900-gsf structured parking facility.

Under a long-term ground lease through the New York State Franchise Oversight Board (FOB), RWNYC operates on an approximately 72.6-acre portion (the RWNYC Lease Area) of the larger State-owned property on Lot 2. Lot 2 totals approximately 172 acres in land area and, in addition to the RWNYC Lease Area, includes the Aqueduct Racetrack and the New York Racing Association, Inc. (NYRA) building (the 172-acre Aqueduct Site). The proposed expansion would be constructed on an approximately 62-acre portion (the Project Site) of the existing RWNYC Lease Area.

The Expansion Project involves the expansion of the existing RWNYC facility by approximately 3,442,665 gsf, resulting in a total of approximately 5,331,200 gsf (existing square footage, plus the proposed expansion) comprising the following elements:

- Up to approximately 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;
- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to approximately 11,000 gaming positions, which will include a mix of live gaming and will continue to include video lottery terminals (VLTs) and electronic table games (ETGs);

- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,300 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical/utility space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and,
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

The Proposed Actions would include the approval of a gaming license from the Gaming Commission, a decision that is subject to the State Environmental Quality Review Act (SEQRA), and the modification of the ground lease by the FOB. The FOB is the Lead Agency for the environmental review.

This chapter provides a summary and description of the Project Site and surrounding context, the project background, Expansion Project, project purpose and need, the analysis framework, 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 SEQRA. Because the Expansion Project is within New York City, unless stated otherwise, the *2021 City Environmental Quality Review (CEQR) Technical Manual* is considered, voluntarily and as appropriate, as a guide with respect to environmental analysis methodologies and impact criteria for evaluating the Expansion Project in this Draft Environmental Impact Statement (DEIS).

Project Site and Context

Project Site

The Project Site, as detailed above, encompasses an approximately 62-acre area within the RWNYC Lease Area on Queens Block 11543, Lot 2, located in the Jamaica neighborhood of Queens (see **Figure 1-1**). The Project Site is currently improved with the existing RWNYC facility and the Hyatt Regency JFK Airport at RWNYC hotel. The Project Site also contains retail and dining space, event space, lobby and public circulation, and surface and structured parking. **Table 1-1** provides a summary of the existing program and **Figure 1-2** shows the existing conditions site plan on the Project Site.

Figure 1-1 Site Location Map

Source: NYC MapPLUTO

Figure 1-2 Project Site Existing Conditions

Source: Perkins Eastman

Table 1-1 Project Site Existing Conditions

Use	Size
Hotel	**270,310 gsf (400 keys)**
Guest Rooms/Lounge/Admin	*230,296 gsf*
Support Space/BOH/Vertical Circulation	*40,014 gsf*
Lobby/Public Circulation	**42,113 gsf**
Retail/Dining	**149,030 gsf**
Retail	*5,271 gsf*
Dining	*65,972 gsf*
Retail/Food Support	*42,009 gsf*
BOH/Vertical Circulation	*35,778 gsf*
Casino/Gaming Facilities	**466,306 gsf (6,650 gaming positions)**
Casino	*260,538 gsf*
BOH/Vertical Circulation	*205,768 gsf*
Function/Event Space	**128,197 gsf**
Multipurpose Event Space	*87,802 gsf*
Meeting Rooms/Hospitality Suites	*9,619 gsf*
Support Space/BOH/Vertical Circulation	*30,776 gsf*
Mechanical and Electrical	**20,279 gsf**
Bus Drop-Off Area	**8,400 gsf**
Parking	**803,900 gsf (4,779 spaces)**
Surface parking	*2,414 spaces*
Garage parking	*2,365 spaces*
Total	**1,888,535 gsf**

The RWNYC facility is currently anchored by the grand entrance that serves as a central lobby for the existing facility, with a porte cochere that provides a vehicular drop-off and pedestrian access point (see the area marked as "5" in **Figure 1-2**). The grand entrance connects to the Hyatt Regency hotel ("4"), restaurant space (the Sugar Factory), and the existing casino ("2") (which occupies space on the ground through third floors). The casino is approximately 466,306 gsf and consists of 6,650 gaming positions. The third floor also contains approximately 70,000 gsf of meeting and event space. This space is subdividable and is a fully equipped facility that features private rooms and breakout rooms. The space hosts a variety of functions, including trade shows, conventions, concerts, business meetings, and more. A five-story structured parking facility (marked as "3" in **Figure 1-2**) is located just to the north of the casino and east of the hotel. Surface parking lots are also located to the west and north of the parking garage and immediately south of the restaurant. Generally, the existing RWNYC buildings are located on the interior of the Project Site, adjacent to and west of the existing racetrack, significantly set back from the surrounding properties and buffered by surface parking.

The balance of the 172-acre Aqueduct Site is improved with the NYRA Aqueduct Racetrack, a thoroughbred horse-racing facility that opened in 1894 and is the only racetrack in New York City. Aqueduct Racetrack consists of the racetrack, the NYRA building and grandstand (marked as "1" in **Figure 1-2**), and associated racing facilities in addition to surface parking. The horse track and pari-mutuel wagering, also known as pool betting, at Aqueduct Racetrack are run by NYRA. Current development at the property includes three horse racecourses (main, inner, and turf courses) and grandstand areas centrally located on the property, 14 barns located to the southeast of the courses, as well as the NYRA building and associated surface parking located to the south of the RWNYC facility.

Vehicular access to the Project Site is provided from Rockaway Boulevard, with an access driveway connecting to the various surface and structured parking facilities. The Project Site is well-served by public transit, including:

- The Aqueduct Racetrack stop along the A subway line IND Rockaway A Line located on the western edge of the Project Site, providing northbound access only toward Downtown Brooklyn and Manhattan;
- The Aqueduct North Conduit Avenue stop along the A Line located to the south of the Project Site, providing both northbound access and southbound access to the Rockaways;
- The Q37 bus line with a stop at the Project Site immediately west of the parking garage, running through South Ozone Park and providing access to the north to Kew Gardens;
- The Q7 bus line running east-west along Rockaway Boulevard; and,
- The Q11 bus line running along Pitkin Avenue, providing access to Hamilton Beach to the south and Rego Park to the north.

RWNYC provides a direct connection to the Aqueduct Racetrack stop via an existing skybridge from the casino and runs a continuous shuttle bus to and from the Aqueduct North Conduit Avenue stop, operating seven days a week. Additionally, RWNYC runs a shuttle to and from Jamaica Station, which provides connection to John F. Kennedy International (JFK) Airport.

The Project Site is located primarily within a C8-1 zoning district, with small portions of the site located within R4 and R4-1 zoning districts. However, as the property is State-owned, it is not subject to local laws, including the New York City Zoning Resolution. Surrounding zoning districts are primarily low-density residential (R3A, R3-2, R3X, R4, R4A, and R4-2), with a large M1-1 manufacturing district located to the south of Belt Parkway, encompassing JFK Airport.

Surrounding Context

The Aqueduct Racetrack property is bounded by Rockaway Boulevard to the north, a 150,384-gsf Home Depot store to the northeast, a primarily residential neighborhood with single-family residences to the east, a Port Authority of New York and New Jersey (PANYNJ) parking lot and North Conduit Avenue to the south, and the A subway line on the site's western boundary with single family residences and open space uses beyond. The Project Site is largely buffered from the predominantly single-family residential neighborhood to the east by the racetrack and horse stables. Some limited multi-family development and mixed commercial/residential uses are located along Rockaway Boulevard. The Southern Fields open space and recreational resource is also located just south of North Conduit Avenue along Belt Parkway. There are more single- and multi-family residential uses north of the intersection of Linden Boulevard and the A subway line (to the northwest of the Project Site), with limited commercial and light industrial uses and a public school

interspersed. Finally, there is a mix of small commercial and multi-family residential uses located south of Rockaway Boulevard and north of Muriel Court. The Project Site is situated approximately 1.3 miles to the northwest of JFK Airport. RWNYC operates a shuttle bus to Jamaica Station, offering connection to JFK's AirTrain.

Background and Project Site History

The Aqueduct Racetrack opened in September 1894 on property that belonged to the former Brooklyn Water Works.[1] Over the years, the racetrack has been home to many of racing's landmark events, such as the Wood Memorial. The Aqueduct facilities were rebuilt from 1955 to 1959, with a new four-tier grandstand, racing strip, barns, and accessory buildings. Aqueduct opened its winterized one-mile inner dirt track in 1975, and in 1981 opened one of the largest restaurants in New York City, the multi-tiered Equestris. Additional improvements were implemented in 1985 and 1989, including construction of mini-theatres; expansion of the backyard, paddock, and grandstand; and installation of a weather-insulated paddock.

In October 2011, the 415,000-square-foot multi-level RWNYC casino opened, occupying a portion of the former grandstand. The original development, supported by a New York State Full Environmental Assessment Form (EAF) and Supporting Studies prepared in 2010 by O'Brien & Gere, included interior and exterior renovations of the existing grandstand and clubhouse building to accommodate VLTs and food and beverage programs, repaving of existing surface parking lots and construction of the parking garage to the north of the grandstand, a new porte cochere at the building entrance, a pedestrian bridge (skyway) to connect the facility to the existing Aqueduct Racetrack subway station, and improvements to existing on- and off-site roadways consisting of on-site circulation improvements. The Gaming Commission served as lead agency for this environmental review, adopted findings and issued a negative declaration for the project, with the NYS Office of General Services (OGS) supporting with the technical review.

In 2014, the RWNYC facility was proposed for expansion by 1,050 new VLTs over the approximately 5,000 VLTs that were already installed at that time. To support this expansion, Philip Habib & Associates prepared additional traffic analyses to evaluate the ability of the transportation network to accommodate this increase (Proposed VLT Expansion – Technical Memorandum, dated December 27, 2014, revised April 1, 2014). The Technical Memorandum found that an increase of 1,050 new VLTs would not cause a significant traffic impact, facilitating a total of up to 6,050 VLTs at the RWNYC facility. The Gaming Commission served as lead agency for this environmental review and adopted the findings of the technical memorandum.

Given the success of RWNYC, another expansion was proposed in 2017, to include the following additional program (the Approved 2017 Plan):

- 504,180 gsf of hotel (two hotels with a total of 600 rooms);
- A 28,005-gsf grand lobby;
- 5,988 gsf of retail;
- 12,214 gsf of dining;
- 10,253 gsf of retail/food and beverage support space;

[1] https://www.nyrainc.com/uploads/wysiwyg/assets/uploads/NYRA_A_Short_History_PROOF.pdf

- 56,108 gsf of gaming (600 additional VLTs for a total of 6,650);
- 94,411 gsf of function/event space;
- 7,110 gsf of mechanical and electrical space; and
- A 2,847-gsf bus drop-off area.

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C. (VHB) prepared a Full EAF and Expanded Environmental Assessment (the 2017 EEA, dated April 2017, revised October 2017) with the Gaming Commission[2] serving as lead agency and the NYS OGS serving as expert review, to study the proposed expansion of the RWNYC facility, which involved two phases. Phase I included construction of the grand lobby, expanded gaming area, the first hotel, retail, dining, food and beverage support space, and the reconfigured surface parking and bus drop-off area; Phase II included the second hotel and a separate event space adjacent to the grand lobby. The Gaming Commission adopted the SEQRA findings and issued a negative declaration for the 2017 EEA. The Phase I portion of the proposed expansion was constructed in 2021. This included the 28,005-gsf grand lobby space; the 56,108-gsf gaming space (6,650 VLTs); 270,310 gsf of hotel space (400 keys); 28,455 gsf of retail, dining, food, and beverage support space; and the 2,847-gsf bus drop-off area. Although approved, the remaining Phase II components of the 2017 EEA project were never constructed. The 2021 expanded facility (Phase I) represents today's existing conditions on the Project Site, with the Expansion Project serving as a revised and expanded Phase II.

It is anticipated that the horse racing currently held at the Aqueduct Racetrack will be moved to Belmont Park, which is undergoing renovation to make it suitable for year-round racing and training. When complete, the redevelopment will allow NYRA to consolidate all downstate racing and training activities at the new Belmont Park, unlocking the balance of the State-owned land at Aqueduct Racetrack for redevelopment opportunities, potentially including housing, additional open space and other uses that will be defined through a competitive request for proposals process.

Proposed Actions

The Applicant is seeking approval from the Gaming Commission for the issuance of a Gaming Facility license to facilitate live gaming operations at, and expansion of, the existing RWNYC casino, as well as the modification of the Applicant's ground lease through the FOB (the Proposed Actions), in support of developing a world-class integrated resort and casino in New York City.

Expansion Project and With-Action Condition

The Applicant is proposing a two-stage conversion and expansion of the existing facilities at the Project Site to construct a world-class integrated resort and casino. Upon issuance of the Gaming Facility license, RWNYC would undertake an initial interior renovation to convert the existing event and exposition space on the third floor to live gaming, as well as renovations to the existing VLT areas of the casino on the lower floors, accommodating a total of 6,650 gaming positions.[3] This initial

[2] The lead agency for the 2017 EEA was the New York State Lottery Division, now merged into the Gaming Commission.

[3] The initial stage conversion of the existing RWNYC facility to live gaming would involve interior renovations only on the Project Site. No additional gross square footage would be constructed. It is anticipated that the existing exposition and event space on the third floor would be converted for gaming purposes as a first step, followed by renovations on the lower levels, in order to provide continuous gaming operations during the initial stage and minimize disruption as much as possible. There would be no increase in gaming positions beyond the 6,650 studied and permitted under the 2017 EEA.

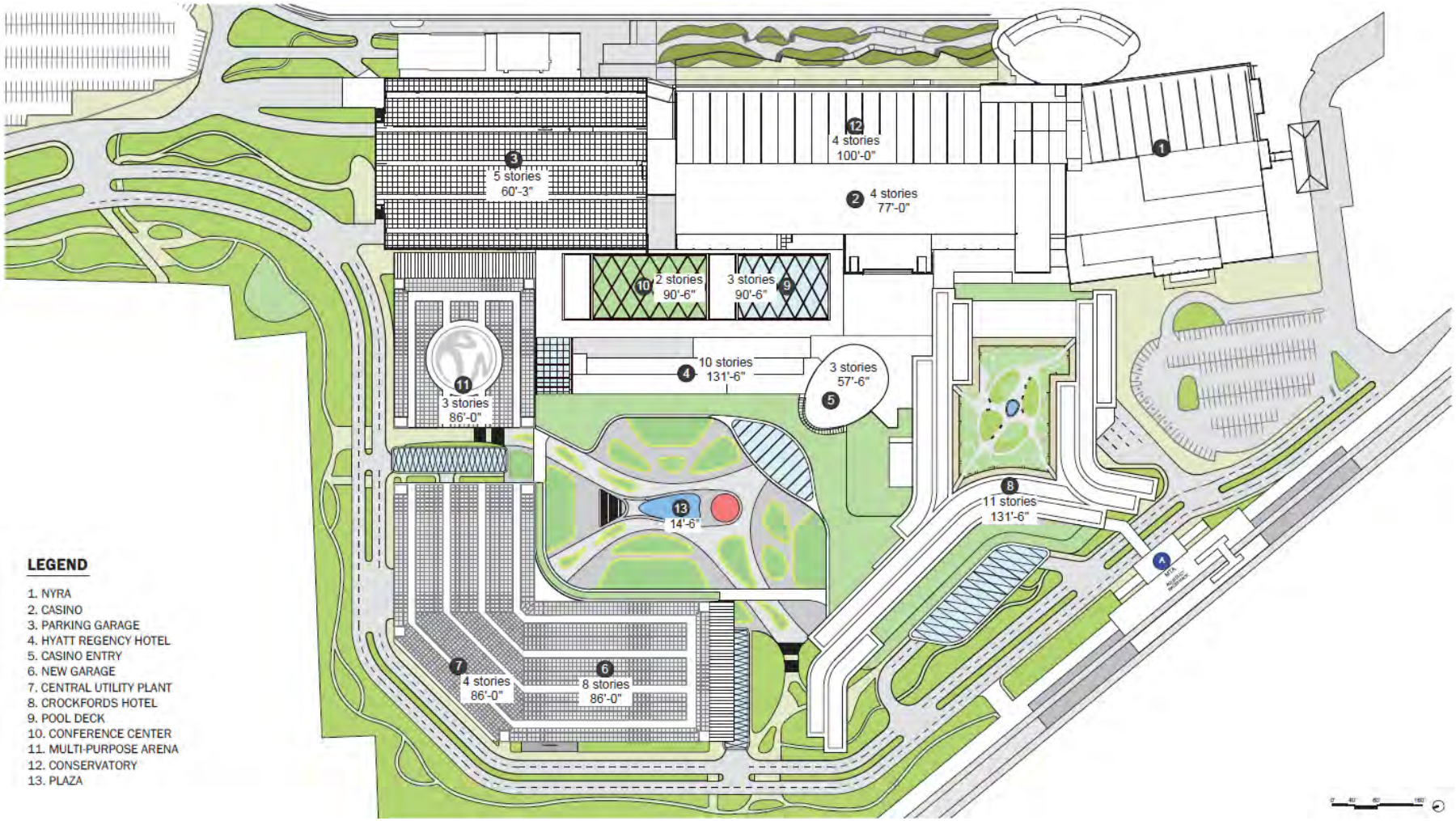
conversion is expected to be completed in 2026 and would allow RWNYC to quickly deliver live gaming to the NYC market.

Following the conversion of existing space to live gaming, the Proposed Actions would facilitate the expansion of the RWNYC facility through the construction of a new hotel and facility space featuring a pool and ballroom/multipurpose event space; expanded retail and dining offerings, including new restaurants, a bar/stage area, and club; expanded casino and gaming facilities and required support spaces (count room, surveillance room, employee lounges, etc.); a new 7,000-seat arena; a central utility plant to service the proposed new buildings; a new central plaza and conservatory; and a new parking garage in the location of the existing surface parking nearest to the main casino entrance. See **Figure 1-3** and **Table 1-2** for a summary of the Expansion Project improvements and the total development projected on the Project Site.

Figure 1-3 shows the site plan for the Expansion Project, which is generally representative of the proposed components of the RWNYC expansion. **Figure 1-3** is conceptual and meant to depict the individual project components.

Each of the program components of the Expansion Project is described in more detail below.

Figure 1-3 Expansion Project Site Plan



Source: Perkins Eastman

Table 1-2 summarizes the total development proposed on the Project Site.

Table 1-2 Expansion Project[1]

Use	Size
Hotel	**1,376,900 gsf (2,000 keys)**
Guest Rooms/Lounge/Admin	*1,041,700 gsf*
Spa/Fitness Center	*23,100 gsf*
Support Space/BOH/Vertical Circulation	*312,100 gsf*
Lobby/Public Circulation	**232,900 gsf**
Retail/Dining	**213,900 gsf**
Retail	*14,000 gsf*
Dining	*43,100 gsf*
Retail/Food Support	*30,800 gsf*
Bar/Stage	*48,500 gsf*
Club/Lounge	*9,200 gsf*
Support Space/BOH/Vertical Circulation	*68,300 gsf*
Casino/Gaming Facilities	**725,900 gsf (11,000 gaming positions)**
Casino	*398,700 gsf*
Support Space/BOH/Vertical Circulation	*327,200 gsf*
Function/Event Space	**73,900 gsf**
Ballroom	*19,300 gsf*
Meeting Rooms/Hospitality Suites	*24,300 gsf*
Pre-Function	*6,000 gsf*
Office/Support Space/BOH/Vertical Circulation	*24,300 gsf*
Pool Deck	**53,300 gsf**
Arena	**187,900 gsf**
Other Support Space	**323,000 gsf**
Mechanical and Electrical	*145,800 gsf*
Central Utility Plant	*97,500 gsf*
Conservatory	*79,700 gsf*
Parking	**2,143,500 gsf (7,309 spaces)**
Surface parking	*1,217 spaces*
Garage parking	*6,092 spaces*
Built Total	**5,331,200 gsf**
Central Plaza	**148,300 sf**

[1] Includes existing gsf on the Project Site. The reported Expansion Project gross square footage is approximate.

Hotel, Conference Center, and Pool Deck

The Expansion Project would provide additional hotels and event space on the Project Site to support the expanded casino and gaming facilities and the proposed arena. The Expansion Project would include up to approximately 2,000 hotel keys, with a new 11-story building (131 feet, 6 inches in height) to accommodate guest rooms and high-end hotel amenities, in addition to an expanded casino area (detailed below) to be located just south of the existing casino entrance (marked as "8" in **Figure 1-3**). A new conference center with a 19,300-gsf ballroom and other smaller meeting rooms ("10" in **Figure 1-3**) and a 53,300-gsf pool deck ("9" in **Figure 1-3**) would be constructed (both to a height of 90 feet, 6 inches) just east of the existing Hyatt Regency hotel to support a variety of events and meetings.

Lobby and Public Circulation

The lobby and public circulation areas are critical components of the Expansion Project, as they would provide central gathering locations and access between the various programmed areas of the RWNYC facility, including family corridors that would provide access around the casino floors. This space includes the main entry and central corridors that would serve the hotels, casino space, ballroom, and retail and dining offerings, along with various pedestrian connectors between the main entry, the publicly accessible central plaza, the new parking facility, and the arena and new hotel and casino areas.

Retail and Dining

Retail and dining offerings at RWNYC would be upgraded and expanded under the Expansion Project. The casino would feature a new food court, 360-degree bar, and various lounges on the first and second floors. Two new fine dining restaurants would be introduced in the new casino, and smaller dining options and retail spaces would also be provided elsewhere throughout the RWNYC facility.

Casino and Gaming Facilities

Through the Proposed Actions, the Expansion Project would involve a conversion of the existing exposition space and casino as well as expanded casino space to accommodate live gaming and table games. A new wing would be constructed that would extend from the existing casino, located in place of the existing surface parking area just south of the existing main lobby ("8" in **Figure 1-3**). The Expansion Project would feature approximately 725,900 gsf of casino and gaming facilities (including the existing casino space), accommodating a total of up to approximately 11,000 gaming positions. The upgraded facilities would provide high-end gaming features and specialized areas that include a poker room, sports betting facilities, and high-limit gaming areas.

Arena

A new 7,000-seat arena would be constructed just north of the existing Hyatt Regency hotel and west of the existing parking garage at the north end of the Project Site (marked as "11" in **Figure 1-3**). The three-story arena (86 feet in height) would host various concerts, comedy shows, and sporting and other events throughout the year. The venue would allow for flexible seating configurations to tailor the space depending on the need and attract a variety of event types.

Parking

The Expansion Project would increase parking capacity on the Project Site to a total of approximately 7,309 spaces, including approximately 1,217 surface parking spaces and approximately 6,092 structured parking spaces. The surface parking would be concentrated within the northern parking area adjacent to Rockaway Boulevard as well as a small surface lot under the proposed open space plaza. The Expansion Project would involve the construction of a new eight-story parking garage (86 feet in height) on the northwest portion of the Project Site (marked as "6" in **Figure 1-3**).

In addition to the parking facilities, existing bus access would be reconfigured on the Project Site, to be located at ground level under the proposed plaza (described below) in order to provide more direct access to the main entry.

Open Space and Other Site Features

The Expansion Project would feature extensive open space and publicly accessible features in addition to enhanced interior gathering spaces. A proposed, approximately 148,300-sf elevated central plaza (14 feet, 6 inches in height) would serve as a pedestrian connector and publicly accessible passive open space between all of the programmed spaces on the Project Site (marked as "13" in **Figure 1-3**). Additionally, the project would feature a cohesive site-wide landscaping and circulation plan, including a publicly accessible walking path that would extend along the western site boundary that would provide a pedestrian connection through the Project Site and between neighboring residential areas. The trackside portion of the existing casino building would also be converted to a three-level conservatory space (100 feet in height), providing an interior landscaped circulation and gathering space to serve visitors to the site. This area would include bars and lounges ("12" in **Figure 1-2**).

In addition to the Expansion Project program categories detailed above, other site features incorporated into the project include the following:

- A publicly accessible pocket park located northeast of the proposed parking garage to be incorporated into the broader publicly accessible walking path (the pocket park, walking path, and plaza would be fully accessible to the public);
- Upgraded site infrastructure and circulation plan, featuring a new central connector road that provides access to the various program areas;
- An approximately 97,500-gsf, 4-story (86 feet in height) central utility plant ("7" in **Figure 1-3**);
- Enhanced connection to the Aqueduct Racetrack subway station via a replacement sky bridge to connect to the expanded hotel/casino building; and,
- Extensive sustainability features—including a photovoltaic solar array on the proposed parking garage.

Finally, the Applicant is exploring the potential to provide a new southbound platform at the Aqueduct Racetrack stop along the IND Rockaway (A) Line, which currently only has northbound service. Under this scenario, access to the southbound platform would be provided via an overpass over the tracks. Though still in the concept phase, this scenario is considered as part of this environmental review for conservative analysis purposes.

Project Purpose and Need

The Proposed Actions would facilitate the construction of an integrated resort that includes new hotel space, dining, shopping, an arena and event center, live gaming, and an expanded casino area at the existing RWNYC facility. The Applicant believes the Expansion Project would solidify RWNYC as a destination for entertainment, dining, and shopping in New York City and support new workforce development opportunities and economic activity in the region.

The Expansion Project would capitalize on the existing investments at the site to continue to build job opportunities and invest in the local community. The Proposed Actions would enable more certainty for the Project Site, allowing for long-term and cohesive planning on the site to benefit existing and future on-site employees. There are currently 859 jobs located on the Project Site; however, with the Proposed Expansion, the site would be able to accommodate approximately 5,000 jobs. The diversity in job types would allow for a range of employee skill sets and opportunities, ranging from family sustaining union jobs to senior managerial level jobs. The Expansion Project would also directly support approximately 5,000 jobs throughout the four-year construction duration.

Overall, the proposal would continue the investment made at this location and supported by previous Gaming Commission decisions and would leverage that investment to provide new community amenities in the form of new publicly accessible open spaces on the site, including multi-use paths and passive open spaces.

Chapter 3, Socioeconomic Conditions, includes a detailed description of the Expansion Project economic benefits and impacts, including job generation, tax revenue generation, and community benefits incorporated into the project.

Analysis Framework

The potential environmental effects of the Expansion Project are analyzed based on an analytical framework that compares the incremental differences between a future condition without the Proposed Actions in place (No-Action condition) and the future with the Proposed Actions in place and the associated development operation (With-Action condition). It is important to note that the Expansion Project includes as-of-right elements that were fully analyzed in the 2017 EEA (the Approved 2017 Plan) and that RWNYC will complete regardless of the outcome of the Proposed Actions.

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 Expansion Project (or With-Action condition) is compared to determine the potential for significant adverse environmental impacts. The difference between the No-Action and With-Action conditions represents the increment to be analyzed in the environmental review.

Future No-Action Condition

As detailed above, the full program analyzed in the Approved 2017 Plan was determined to have no significant adverse impacts. Therefore, though certain components of the Approved 2017 Plan program were never constructed on the Project Site, namely a second proposed hotel, the full program as approved in 2017 is considered the baseline No-Action future condition for the purposes of this

analysis. If the Applicant is not awarded a license for live gaming, the approved and unbuilt program would be constructed on-site. The Approved 2017 Plan program is outlined in **Table 1-3** below.

Future With-Action Condition and Increment for Analysis

The With-Action condition is the same as the Expansion Project, detailed above in **Table 1-2**. The With-Action condition would include a total of approximately 5.3 million gsf of development and an incremental increase of approximately 3,167,534 gsf over the No-Action condition. **Table 1-3** provides the increment for analysis.

Table 1-3 Future No-Action and With-Action Comparison

	Existing Condition	Approved 2017 Plan (No-Action Condition)	With-Action Condition	Increment
Hotel	**270,310 gsf**	**504,180 gsf**	**1,376,900 gsf**	**+872,720 gsf**
Keys	*400 keys*	*600 keys*	*2,000 keys*	*+1,400 keys*
Guest Rooms/Lounge/Admin	*230,296 gsf*	*387,447 gsf*	*1,041,7 00 gsf*	*+654,253 gsf*
Spa/Fitness Center	*-*	*12,234 gsf*	*23,100 gsf*	*+10,866 gsf*
Support Space/BOH/Vertical Circulation	*40,014 gsf*	*104,499 gsf*	*312,100 gsf*	*+207,601 gsf*
Lobby/Public Circulation	**42,113 gsf**	**35,526 gsf**	**232,900 gsf**	**+197,374 gsf**
Retail/Dining	**149,030 gsf**	**134,253 gsf**	**213,900 gsf**	**+79,647 gsf**
Retail	*5,271 gsf*	*7,413 gsf*	*14,000 gsf*	*+6,587 gsf*
Dining	*65,972 gsf*	*53,364 gsf*	*43,100 gsf*	*-10,264 gsf*
Retail/Food Support	*42,009 gsf*	*42,253 gsf*	*30,800 gsf*	*-11,453 gsf*
Bar/Stage	*-*	*-*	*48,500 gsf*	*+48,500 gsf*
Club/Lounge	*-*	*-*	*9,200 gsf*	*+9,200 gsf*
Support Space/BOH/Vertical Circulation	*35,778 gsf*	*31,223 gsf*	*68,300 gsf*	*+37,077 gsf*
Casino/Gaming Facilities	**466,306 gsf**	**473,731 gsf**	**725,900 gsf**	**+252,169 gsf**
Gaming Positions	*6,650*	*6,650*	*11,000*	*+4,350*
Casino	*260,538 gsf*	*277,108 gsf*	*398,700 gsf*	*+121,592 gsf*
Office/Support Space/BOH/Vertical Circulation	*205,768 gsf*	*196,623 gsf*	*327,200 gsf*	*+130,577 gsf*
Function/Event Space	**128,197 gsf**	**193,719 gsf**	**73,900 gsf**	**-119,819 gsf**
Multipurpose Event Space	*87,802 gsf*	*91,772 gsf*	*-*	*- 91,772 gsf*
VIP Skyboxes	*-*	*3,346 gsf*	*-*	*- 3,346 gsf*
Meeting Rooms/Hospitality Suites	*6,051 gsf*	*10,066 gsf*	*24,300 gsf*	*+14,234 gsf*
Ballroom	*3,568 gsf*	*-*	*19,300 gsf*	*+19,300 gsf*
Pre-Function	*-*	*-*	*6,000 gsf*	*+6,000 gsf*
Office/Support Space/BOH/Vertical Circulation	*30,776 gsf*	*88,535 gsf*	*24,300 gsf*	*-64,235 gsf*
Pool Deck	**-**	**-**	**53,300 gsf**	**+53,300 gsf**
Arena	**-**	**-**	**187,900 gsf**	**+187,900 gsf**
Other Support Space	**29,079 gsf**	**18,357 gsf**	**323,000 gsf**	**+304,643 gsf**
Mechanical and Electrical	*20,279 gsf*	*7,110 gsf*	*145,800 gsf*	*+138,690 gsf*
Central Utility Plant	*-*	*-*	*97,500 gsf*	*+97,500 gsf*
Bus Drop-Off Area	*8,400 gsf*	*11,247 gsf*	*-*	*-11,247 gsf*
Conservatory	*-*	*-*	*79,700 gsf*	*+79,700 gsf*
Parking	**803,900 gsf (4,779 spaces)**	**803,900 gsf (4,960 spaces)**	**2,143,500 gsf (7,309 spaces)**	**+1,339,600 gsf (2,349 spaces)**
Surface Parking	*2,414 spaces*	*2,401 spaces*	*1,217 spaces*	*-1,184 spaces*
Garage Parking	*2,365 spaces*	*2,559 spaces*	*6,092 spaces*	*+3,533 spaces*
Total	**1,888,535 gsf**	**2,163,666 gsf**	**5,331,200 gsf**	**+3,167,534 gsf**

Analysis (Build) Year

Assuming approval of the gaming license in late 2025, the first phase conversion of the existing casino facilities for live gaming operations is expected to be complete in 2026. The second phase of the Expansion Project, to expand the existing RWNYC facility as part of an integrated resort, is expected to be complete in 2030.

Public Review Process and Required Permits

The Applicant requires approval of the Proposed Actions to implement the Expansion Project. The issuance of a Gaming Facility license and modification of the ground lease through the FOB is subject to SEQRA. The Expansion Project will also be subject to the Community Advisory Committee process established by the Gaming Facility Location Board in its issuance of a *Request for Applications to Develop and Operate a Gaming Facility in New York State*, dated January 3, 2023. Both of these processes are outlined below, followed by a list of permits that will be required for the Expansion Project.

SEQRA Process

Any action that requires a discretionary decision is subject to review under the SEQRA (Article 8 of the Environmental Conservation Law) and its implementing regulations found at 6 NYCRR Part 617. 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. SEQRA rules guide environmental review, as follows:

- *Establish a Lead Agency*. Under SEQRA, the "lead agency" is the public entity responsible for conducting environmental review. If only one agency is approving, funding or directly undertaking an action, that agency is automatically the lead agency. If there are two or more involved agencies, the involved agencies must agree on a lead agency within 30 calendar days. If any involved agency desires to be lead agency, it can indicate in the coordination request its willingness to act as lead agency, by stating that if no response is received within 30 days, it will assume the role of lead agency. As the Proposed Actions would include the modification of the ground lease by the FOB, the FOB is serving as the SEQRA lead agency for environmental review. In their role as lead agency, the FOB issued a lead agency letter on March 26, 2024.
- *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, the FOB evaluated an EAF dated June 11, 2024, for the Proposed Action. Based on information contained in the EAF, and as the Proposed Actions are classified as a "Type I Action," the FOB 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 Environmental Impact Statement (EIS) be prepared in public open conformance with all applicable laws and regulations.
- *Scoping*. Along with its issuance of a Positive Declaration, the Gaming Commission issued a Draft Scope of Work for the EIS, dated July 24, 2024, 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. A public scoping meeting was held on August 14, 2024. The public review period for agencies and the public to review and comment on the Draft Scope of Work was open through September 6, 2024. A Final Scope of Work document for the Expansion Project was issued on October 10, 2024.

- *DEIS*. This DEIS was prepared in accordance with the Final Scope of Work. The lead agency reviewed all aspects of the document, calling on other local 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 in writing. All substantive comments received become part of the CEQR record and must be summarized and responded to in the Final Environmental Impact Statement (FEIS).
- *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 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 lead agency must wait at least ten days after the FEIS is complete to take action on the application.

Community Advisory Committee Process

After the completion of the SEQRA process, the Applicant will submit an application for a Gaming Facility license, at which point a Community Advisory Committee (CAC) will be formed pursuant to PML Section 1321-d(3)(a) and (b). While full guidance regarding the CAC process has not yet been issued by the Gaming Facility Location Board, it is understood that the makeup of the CAC will consist of six members to be appointed by the Governor of New York, the Mayor of New York City, the local New York State Senator, the local New York State Assemblymember, the Queens Borough President, and the local New York City Councilmember. The CAC will solicit and review public comments, which may include public meetings and hearings, and will vote to either approve or disapprove the application. A two-thirds vote indicating community support of a project is a requirement for the application to be considered for a Gaming Facility license. Assuming approval of the Expansion Project by the CAC, the project would then be referred to the Gaming Commission for consideration.

Required Permits

Table 1-4 shows the expected non-discretionary permits required for the Expansion Project.

Table 1-4 Expansion Project Required Permits

Approval Agency	Permit
New York City Department of Environmental Protection (NYCDEP)	› Site Connection Proposal (SCP) › Cross Connection Control Plan (CCCP) › Stormwater Pollution Prevention Plan (SWPPP)
New York City Department of Buildings	› Building Permit
Fire Marshal (on behalf of the Fire Department of New York)	› Site Access Plan
New York City Transit (NYCT)	› New York City Transit Approval for construction activities within 200 feet of NYCT structures
New York State Office of General Services – Design & Construction	› Construction Permit

2

Land Use, Zoning, and Public Policy

This chapter considers the potential for the Expansion Project to result in significant adverse impacts to land use, zoning, and public policy. This analysis evaluates the uses in the area that may be affected by the Expansion Project and determines whether the Expansion Project is compatible with land use, zoning, and public policy conditions, or may otherwise affect them. The analysis also considers the Expansion Project's compatibility with zoning regulations and other public policies applicable to the area.

Introduction

The Applicant, Genting New York, LLC d/b/a Resorts World Casino New York City, is seeking approval for modification of the existing ground lease of State-owned property and issuance of a Gaming Facility license from the New York State Gaming Commission (the Gaming Commission) in conjunction with the proposed expansion of the existing approximately 1.9-million-gross-square-foot (gsf) Resorts World New York City (RWNYC) casino and installation and operation of live table games (the Proposed Actions). The Proposed Actions would facilitate the construction of an expansion to the existing facilities on a 62-acre portion of the RWNYC Lease Area, comprising Queens Block 11543, Lot 2 (the Project Site).

The Proposed Actions involve the expansion of the existing RWNYC facility by approximately 3,442,665 gsf (the Expansion Project), resulting in a total of approximately 5,331,200 gsf (existing gsf, plus the Expansion Project) comprising the following elements:

- Up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;
- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to 11,000 gaming positions;

- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,000 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

The Proposed Actions would include the approval of a gaming license from the Gaming Commission, a decision that is subject to the State Environmental Quality Review Act, and the modification of the ground lease by the Franchise Oversight Board. The Franchise Oversight Board is the Lead Agency for the environmental review.

As the Project Site is located on State-owned land, City zoning and public policies (including local laws and executive orders) do not apply to the Expansion Project. Even though the state has jurisdiction over the city, as the property is state-owned and is ultimately not required to comply with local laws, the Expansion Project aims to comply with the intent and spirit of the city's zoning and land use.

This chapter provides an assessment of existing and future conditions with and without the Expansion Project for the Project Site and a quarter-mile study area surrounding the RWNYC Lease Area. The *2021 City Environmental Quality Review (CEQR) Technical Manual* was consulted to inform the analysis framework for the land use, zoning and public policy assessments provided in this chapter. Previous approvals, which were the subject of environmental review on the Project Site, assessed and allowed for the existing casino and hotel uses. The Proposed Actions would facilitate an expansion of those existing, established uses on the Project Site. Overall, the Expansion Project would be consistent with the goals and guidelines of various citywide policy documents.

Principal Conclusions

The Proposed Actions would not result in new land uses but would introduce greater bulk and density than what currently exists on the Project Site. The uses would be compatible with the existing and historic use of the Project Site as a citywide and regional recreational and entertainment facility. The surrounding land uses are buffered from the proposed expansion on the northeast, east, south, and west (the elevated subway line) and the Applicant proposes an enhanced berm along the property line at the northwest corner of the site to provide a densely planted buffer between the Project Site and the adjacent residences. Additionally, the building bulk of the proposed development on the Project Site facilitated by the Proposed Actions would be comparable to existing development on the RWNYC Lease Area.

The requested discretionary actions are not subject to local zoning regulations. The Expansion Project would be consistent with many of the high-level goals and objectives set forth by the City in its citywide policy documents. The Proposed Actions would facilitate development that is well-integrated with current built conditions and the existing uses on the Project Site. Therefore, the Expansion Project would not adversely affect surrounding land use, zoning, or public policy.

Project Commitments

As described in further detail below, the Applicant is making several project commitments in conjunction with the Expansion Project. The project commitments discussed in the chapter include:

- Significant new landscaping, including enhanced berms, are proposed along the northwestern portion of the property to provide screening between the adjacent residential neighborhood and the Expansion Project.
- The Expansion Project would be in compliance with Local Law 97, introduced in 2019 for NYC to achieve reductions in greenhouse gas emissions by 2050, as well as NYC's Local Law 86, the "Green Building Law," through its anticipated qualification for Leadership in Energy and Environmental Design (LEED) certification.
- Landscaping and plantings throughout the Project Site would prioritize native plant species and pollinators over non-native species to support, promote, and protect future biodiversity and habitat.

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:

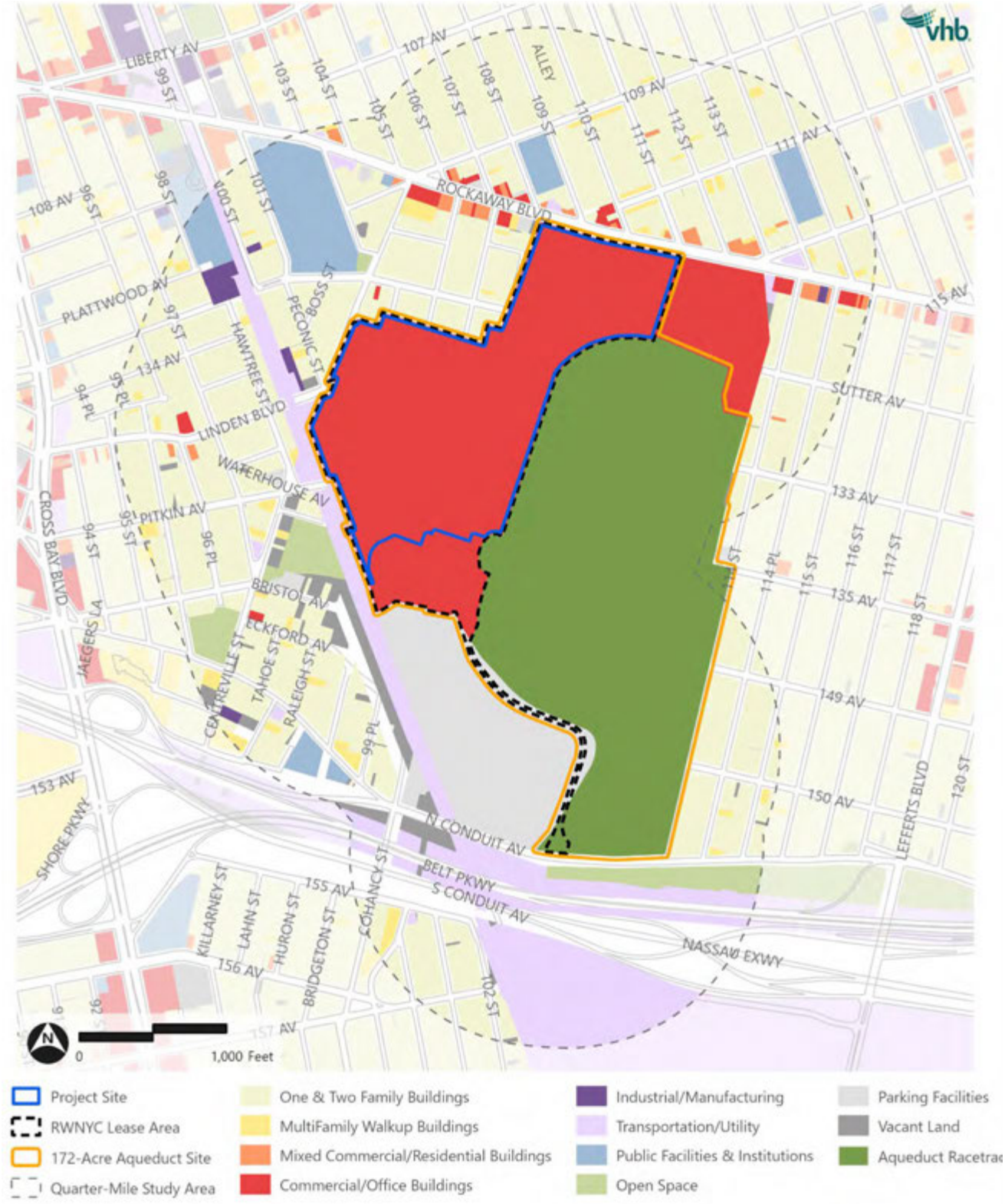
- Describes existing and future land uses and zoning information, and describes any changes in zoning that could cause changes in land use;
- Characterizes the land use development trends in the area surrounding a project site that might be affected by a proposed action; and
- Determines whether the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

The following assessment method was used to determine the potential for the Expansion 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 Site to determine how the Expansion Project may affect the immediate surrounding area. For this assessment, a study area of a quarter mile surrounding the Project Site 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 Expansion Project's potential effects on land use, zoning and public policy to determine whether the Expansion Project is consistent with or conflicts with area land uses, zoning, or the identified policies.

The study area for this analysis is the area within a quarter-mile of the RWNYC Lease Area (see **Figure 2-1**), which is generally bounded by a line approximately 1,200 feet north of Rockaway Boulevard to the north, midblock between 114th Place and 115th Street to the east, a line approximately 1,300 feet west of Hawtree Street and Centreville Street to the west, and South Conduit Avenue to the south.

Figure 2-1 Land Use Map



Source: NYC MapPLUTO

Assessment

Existing Conditions

Land Use

Project Site

The proposed expansion would be constructed on an approximately 62-acre portion of the existing 72.6-acre RWNYC ground Lease Area (the Project Site). The RWNYC Lease Area is located on the approximately 172-acre Queens Tax Block 11543, Lot 2. This entire lot is owned by New York State and includes the RWNYC casino, the Aqueduct Racetrack, and New York State Racing Association (NYRA) building (the Aqueduct Site).

The 72.6-acre portion of the property contains several existing structures. Located along the west side of the Aqueduct Racetrack and to the north of the NYRA grandstand is the approximately 466,306-gsf RWNYC casino, which includes approximately 6,650 video lottery terminals and electronic table games; the 400-key Hyatt Regency JFK Airport at Resorts World New York hotel; an on-site restaurant (the Sugar Factory); and a food court. Approximately 4,779 parking spaces are provided on the RWNYC property in surface and structured parking to serve the hotel and casino. A designated bus drop-off area is located immediately west of the parking garage and accommodates shuttle bus and city bus service. A sky bridge provides direct pedestrian connection from the hotel and casino to the Aqueduct Racetrack stop along the A subway line. RWNYC's internal drives, landscaping and surface parking occupy the western and northern portions of the Project Site.

RWNYC Lease Area

The overall RWNYC Lease Area includes the Project Site (described above) and an approximately 10-acre area comprising NYRA's Aqueduct Racetrack grandstand, a surface parking lot, and roadways that provide internal circulation. The Lease Area does not include the racetrack or stables. This approximately 10.6-acre portion of Queens Tax Block 11543, Lot 2 is included in the RWNYC lease but is leased to NYRA for use related to the Aqueduct Racetrack.

Study Area

As indicated in **Figure 2-1** and **Table 2-1** the predominant land use within the quarter-mile study area is the NYRA Aqueduct Racetrack, accessory parking, and horse stables. The racetrack is located immediately to the south and east of the Project Site. It is shown as open space on NYC's land use map, but it is not mapped parkland. It includes three horse racetracks (main, inner, and turf courses), 14 barns, and grandstand areas.

Other land uses in the immediate vicinity of the RWNYC Lease Area include the Port Authority of New York and New Jersey (PANYNJ)'s surface parking lot located south of the Project Site on Lot 500; a Home Depot store located to the northeast; a residential neighborhood located beyond the NYRA Aqueduct Racetrack and horse stables to the east; and the elevated A subway line, which makes up the western boundary of the Project Site, with a residential neighborhood located beyond the subway line to the west. With the presence of these large adjacent land uses, including substantial physical buffers such as the Aqueduct Racetrack to the east, the remote surface parking lot to the

northeast, the planted berm to the north, the elevated subway line along the western boundary, and the PANYNJ's surface parking lot located to the south, the Project Site is significantly buffered from its surroundings.

Beyond the Aqueduct Racetrack, there are a mix of commercial and residential uses along the north side of Rockaway Boulevard, which is a commercial corridor. There are also single- and multi-family residential uses and public schools to the north of the Project Site. Additional single- and multi-family residential uses are located along the east side of the Aqueduct Racetrack site. A limited number of mixed commercial and residential uses are present within the mostly residential neighborhood. North of the intersection of Linden Boulevard and the subway line, there are more single- and multi-family residential uses, with limited commercial and light industrial uses interspersed. South of Rockaway Boulevard and north of Muriel Court, there is a mix of small commercial and multi-family residential uses. Open space and recreational uses are located along the Belt Parkway corridor. Additional PANYNJ surface parking lots are located south of the Belt Parkway corridor.

Table 2-1 Study Area Generalized Existing Land Uses

Land Use	Number of Tax Lots[2]	Percentage of Total Lots (%)	Lot Area (sf)[3]	Percentage of Total Lot Area (%)
One & Two Family Residential	2,500	43.5%	6,785,440	33.0%
Multi-Family Walk-Up Residential	89	1.5%	337,259	1.6%
Mixed Residential & Commercial	57	1.0%	127,364	0.6%
Commercial & Office	22	0.4%	614,305	3.0%
Industrial & Manufacturing	6	0.1%	71,435	0.3%
Transportation & Utility	66	1.1%	2,158,791[3]	10.5%
Public Facilities & Institutions	7	0.1%	832,433	4.0%
Open Space & Outdoor Recreation	16	0.3%	500,134	2.4%
Parking Facilities	17	0.3%	89,941	0.4%
Vacant Land	91	1.6%	1,577,151	7.7%
Other	2	<0.1%	4,675	<0.1%
Aqueduct Racetrack	1	<0.1%	7,492,320	36.4%
Total	**2,874**	**100%[1]**	**19,325,793**	**100%[1]**

Source: Map PLUTO 24v3

[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.

[3] Block 14260, Lot 1 (JFK Airport) was clipped to only include the 661,722 sf of lot area falling within the quarter-mile radius (out of the total lot area of 214,378,390 sf).

Zoning

Project Site and Study Area

While the RWNYC Lease Area is a New York State–owned property and is not subject to local zoning regulations set forth by the New York City Zoning Resolution, the existing zoning on the Project Site and in the surrounding area is documented below.

The majority of the Project Site and RWNYC Lease Area is mapped with a C8-1 zoning district, with a portion located at the northeast corner of the property mapped R4 and R4-1 (see **Table 2-2**). Residential zoning districts compose a majority of the study area beyond the Aqueduct Site, with some commercial and manufacturing zoning districts mapped as well (see **Figure 2-2**). The zoning districts mapped within the study area are detailed below, by land use type.

Table 2-2 Project Site Zoning Summary – Zoning Districts

District	Area (Acres)	Area (Percent)	Description	Allowable Floor Area Ratio (FAR)[1]
C8-1	56.01	89.9%	C8 districts are "general service" commercial districts that bridge commercial and manufacturing uses, providing for automotive and other heavy commercial services that often require large amounts of land. One accessory parking space is required per 300 sf. The initial required setback distance is 20 feet along a narrow street and 15 feet along a wide street at a height of 30 feet or 2 stories.	R: N/A CF: 2.4 C: 1.0 M: N/A
R4	5.38	8.6%	R4 districts are low-density, non-contextual residence districts. These districts allow single- or two-family homes along with multi-family buildings in a variety of housing types. This district usually produces buildings with three stories. To accommodate a potential third floor beneath a pitched roof, the perimeter wall in R4 districts may rise to 25 feet (35 feet for qualifying sites) before being set back to the maximum building height of 45 feet.	R: 1.00[2] CF: 1.00 C: N/A M: N/A
R4-1	0.93	1.5%	R4-1 districts are low-density, contextual residence districts permitting only one- and two-family detached and semi-detached houses. The district requires a minimum lot width of 25 feet for detached homes and allows an FAR of 1.00. The perimeter wall may rise to 25 feet (35 feet for qualifying sites) before sloping or being set back to a maximum building height of 45 feet. Parking must be within the side or rear yard or in a garage. An in-house garage is permitted within a semi-detached house, or in a detached house if the lot is 35 feet or wider.	R: 1.00[2] CF: 1.00 C: N/A M: N/A

Notes:
1. R = Residential; CF = Community Facility; C = Commercial; M = Manufacturing
2. Maximum residential FAR is increased to 1.50 for Qualifying Sites or when mapped with a commercial overlay.

Commercial Districts

As noted, a large portion of the RWNYC Lease Area and Aqueduct Site is zoned C8-1 (see **Table 2-3**). C8 districts often bridge commercial and manufacturing uses, providing for automotive and other heavy commercial services that often require large amounts of land. Typical uses are automobile showrooms and repair shops, warehouses, gas stations, and car washes—although all commercial uses (except large, open amusements) as well as certain community facilities are permitted in C8 districts. Housing is not permitted, and performance standards are imposed for certain semi-industrial uses (Use Group X). The floor area ratio (FAR) in C8-1 districts is 1.0.

Use Groups I and III through X are allowed as-of-right in C8 districts. These Use Groups generally include: community facilities; retail stores and personal service establishments; public service establishments; home maintenance or repair services; amusement or service establishments; large retail establishments; custom manufacturing activities; fairly large entertainment facilities; open or low coverage and mostly open amusement establishments; special services and facilities required for boating and related activities; and automotive and other necessary semi-industrial uses.

C2-3 commercial overlays are mapped to the west of the study area and along Rockaway Boulevard. C2 districts permit a wide range of retail uses and service shops that serve the immediate needs of surrounding residential communities. When mapped as an overlay in R1 to R5 zoning districts, a commercial FAR of 1.0 is permitted.

Table 2-3 Project Site Zoning Summary – Use Groups

District	Permitted Use Groups	
C8-1	I – Agriculture and Open Uses	Agricultural uses, cemeteries, outdoor recreation, sand and gravel pits
	III – Community Facilities	Faith-based, health care, and other institutions with and without sleeping arrangements
	IV – Public Service Facilities and Infrastructure	Public services, including public safety buildings, and infrastructure
	V – Transient Accommodations	Motels, camps, cabins, and hotels
	VI – Retail and Services	Retail trade establishments: automobile dealers, building material and garden equipment dealers, food and beverage retailers, furniture and appliance retailers, general merchandise retailers, health and personal care retailers, gas stations, clothing, accessory, and jewelry retailers, sporting goods, hobby, and miscellaneous retailers Service establishments: postal service, telecommunications, computer and data services, credit services, financial services, insurance services, real estate, rental and leasing, professional and management services, administrative and support services, educational services, food and drink services and establishments, repair and maintenance services, personal and laundry services
	VII – Offices and Laboratories	Laboratories and offices including ambulatory health care
	VIII – Recreation, Entertainment, and Assembly Spaces	Amusement and recreation facilities, art galleries and studios, entertainment and sports venues, and other assembly spaces
	IX – Storage	General storage including self-storage facilities
	X – Production Uses	Limited manufacturing uses
R4	I – Agriculture and Open Uses	Agricultural uses, cemeteries, outdoor recreation
	II – Residences	Single-family, two-family, and multi-family; detached, zero-lot-line, semi-detached, and attached
	III – Community Facilities	Educational, faith-based, health care, and other institutions with and without sleeping arrangements
R4-1	I – Agriculture and Open Uses	Agricultural uses, cemeteries, outdoor recreation
	II – Residences	Single-family and two-family; detached, zero-lot-line, and semi-detached
	III – Community Facilities	Educational, faith-based, health care, and other institutions with and without sleeping arrangements

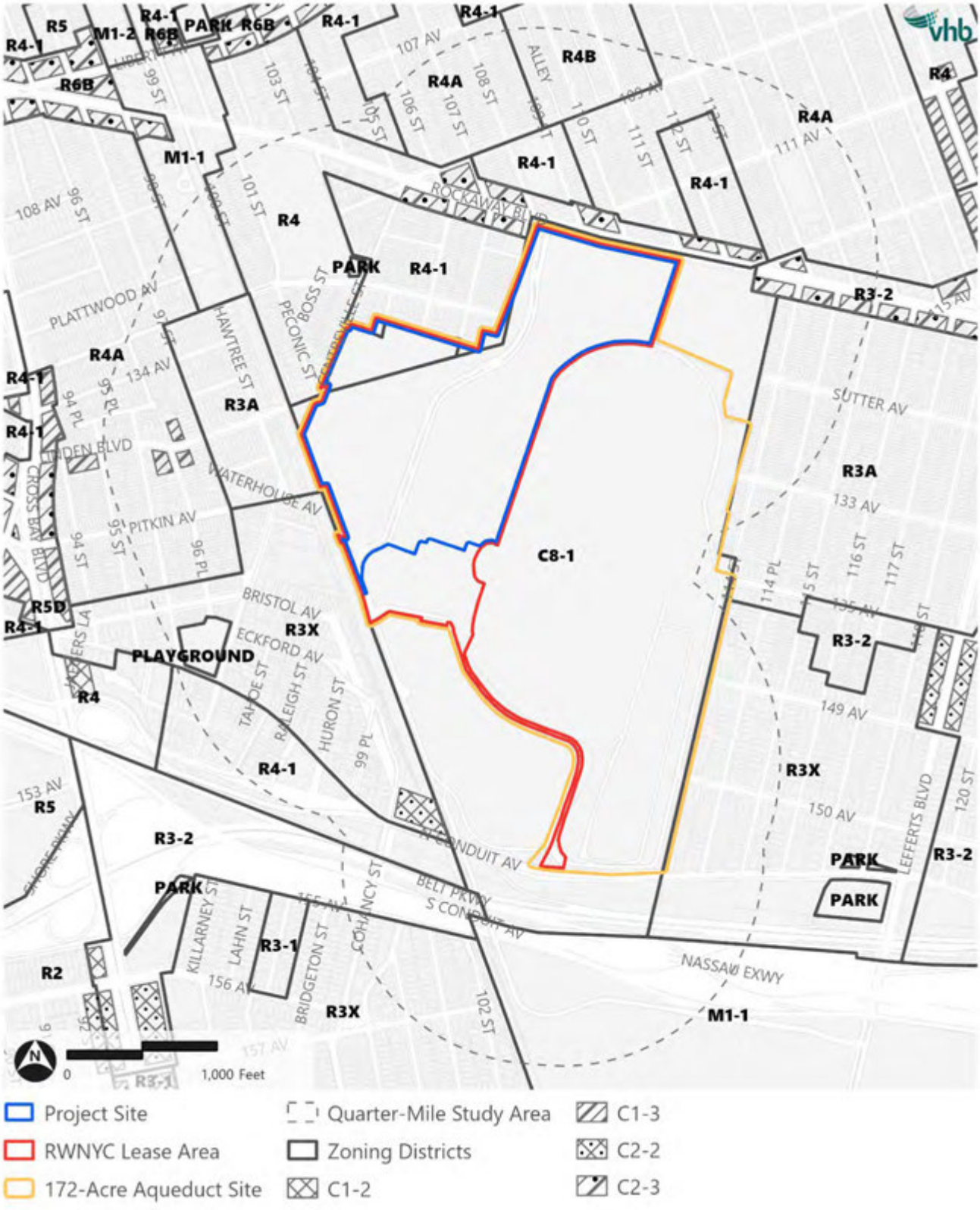
Notes: [1.] R = Residential; CF = Community Facility; C = Commercial; M = Manufacturing

Residential Districts

Low density residential zoning districts surround the Aqueduct Site, including R3-2, R3A, R3X, R4, R4-1, R4A and R4B districts. As shown above in **Table 2-2**, portions of the Project Site and RWNYC Lease Area are mapped in R4 and R4-1 zoning districts. Specifically, 5.38 acres (8.6 percent) of the Project Site is mapped within an R4 district and 0.93 acres (1.5 percent) is in an R4-1 district. R4 districts allow all types of housing at a FAR of 1.00 (or up to 1.50 for qualifying sites or when mapped with a commercial overlay). This district usually produces buildings with three stories. R4-1 districts permit only one- and two-family detached and semi-detached houses, also at a maximum FAR of 1.00 (or up to 1.50 for qualifying sites or when mapped with a commercial overlay).

An R3-2 district is mapped to the northeast of the Aqueduct Racetrack along Rockaway Boulevard, permitting low-rise attached houses, small multi-family apartment houses, and detached and semi-detached one- and two-family residences with an FAR of 0.75. R3A contextual districts are mapped to the east and west of the Project Site and feature one- and two-family detached residences on zoning lots as narrow as 25 feet in width, also with a FAR of 0.75. R3X (FAR of 0.75) and R4A (FAR of 1.00) contextual districts are located to the east and west of the Project Site and permit only one- and two-family detached homes. R4A districts have a minimum lot width of 25 feet. R4B, mapped to the north of the Project Site, is a contextual rowhouse district limited to low-rise, one- and two-family attached residences. R4B districts also permit detached and semi-detached buildings. Maximum residential FAR for R4B districts is 1.00 (or up to 1.50 for qualifying sites or when mapped with a commercial overlay).

Figure 2-2 Existing Zoning Map



Source: NYC MapPLUTO

Manufacturing District

M1-1 districts are mapped within the northwest and southeast portions of the study area. M1-1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. Nearly all industrial uses are allowed in M1 districts if they meet the stringent M1 performance standards. Offices and most retail uses are also permitted. M1 districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts. M1-1 zoning districts have an FAR of 1.0.

Public Policy

Officially adopted public policies also describe the intended use or high-level objectives applicable to an area or site(s) in the City. Some of these policies have the force of law, while others describe general goals. One citywide policy, *PlaNYC: Getting Sustainability Done*, builds on the equity focus of the prior sustainability plan developed for the City, known as *OneNYC 2050: NYC Green New Deal,* with a focus on environmental justice, equity, and improving public health. The existing RWNYC casino was already a well-established and long-standing use at the time this policy was adopted.

No-Action Condition

Land Use

Project Site and RWNYC Lease Area

Absent the Proposed Actions (the future No-Action condition), it is anticipated that the Project Site would remain in its existing condition. However, it is possible that the Applicant could build a second hotel and other program that was evaluated in the Approved 2017 Plan but have not yet been constructed.

Study Area

There are no new planned developments within the quarter-mile study area that are expected to be completed by the 2030 analysis year.

Zoning

There are no zoning changes expected within the Project Site and study area.

Public Policy

There are no known public policy changes that are anticipated to affect the Project Site or study area.

With-Action Condition

As described in **Chapter 1, Project Description**, the With-Action condition proposed on the Project Site would include an approximately 3.4-million-gsf addition to the existing facilities on a 62-acre portion of Queens Block 11543, Lot 2. The Expansion Project would include up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space; approximately 725,900 gsf of casino/gaming facility space accommodating up to 11,000 gaming positions; approximately 213,900 gsf of retail and

dining space; an approximately 187,900-gsf arena with a total of approximately 7,000 seats; approximately 73,900 gsf of event center and meeting room space; approximately 232,900 gsf of lobby or public circulation space; approximately 145,800 gsf of mechanical/electrical space; an approximately 97,500-gsf central utility plant; an approximately 79,700-gsf conservatory; and approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

Land Use

In the With-Action condition, new development would occur within the existing parking lots of the Project Site. The Project Site would be redeveloped with a new casino building, hotel, arena, and accessory parking, expanding upon the existing RWNYC casino uses. As mentioned above, previous environmental reviews on the Project Site assessed and permitted the casino and hotel uses that exist on the Project Site. Additionally, new publicly accessible open spaces are proposed. This is expected to activate portions of the Project Site for the community. As the Expansion Project would be a continuation of existing uses, significant adverse impacts to land use are not expected.

Zoning

The Proposed Actions include approval for a long-term ground lease of State-owned property in conjunction with the expansion of an existing casino and issuance of a State license for live table gaming on the Project Site. Previous environmental reviews on the Project Site assessed and permitted the casino and hotel uses that currently occupy the Project Site. These past assessments facilitated the development of a site that provides a unique use in the City as a large entertainment facility. As detailed in **Chapter 1, Project Description**, since the construction of the Aqueduct Racetrack in 1894 through the opening of the RWNYC casino, uses on the Project Site have been evolving as it relates to gaming, horse racing, and other entertainment and support uses.

In April 2024, the New York City Department of City Planning adopted a citywide zoning text amendment to modify Section 32-10 and Section 42-10 of the Zoning Resolution to allow gaming facilities as a permitted use in C4, C5, C6, C7, and C8 commercial districts as well as M1, M2, and M3 manufacturing districts. The purpose of the modifications was to facilitate the development of three gaming facilities to be licensed by New York State and chosen through a new State-defined siting process.

A gaming facility is defined by New York State in Section 1301(23) of the Racing, Pari-Mutuel Wagering and Breeding Law as "the premises approved under a gaming license which includes a gaming area and any other non-gaming structure related to the gaming area and may include, but shall not be limited to, hotels, restaurants or other amenities." Consistent with the New York State 2022 legislation that authorized gaming facilities downstate, gaming facilities must operate under a gaming license issued by the New York State Gaming Commission.

Under the proposed text amendment, a gaming facility that is approved by New York State would be deemed predominantly complying and conforming with all applicable use and bulk zoning regulations. The casino, hotel, arena, and accessory uses would be included with the New York State approval and license, and as such would also be deemed compliant with the Zoning Resolution.

As mentioned above, the RWNYC Lease Area is a New York State-owned property and is not subject to local zoning regulations set forth by the New York City Zoning Resolution. However, the following is disclosed for informational purposes. As detailed above, the majority of the Project Site is mapped with a C8-1 zoning district, with a portion of the site located at the northeast corner of the property mapped R4 and R4-1. The proposed Expansion Project buildings have been designed to be consistent with the existing built form on the Project Site. Throughout the recent history of the Aqueduct site, it has been used as a unique entertainment venue with ample on-site surface and structured parking. The racino has built upon the existing on-site building context. The evolution of the site's development has respected its history as a unique regional entertainment venue, while also maintaining adequate buffer and screening between the adjacent residential neighborhood and the resort/casino buildings.

The following site plan considerations and building design elements integrated into the proposed Expansion Project demonstrate the suitability of the project with respect to the study area zoning:

- The proposed buildings would be of a similar height and massing to the existing buildings on the Project Site. None of the proposed buildings would be taller than the existing Hyatt Regency JFK Airport at Resorts World New York hotel, which is approximately 132 feet tall.
- The highest intensity uses including the new hotel and casino, ballrooms, and the majority of the arena building would be located within the C8-1 portion of the Project Site, while the parking garage and central utility plant would be located within the R4-1 portion of the Project Site closest to the adjacent single-family homes.
- The proposed new hotel and casino would be located adjacent to the A subway line tracks along the southwestern property boundary, providing a significant buffer between the tallest proposed building on the Project Site (proposed at approximately 132 feet tall) and the neighborhood to the west.
- The buildings proposed to be located closest to the adjacent single-family homes to the northwest of the Project Site would be set back from the nearest homes. Specifically, the proposed arena would be set back by approximately 162 feet. While this is less than the 200-foot buffer from residential districts that would be required by the New York City Zoning Resolution for large arenas (see additional discussion below), various design measures would be implemented as part of the Expansion Project, such as berms and landscaping, to minimize the presence of the new building with respect to surrounding residential uses. The proposed parking garage and portion of the proposed central utility plant closest to the property boundary would be set back by approximately 156 feet from the surrounding residences, significantly greater than the required 20-foot setback within the C8-1 district. Given the significant setbacks, none of the proposed buildings would surpass the sky exposure plane from the property boundary.
- Significant new landscaping, including enhanced berms, are proposed along the northwestern portion of the property to provide further screening between the residential neighborhood and the Expansion Project.

In addition to the above, all of the proposed uses on the Project Site are permitted as-of-right or by special permit within the C8-1 zoning district. The proposed 7,000-seat arena is also generally in compliance with the findings set forth in the New York City Zoning Resolution Section 74-182 (arenas, auditoriums, stadiums or trade expositions), which permits arenas with a capacity in excess of 2,500 seats. While a portion of the arena would be located within 200 feet of a residence district (in fact, within the residence district on the Project Site), the proposed arena would be accessed from

a major street (Rockaway Boulevard) and would not require significant traffic along local streets. The Project Site would provide enough parking and sufficient access so as to avoid traffic congestion and prevent backup on Rockaway Boulevard. Additionally, the Project Site would be located proximate to several bus lines and the A subway line, reducing reliance on vehicular travel to the proposed facility.

Overall, the Proposed Actions would introduce structures that are consistent with the existing built form on the Project Site; these changes would be limited only to the Project Site. While local zoning regulations do not apply to the State-owned property, the proposal for the Proposed Expansion would undergo a review by the State. This would ensure that the proposal is consistent with the State's vision for the site and as such, the Expansion Project would not result in significant adverse zoning impacts.

Public Policy

The Expansion Project is consistent with many of the high-level goals and objectives set forth by the City in its citywide policy documents, including *PlaNYC: Getting Sustainability Done*, in addition to State policy initiatives, including New York State *Executive Order 22*. The Expansion Project's consistency with these policies is detailed below. However, regarding citywide policy, as the RWNYC Lease Area is a New York State–owned property and not subject to local zoning regulations, policies or guidelines related to local zoning and land use regulations are not applicable to the Project Site.

PlaNYC: Getting Sustainability Done

Buildings

Initiative 7: Support building owners in complying with Local Law 97 emissions reduction goals by 2030

The Applicant proposes to construct new building that would include various components such as an event center, arena, casino, hotel, restaurant, and retail space; these buildings would be supported by electric mechanical, electrical, and plumbing systems. The Applicant would make a conscientious effort to maximize the usage of rooftop solar arrays and allow for reliance on electricity from on-site solar power. Although NYC local laws are not applicable to the State-owned Project Site, the Expansion Project would be in compliance with Local Law 97, introduced in 2019 for NYC to achieve reductions in greenhouse gas emissions by 2050, as well as the 2020 Energy Code. The Expansion Project would also comply with NYC's Local Law 86, the aforementioned Green Building Law, through its anticipated qualification for LEED certification, a program led by the U.S. Green Building Council to promote sustainable building construction and design. Overall, the Expansion Project supports the goal of moving toward carbon neutrality and clean energy sources and is therefore supportive of and consistent with this initiative.

Green Spaces

Initiative 15: Create an accessible and connected network of open spaces

The Expansion Project would include the provision of publicly and privately accessible open space. Publicly accessible open space elements would consist of an elevated park to be located between the proposed parking garage and the casino main lobby. Covered pedestrian bridges and walkways would encircle the plaza space, connecting the garage to the existing casino. Additionally, meandering landscaped walkways are proposed along the eastern and western perimeters of the

Project Site, including a linear pathway running the length of the property along the western property line that would connect neighboring areas across the Project Site. Therefore, the Proposed Actions would be supportive of this initiative.

New York State Executive Order (EO) 22

Governor Kathy Hochul signed EO 22 in September 2022 to accelerate efforts to make State operations more sustainable. EO22 commits State agencies to lead the effort to green operations and decarbonize assets. For State buildings, this means focusing on energy efficiency, avoiding the use of equipment that burns fossil fuels, aiming for 100 percent of the electricity used in State operations to come from renewable sources by 2030, and investing in resiliency initiatives. The Expansion Project would be consistent with several policies of EO22, specifically related to the following:

VII. Reducing Greenhouse Gas Emissions: The Expansion Project buildings would not rely on fossil fuels, utilizing electric heating, ventilation, and air-conditioning (HVAC) and hot-water systems, thereby contributing to greenhouse gas reduction efforts.

XI. Low Impact Development: As described in **Chapter 9, Water and Sewer Infrastructure**, the Expansion Project's stormwater design incorporates best management practices. Of the 33-acres of disturbed area on the Project Site, approximately 28 acres would have stormwater routed to green infrastructure practices, such as bioretention basins and stormwater planters, or infiltration basins, such as drywells and open-bottom chambers. Additionally, as described in **Chapter 10, Energy, Sustainability, Greenhouse Gas Emissions, and Climate Change**, the Project Site is located well outside of the City's Coastal Zone and is not located in the 100-year floodplain or the 500-year floodplain. Therefore, the Expansion Project would not be at risk of sea level rise or flood-related impacts now or in the future.

XII. Promoting Biodiversity and Habitat Protection: Landscaping and plantings throughout the Project Site would prioritize native plant species and pollinators over non-native species to support, promote, and protect future biodiversity and habitat.

XIII. Disadvantaged Communities: The Project Site is located within a defined Disadvantaged Community. However, as discussed in **Chapter 3, Socioeconomic Conditions**, the Expansion Project would not result in any significant adverse impacts to socioeconomic conditions and would in contrast bring economic benefit to the surrounding area resulting in both construction jobs and permanent employment opportunities, facilitated by a Workforce Development and Diversity Plan that would include the implementation of a local hiring preference. Additionally, as outlined in **Chapter 14, Public Health,** the Expansion Project would not result in significant adverse public health impacts to the surrounding area related to hazardous materials, water and sewer infrastructure, air quality, noise, or construction, and therefore would not introduce environmental hardships on the Project Site, nor within any neighboring disadvantaged communities. Similarly, as stated above, the Expansion Project buildings would operate on electric HVAC and hot-water systems, which would reduce on-site emissions.

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
- Adverse effects on specific industries.

For the Expansion Project, a preliminary analysis of indirect business displacement is warranted.

As described below, the preliminary analysis determined that the Expansion Project would not result in significant adverse impacts to socioeconomic conditions.

Principal Conclusions

The preliminary analysis of the Expansion Project has determined that the Proposed Actions would not result in significant adverse impacts to socioeconomic conditions. The Expansion Project would not introduce new economic trends to the study area that would substantially alter existing economic patterns and trends. Since the site is used for commercial and entertainment activity, the Expansion Project would not result in direct displacement and, therefore, would not result in displacement of any uses that may directly or indirectly support businesses in the Study Area. Therefore, the Expansion Project would not result in significant adverse impacts due to indirect business displacement.

Project Commitments

The Applicant is committed to continuing to hire a workforce that represents the demographics of Queens through the Workforce Development and Diversity Plan.

Methodology

Introduction

According to the *CEQR Technical Manual*, 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 Expansion Project 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 screen 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 Expansion Project to either rule out the possibility of significant adverse impacts or determine that a more detailed analysis is required to resolve the issue.

Initial Screening Assessment

According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may be reasonably expected to create within the area affected by the project substantial socioeconomic changes 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.*

There are no existing residential uses on the Project Site, and no residential uses would be displaced or modified as part of the Expansion Project. Therefore, assessment of direct residential displacement is not warranted.

- ***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 Expansion Project would not directly displace any employees or businesses. Therefore, assessment of direct business displacement is not warranted.

- ***Indirect Displacement due to Increased Rents**: Would the project result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood? Residential development of 200 units or less or commercial development of 200,000 square feet (sf) or less would typically not result in significant socioeconomic impacts. For projects exceeding these thresholds, assessments of indirect residential displacement and indirect business displacement are appropriate.*

The Expansion Project would result in the addition of more than 200,000 sf of commercial space. Therefore, a preliminary assessment of indirect business displacement is warranted. The Expansion Project does not include new residential uses; therefore, assessment of indirect residential displacement is not warranted.

- ***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 Expansion Project would not result in the introduction of new retail space totaling 200,000 sf or more. Therefore, an assessment of potential 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 Expansion 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 Expansion Project only warrants an analysis of indirect business displacement.

Preliminary Assessment

Indirect Business Displacement Methodology

Per *CEQR Technical Manual* guidelines, a preliminary assessment of a project's potential to cause indirect business displacement is necessary to determine whether a proposed project may introduce trends that would make it difficult for certain local businesses to remain in the area. Indirect displacement is typically caused by a marked increase in property values and rents or through direct displacement. The Expansion Project would expand and improve the current uses on site rather than displacing any uses, therefore, no direct displacement would occur.

Therefore, this assessment will focus on the potential for the Expansion Project to introduce new economic trends to the study area that could make it difficult for vulnerable businesses to remain in the study area.

Study Area Definition

The *CEQR Technical Manual* states that the socioeconomic study area boundaries are similar to those of the land use Study Area. As discussed in **Chapter 2, Land Use, Zoning, and Public Policy**, a quarter-mile area surrounding the Resorts World New York City (RWNYC) Lease Area was used for the land use study area. Per *CEQR Technical Manual* guidance, the study area for the indirect business displacement assessment comprises the census tracts with at least 50 percent of their area falling within a quarter mile of the RWNYC Lease Area—Census Tracts 88, 96, 100, and 864 (see **Figure 3-1**).

Data Sources

Information used in the assessment of indirect business displacement includes employment by industry sector data from the Longitudinal Employer-Household Dynamics (LEHD) program of the US Census Bureau (accessed via https://onthemap.ces.census.gov/) for 2021. ESRI Business Analyst was used to assess local businesses. The assessment of indirect business displacement also includes analysis of land use patterns and trends as established in **Chapter 2, Land Use, Zoning, and Public Policy**.

Existing Conditions

The RWNYC Lease Area is located on the approximately 172-acre Queens Tax Block 11543, Lot 2. This entire lot is owned by New York State and includes the RWNYC casino, the Aqueduct Racetrack, and New York State Racing Association (NYRA) building. Located along the west side of the Aqueduct Racetrack and to the north of the NYRA grandstand is the approximately 466,306-gross-square-foot (gsf) RWNYC casino, the 400-key Hyatt Regency JFK Airport at Resorts World New York hotel, an on-site restaurant, a food court, and approximately 4,779 surface parking spaces. The overall RWNYC Lease Area also includes an approximately 10-acre area that comprises NYRA's Aqueduct Racetrack

grandstand, a surface parking lot, and roadways that provide internal circulation, but does not include the racetrack or stables.

As detailed in **Chapter 2, Land Use, Zoning, and Public Policy**, the quarter-mile study area contains several large land uses—including the NYRA Aqueduct Racetrack and horse stables located immediately to the south and east of the Project Site; the Port Authority of New York and New Jersey (PANYNJ)'s surface parking lot located south of the Project Site on Lot 500; a Home Depot store located to the northeast; and the elevated IND Rockaway (A) Line of the NYC Subway system, which makes up the western boundary of the Project Site. Apart from these notable land uses, the remainder of the study area is primarily made up of low-density residential neighborhoods of mainly one- and two-family homes, interspersed with commercial corridors (Liberty Avenue, Rockaway Boulevard, and Cross Bay Boulevard) and institutional uses. Land uses comprising mixed residential and commercial, commercial and office, and industrial and manufacturing uses make up less than 2 percent of total lot area of the study area.

As shown in **Table 3-1**, there are approximately 2,679 employees in the quarter-mile study area. Of the standard North American Industry Classification System (NAICS) categories, those with the most employees in the study area are Accommodation and Food Services; Retail Trade; and Arts, Entertainment, and Recreation. The industries with the most employees in Queens are Health Care and Social Assistance, Retail Trade, and Accommodation and Food Services. The industries with the most employees in New York City as a whole are Health Care and Social Assistance; Professional, Scientific, and Tech Services; and Educational Services.

Per ESRI Business Analyst, the top employers in the study area include Resorts World NYC and the Hyatt Regency JFK Airport at Resorts World, the Aqueduct Racetrack, Home Depot, and John Adams High School.

Businesses within the study area (and outside the Project Site) mostly consist of neighborhood retail, restaurants, auto repair, and local services (including medical, law, tax, and insurance offices) geared toward the population of the residential neighborhoods surrounding the Project Site. There is also one small hotel within the study area. The Home Depot store located directly northeast of the Project Site is the only large commercial use in the area. These businesses are concentrated along commercial corridors (Liberty Avenue, Rockaway Boulevard, and Cross Bay Boulevard) and generally reflect a typical low-density residential neighborhood.

The study area has experienced limited development in recent years and there is no clear economic trend. The bulk of the study area was within the rezoning area for the 2013 Ozone Park Rezoning (ULURP No. 140079ZMQ), which was an area-wide rezoning undertaken in order to reinforce the area's predominant one- and two-family residential character while directing limiting residential and mixed-use development towards commercial corridors and mass transit resources. Subsequent development has generally conformed to the goals of the rezoning; new construction within the study area since the rezoning has been limited to single-family homes and small commercial developments along Cross Bay Boulevard and Rockaway Boulevard. As such, the study area is not experiencing a development trend or other economic trend. Instead, the business environment in the study area has remained stable, with small-scale retail and services continuing to serve the local residential population.

Table 3-1 Employment by Industry Sector

Type of Job (NAICS)	Quarter-Mile Study Area		Queens		New York City	
	Employees	%	Employees	%	Employees	%
Agriculture, Forestry, Fishing and Hunting	0	0.0%	37	0.0%	469	0.0%
Mining, Quarrying, Oil and Gas Extraction	0	0.0%	32	0.0%	107	0.0%
Utilities	0	0.0%	2,749	0.4%	15,970	0.4%
Construction	88	3.3%	51,764	7.9%	141,882	3.5%
Manufacturing	23	0.9%	15,387	2.4%	52,286	1.3%
Wholesale Trade	39	1.5%	19,206	2.9%	125,235	3.1%
Retail Trade	642	24.0%	61,753	9.4%	285,370	7.0%
Transportation and Warehousing	2	0.1%	61,547	9.4%	177,839	4.3%
Information	1	0.0%	7,346	1.1%	228,852	5.6%
Finance and Insurance	26	1.0%	13,490	2.1%	342,755	8.4%
Real Estate and Rental and Leasing	27	1.0%	14,829	2.3%	130,481	3.2%
Professional, Scientific, Technical Services	10	0.4%	20,361	3.1%	407,523	9.9%
Management of Companies and Enterprises	0	0.0%	3,484	0.5%	68,005	1.7%
Administration & Support, Waste Management and Remediation	6	0.2%	36,314	5.6%	230,584	5.6%
Educational Services	264	9.9%	60,619	9.3%	390,769	9.5%
Health Care and Social Assistance	134	5.0%	168,475	25.8%	862,722	21.0%
Arts, Entertainment, and Recreation	444	16.6%	3,958	0.6%	49,791	1.2%
Accommodation and Food Services	855	31.9%	38,494	5.9%	205,899	5.0%
Other Services (excl. Public Administration)	118	4.4%	20,609	3.2%	144,446	3.5%
Public Administration	0	0.0%	53,272	8.1%	239,118	5.8%
Total	**2,679**	**100.0%**	**653,726**	**100.0%**	**4,100,103**	**100.0%**

Source: US Census Bureau, 2021 LEHD data accessed via https://onthemap.ces.census.gov/

No-Action Condition

As discussed in **Chapter 1, Project Description**, a redevelopment program for the Project Site (under the Approved 2017 Plan) was analyzed in a 2017 Expanded Environmental Assessment (EEA) and was determined to have no significant adverse impacts. While the Phase I of the Approved 2017 Plan program was constructed on the Project Site, Phase II, which would include a second hotel and event space, was never constructed. In the future without the Proposed Actions, it is assumed that the remaining Phase II components of the Approved 2017 Plan would be constructed. Therefore, the full program as approved in 2017 is considered the baseline No-Action condition for the purposes of this analysis.

As noted in **Chapter 2, Land Use, Zoning, and Public Policy**, there are no new planned developments within the quarter-mile study area that are expected to be completed by the 2030 analysis year.

With-Action Condition

According to the *CEQR Technical Manual*, an assessment of indirect business displacement seeks to determine whether a proposed project may introduce trends that would make conditions difficult for businesses that are essential to the local economy—or businesses that are the subject of regulations or publicly adopted plans to preserve, enhance, or otherwise protect them—to remain in the area.

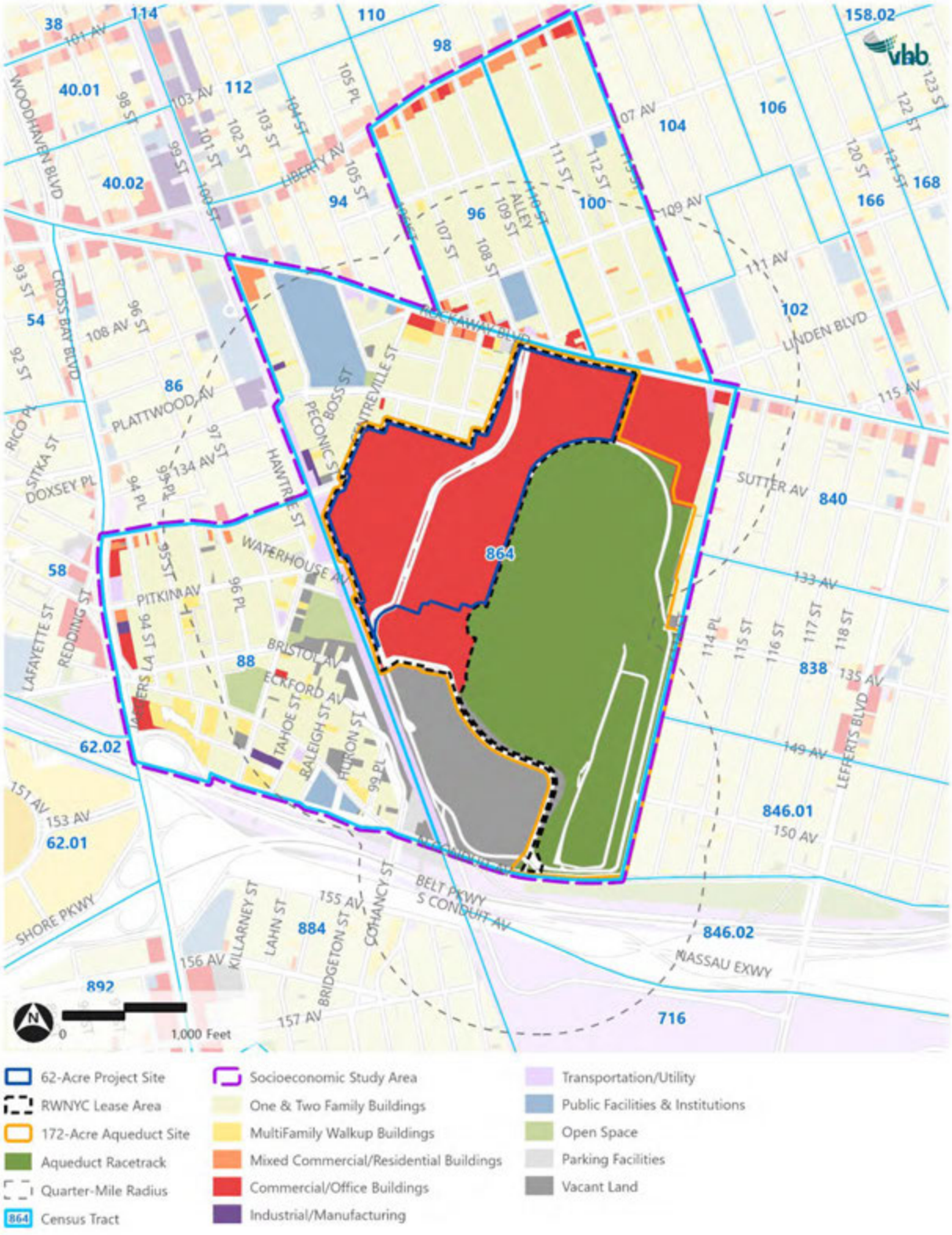
The Expansion Project would result in the expansion of the existing RWNYC facility by approximately 3,442,665 gsf, resulting in a total of approximately 5,331,200 gsf (existing square footage, plus the proposed expansion). As discussed in detail in **Chapter 1, Project Description,** the program resulting from the Expansion Project would consist of up to approximately 2,000 hotel keys; approximately 725,900 gsf of casino/gaming facility space; approximately 213,900 gsf of retail and restaurant space; an approximately 187,900-gsf, 7,000-seat arena; approximately 73,900 gsf of function and event space; approximately 53,300 gsf of pool deck area; approximately 232,900 gsf of lobby and public circulation space; approximately 145,800 gsf of mechanical/electrical/utility space; an approximately 97,500-gsf central utility plant; an approximately 79,700-gsf conservatory; and approximately 2,143,500 gsf of structured parking., with approximately 7,309 structured and surface parking spaces.

The Expansion Project would augment and enhance an existing facility with new entertainment and commercial space, supporting similar uses and businesses to what exists on the Project Site and what would be developed in the No-Action condition under the Approved 2017 Plan. The Expansion Project would not introduce uses or businesses that are fundamentally different than those that already exist or would be developed in the No-Action condition. The With-Action condition would introduce a pool deck and arena space that would not be present in the No-Action condition; however, this space would function as destination entertainment space that would complement the commercial and entertainment uses in the No-Action condition. The remaining elements of the Expansion Project would all be present in the future without the Proposed Actions, though at a smaller scale.

The With-Action condition represents a continuation and expansion of existing entertainment, hotel, retail, dining, and event space uses present on the Project Site, and the Expansion Project would not introduce a new development trend. As noted above, the development conditions and local economy of the study area are relatively static, with no clear trend occurring in recent years. The stable economic conditions of the study area have been consistent with the objectives of the 2013 Ozone Park Rezoning, which sought to limit local commercial development to existing commercial corridors and transit-rich areas. The study area did not experience a change in development trends following the construction of Phase I of the Approved 2017 Plan, which suggests that further expansion of similar operations at the Project Site would not introduce new trends that could affect nearby local businesses. Therefore, the Expansion Project would be consistent with the existing mix of uses at the Project Site and would not affect development conditions in the study area.

As discussed above, the Expansion Project would not directly displace any residential, commercial, or other existing uses. Because no businesses or residents would be directly displaced, and the With-Action condition represents a continuation of existing uses, there would be no related indirect displacement effects. It is not anticipated that the Expansion Project would introduce economic trends that would affect the ability of local businesses to remain in the area. Additionally, it is expected that residential and commercial uses that support businesses in the study area would continue to bring a customer base to those existing businesses. Therefore, the Expansion Project would not cause significant adverse socioeconomic impacts due to indirect business displacement.

Figure 3-1 Socioeconomic Study Area



Source: NYC MapPLUTO, US Census Bureau

Economic Benefits

The Applicant believes the Expansion Project would solidify RWNYC as a destination for dining, shopping, and entertainment in New York City and support new workforce development opportunities and economic activity in the region. The Expansion Project would capitalize on the existing investments at the Project Site to continue to build job opportunities, resulting in new construction jobs and permanent employment. The proposal would also continue the investment made at this location supported by previous Gaming Commission decisions.

Permanent Job Opportunities

The Expansion Project is designed to capitalize on existing on-site investments to continue to build job opportunities and invest in the local community. The Proposed Actions would enable more certainty for the Project Site, allowing for long-term and cohesive planning on the site to benefit existing and future on-site employees. There are currently 859 jobs located on the Project Site. However, with the Proposed Expansion, the site would be able to accommodate approximately 5,000 jobs. The additional 4,140 jobs would be primarily centered in the casino (60 percent of jobs) (see **Table 3-2**), though several jobs would be created in a variety of industries such as administration, marketing, hotel, and security. The diversity in job types would allow for a range of employee skill sets and opportunities—from family-sustaining union jobs to senior managerial-level jobs. Note that the Expansion Project would generate additional jobs for retail and the proposed spa.

Table 3-2 Existing and Proposed On-Site Employment

Division	Existing Jobs[1]	With-Action Jobs[1]
Administration	70	158
Casino	185	3,112
Food and Beverage	241	812
Hotel	92	446
Marketing	43	44
Player Development	9	61
Property Operations	123	204
Security	96	163
Total	**859**	**5,000**

Notes: [1] All jobs are reported as Full-Time Equivalent (FTE), calculated at 40 hours of work per week.

The Applicant has developed a Workforce Development and Diversity Plan (the Plan) outlining a strategy to recruit, retain, and develop a diverse workforce through local hiring preferences, in-house training programs, and collaboration with local organizations (see **Appendix A**). RWNYC's existing workforce reflects approximately 80 percent minority representation, and the Applicant is committed to continuing to hire a workforce that represents the demographics of Queens.

The Plan outlines a local hiring preference for Jamaica, Howard Beach, and Far Rockaway residents (residents of Queens Community Districts 12, 10, and 14, respectively), which represent the top three unemployment rates among Community Districts in Queens. Qualified residents of these neighborhoods will have their resumes reviewed first and will have the opportunity to be called for an initial round of interviews. The Applicant will also work with Queens-based stakeholders to identify local residents who would qualify for the additional job opportunities. As part of its record-keeping

and for tracking purposes, the Applicant will maintain data on local hiring progress both directly and through its construction contractors.

The Applicant is currently partnering with community-based organizations such as Jamaica-Queens Independent Living Center (QILC); Advocacy Humanity Reimagination Change (AHRC) New York City; Queens Community Board Disability Committee; Workforce1 Career Centers; Center for Independence of the Disabled, New York (CIDNY); Queens Vet Center; and Veterans' Service Organizations (VSOs) such as the American Legion, Veterans of Foreign Wars (VFW), and Disabled Veterans of America (DVA). These partnerships are intended to strengthen Diversity, Equity, and Inclusion (DEI) and accessibility in the hiring process.

The Plan also outlines RWNYC's comprehensive workforce training programs that cater to a wide range of individuals. The Applicant uses the SkillSmart online platform in order to help job seekers align their skills and experience with available positions and connect with training resources for skill development. The Applicant also plans to offer job readiness workshops designed to equip individuals with the essential skills needed to enter the workforce successfully, and skills development programs that focus on specific areas related to the casino and hospitality industry. In addition to an online careers page, RWNYC will offer in-person support to job seekers at multiple Hiring Hubs at Resorts World properties in New York State, local career centers, community centers, public libraries, and colleges. RWNYC will also host hiring events and attend job fairs.

Construction Jobs

The Expansion Project would directly support approximately 5,000 construction jobs throughout the four-year construction duration. These jobs include the various craft trades, truck drivers, delivery personnel, inspectors, management staff, etc.[1] Beyond direct employment, construction of the Expansion Project would support approximately 600 indirect jobs (jobs created through business-to-business spending) and 1,600 induced jobs (jobs created from household spending of construction workers).

Tax Revenue

The existing development currently provides approximately $35.7 million in federal and state taxes, including taxes paid by the employer and on behalf of the employees. These taxes include payments for Social Security, Medicare, and federal, state, and NYC withholding amounts. The New York State withholding is approximately $5.2 million, and New York City withholding is approximately $2.5 million.

State and NYC sales and use taxes, as well as hotel unit, hotel revenue, and hotel occupancy taxes, are also paid for the existing development. The current amounts paid are approximately $1.2 million for food and beverage sales tax; $600,000 for use tax; $1.5 million for hotel revenue sales tax; $126,000 for hotel unit tax; and, $1.1 million for hotel occupancy tax.

Though estimates are not provided, it is anticipated that the amounts of federal and state taxes paid annually would significantly increase after completion of the Expansion Project.

Additionally, approximately 68 percent, or $661 million for 2024, of gross gaming revenues generated by the existing operations are paid to various state entities—including State Education, NYRA Operations/Capital Expense, and Nassau Off Track Betting (OTB) Corporation. It is anticipated that gaming revenues would more than double after completion of the Expansion Project.

[1] The number of direct construction jobs was estimated by the Applicant based on a preliminary construction phasing plan, evaluation of past experiences in building similar projects with comparable timelines, and review of manpower daily reports from past projects. Indirect and induced jobs were estimated using IMPLAN.

4

Community Services and Solid Waste

This section assesses the potential impacts of the Proposed Actions on community services and solid waste. Generally, community services are public or publicly funded facilities including fire and police protection services, health care facilities, and solid waste.

Introduction

The Applicant, Genting New York, LLC, d/b/a Resorts World Casino New York City, is seeking approval for modification of their existing ground lease of State-owned property and issuance of a Gaming Facility license from the New York State Gaming Commission (the Gaming Commission) in conjunction with the proposed expansion of the existing approximately 1.9-million-gross square-foot (gsf) Resorts World New York City (RWNYC) casino and installation and operation of live table games (the Proposed Actions). The Proposed Actions would facilitate the construction of an expansion to the existing facilities on a 62-acre portion of the RWNYC Lease Area, comprising Queens Block 11543, Lot 2 (the Project Site).

The Proposed Actions involve the expansion of the existing RWNYC facility by approximately 3,442,665 gsf (the Expansion Project), resulting in a total of approximately 5,331,200 gsf (existing gsf, plus the Expansion Project) comprising the following elements:

- Up to approximately 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;
- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to approximately 11,000 gaming positions, which will include a mix of live gaming and will continue to include video lottery terminals (VLTs) and electronic table games (ETGs);
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,300 gsf of pool deck area;

- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical/utility space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and,
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces"

This section assesses the potential impacts of the Proposed Actions on community services and solid waste in the vicinity of the Project Site.

Principal Conclusions

The *2021 CEQR Technical Manual* indicates that a significant adverse impact on health care, police and emergency services could occur when a proposed project would introduce a sizeable new population to the neighborhood or when it would displace a health care, police station, or emergency service facility. As described below, the Expansion Project would expand upon an existing use and would not introduce a sizeable new population to the neighborhood, nor would it displace the functions or facilities related to health care, police, and emergency services within the neighborhood. Therefore, no significant adverse impact is anticipated to these services.

The Proposed Actions would generate an increment above the Approved 2017 Plan of approximately 45.95 tons per week of solid waste. All solid waste generated on the Project Site would be handled by private carters. Overall, the uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately four commercial carter truck loads per week. This is considered a negligible increase relative to the approximately 9,000 tons of waste handled by commercial carters every day, and it would also represent approximately 0.02 percent of the City's anticipated future weekly commercial and the New York City Department of Sanitation (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. Therefore, the Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services.

Project Commitments

As described in further detail below, the Applicant is making several project commitments in conjunction with the Expansion Project. The project commitments discussed in the chapter include:

- The Applicant would maintain coordination with the local fire and police service providers as development occurs to address concerns raised and avoid impacts to the local community.
- The Applicant would implement an organics recycling program to divert organics from the waste stream.
- Solid waste collection on the Project Site would be handled out of public view and away from nearby residences.

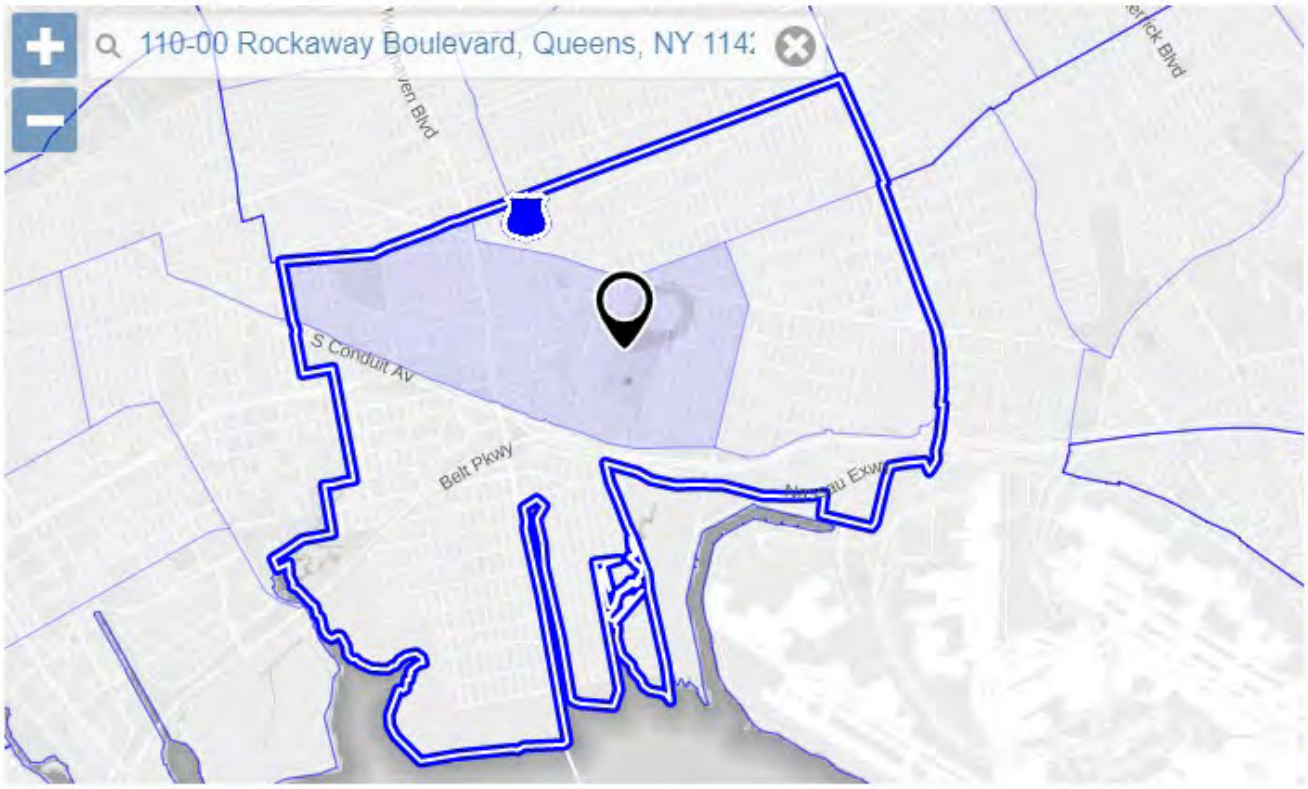
Assessment

Existing Conditions

Police Services

The Project Site is located in the 106th Police Precinct. This Precinct maintains headquarters at 103-53 101st Street in Ozone Park, New York, approximately 0.6 miles northwest of the Project Site. The precinct is divided in four sectors: A, B, C, and D; the Project Site falls within Sector B (see **Figure 4-1**). Two neighborhood coordinators within the 106th Precinct are specifically assigned to the Resorts World Casino.[1] According to information obtained from New York City's NYCityMap website, the 106th Precinct serves an area encompassing approximately 6.8 square miles and approximately 122,441 residents.[2]

Figure 4-1 New York City Police Department 106th Police Precinct



Source: Map retrieved from New York City Police Department nyc.gov.

Fire Protection

The Project Site is situated within the service area of the Fire Department of the City of New York (FDNY), 13th Division, Battalion 51, Engine Company 308. There are also three additional firehouses located within approximately one mile of the Project Site (see **Table 4-1**). Battalion 51 is located at

[1] https://www.nyc.gov/site/nypd/bureaus/patrol/precincts/106th-precinct.page

[2] New York City's NYCityMap website.

107-12 Lefferts Boulevard, South Richmond Hill, New York, approximately 0.8 miles northeast of the Project Site.

Table 4-1 FDNY Firehouses

Firehouse Name	Address	Distance from Project Site (Miles)
Engine 308/Battalion 51	107-12 Lefferts Boulevard	0.80
Engine 285/Ladder 142	103-17 98th Street	0.70
Engine 331/Ladder 173	158-57 Cross Bay Boulevard	1.10

Fire service demands are currently served by a fire service loop with two connections to the New York City Department of Environmental Protection (NYCDEP) network from Centreville Street and Rockaway Boulevard.

Generally, the assessment of impact on fire protection services relates to fire response time (i.e., the amount of time it would take for fire engines to travel from the nearest fire station to the site of the proposed action or other buildings within the primary service area of that station). However, units responding to a fire are not limited to those closest to it. Normally, more than one engine and ladder company respond to each call, and rescue companies also respond to fires or emergencies in high-rise buildings. Each FDNY squad company is capable of operating as an engine, ladder, or rescue company, making the units a very versatile company for incident commanders. FDNY can call on units in other parts of the city as needed.

According to data maintained by the Applicant, the current RWNYC facility generated the following emergency calls/responses in the period between November 2023 and October 2024:

- 911 Medical: 204
- 911 Crime: 143
- FDNY Response:[3] 23

Ambulance Services

The FDNY provides emergency medical services (EMS) to the Project Site. In addition to EMS provided by the FDNY, the Lindenwood Volunteer Ambulance Company (LVAC) provides ambulance coverage to the neighborhoods of Lindenwood, Ozone Park, and South Ozone Park. LVAC is a member of the FDNY's Mutual Aid Response Service agreement and has 40 volunteer members. According to its website, LVAC operates two ambulances and, during a typical year, responds to over 1,500 calls. LVAC is headquartered at 94-10 133rd Avenue, approximately 0.6 miles west of the Project Site.

Health Care Facilities

There are four NYC Health + Hospitals facilities located to the east of the Project Site, as shown in **Table 4-2**.

[3] These are fire alarm activations that do not necessarily result in a FDNY Response.

Table 4-2 NYC Health + Hospitals Facilities

Hospital Name	Address
Gotham Health, South Queens	114-02 Guy R. Brewer Boulevard
Gotham Health, Springfield Gardens	134-64 Springfield Boulevard
Gotham Health, Parsons	90-37 Parsons Boulevard
Queens Medical Center	82-68 164th Street

According to the guidelines of the *CEQR Technical Manual*, a detailed health care facilities analysis is warranted if a proposed project would introduce a sizeable new population to the neighborhood or if the proposed project would displace or alter a hospital or public health care clinic. The *CEQR Technical Manual* cites Hunters Point South in Queens as an example of a sizeable new neighborhood where none existed before; Hunters Point South was projected to introduce 6,650 new residential units, 126,500 square feet (sf) of retail use, 45,000 sf of community facility use, a 1,250-seat school, 2,660 parking spaces, and 13.4 acres of open space. The Expansion Project would not introduce a sizeable new population, nor would it displace or alter the health care facilities described above. Therefore, a health care facilities analysis is not warranted.

Solid Waste

According to the *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 a detailed analysis. Because the Expansion Project would result in an increase of more than 50 tons per week, an assessment of solid waste and sanitation services is warranted. As the analysis of solid waste and sanitation services is a density-based technical analysis, this assessment accounts only for the anticipated incremental development on the Project Site.

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). The 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 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.

Commercial carters collect 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. Commercial establishments are 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 October 2026. 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 would be necessary for such waste. According to the SWMP, the City's commercial solid waste generation would 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.

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 Marine Transfer Stations (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.

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.

Commercial Waste Zones

Local Law 199 of 2019 requires the establishment of Commercial Waste Zones (CWZ) throughout New York City. The CWZ program divides the city into 20 commercial waste zones, established in February 2020 via DSNY rulemaking, each served by up to three carters that have been selected through a competitive process. Five citywide contracts have also been awarded for citywide containerized collection. This approach is expected to reduce truck traffic associated with commercial waste collection by 50 percent, eliminating millions of heavy-duty truck miles from NYC streets every year while strengthening service standards and allowing for customer choice. Customer transitions are expected to begin in 2024 and be complete by 2026. The Project Site falls in the Queens Northeast (QN-4) CWZ.

Solid Waste Generation on the Project Site

The Project Site is currently improved with the existing RWNYC facility and the Hyatt Regency JFK Airport at RWNYC hotel. The Project Site also contains retail and dining space, event space, lobby and public circulation, and surface and structured parking. All solid waste generated by on the Project Site is handled by private carters. The Project Site has four 40-foot garbage containers on site that are removed by private carters four times per week. Additionally, the Project Site has a cardboard bailer and recycling receptors on site. The Project Site does not currently incorporate organics recycling. **Table 4-3** provides an estimate of existing solid waste generation on the Project Site.

Table 4-3 Existing Solid Waste Generation on the Project Site

Use	Approximate Area (gsf)	Employees[1]	Solid Waste Generation Rate (lbs/wk)[2]		Solid Waste Generation	
					lbs/wk	tons/wk
RWNYC Facility	466,306	850	13	Per employee	11,050	5.53
Event Space	128,197					
Lobby and Circulation	42,113					
Retail and Dining	149,030	150	251		37,650	18.83
Hotel	270,310	132	75		9,900	4.94
Total Solid Waste Generation					**58,600**	**29.30**
Solid Waste Handled by Private Carters					**58,600**	**29.30**
Solid Waste Handled by DSNY					--	--

Notes:
[1] The existing number of employees was 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.

No-Action Condition

As discussed in **Chapter 1, Project Description**, the full program analyzed in the 2017 Expanded Environmental Assessment (the Approved 2017 Plan) was determined to have no significant adverse impacts. Therefore, though certain components of the Approved 2017 Plan program were never constructed on the Project Site, namely a second proposed hotel, the full program as approved in 2017 is considered the baseline No-Action future condition for the purposes of this analysis.

Police Services, Fire Protection, and Ambulance Services

The Project Site would continue to be served by the existing community services described above under the No-Action condition.

Based on the proportional increase in the No-Action condition development program compared with existing conditions, the estimated No-Action demand for emergency services would include:

- 911 Medical Calls: 235
- 911 Crime Calls: 165
- FDNY Response Calls: 26[4]

Solid Waste

It is anticipated that the Approved 2017 Plan would result in approximately 32.29 tons of solid waste generated per week (see **Table 4-4**). All waste would continue to be handled by a private carter. Therefore, there would be no change in waste generation or handling under the Approved 2017 Plan conditions. Additionally, the CWZ program is expected to be in effect by the 2030 build year.

[4] This estimate is conservative in that it does not account for fire alarm activations that do not result in a FDNY response.

Table 4-4 Approved 2017 Plan (No-Action Condition) Solid Waste Generation on the Project Site

Use	Approximate Area (gsf)	Employees[1]	Solid Waste Generation Rate (lbs/wk)[2]		Solid Waste Generation lbs/wk	Solid Waste Generation tons/wk
RWNYC Facility	473,731	939	13	Per employee	12,202	6.10
Event Space	193,719					
Lobby and Circulation	35,526					
Retail and Dining	134,253	135	251		33,917	16.96
Hotel	504,180	246	75		18,465	9.23
				Total Solid Waste Generation	**64,584**	**32.29**
				Solid Waste Handled by Private Carters	**64,584**	**32.29**
				Solid Waste Handled by DSNY	--	--

Notes:
[1] The No-Action Condition employees were calculated based on the proportional breakdown of the existing number of employees by use.
[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.

With-Action Condition

As detailed in **Chapter 1, Project Description**, the Proposed Actions would facilitate the construction of an approximately 3.4-million-sf addition to the existing facilities on a 62-acre portion of the Project Site. The Expansion Project would include up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space; approximately 725,900 gsf of casino/gaming facility space accommodating up to 11,000 gaming positions; approximately 213,900 gsf of retail and dining space; an approximately 187,900-gsf arena with a total of approximately 7,000 seats; approximately 73,900 gsf of event center and meeting room space; approximately 232,900 gsf of lobby or public circulation space; approximately 145,800 gsf of mechanical/electrical space; an approximately 97,500-gsf central utility plant; an approximately 79,700-gsf conservatory; and approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

Police Services, Fire Protection, and Ambulance Services

According to the guidelines of the *CEQR Technical Manual*, a detailed police and emergency services analysis is warranted if a proposed project would introduce a sizeable new population to the neighborhood or if a proposed project would displace or alter a police station or emergency service.

The Expansion Project would not introduce a sizeable new population, nor would it displace or alter the police or emergency service facilities described above. Therefore, the Expansion Project does not meet either of the conditions to warrant a detailed assessment of emergency services.

The Expansion Project would incorporate an expansion of the existing safety and emergency services and infrastructure currently provided on the Project Site. All new proposed buildings would be fully sprinklered and would be integrated into the existing RWNYC fire control system, which includes a 24-hour/7-day-per-week manned fire command center; automatic and manual fire alarm systems throughout the facility; and an emergency voice communication system connecting all entrance lobbies, exit stairwells, elevators, and the fire pump room to the fire command center.

A hydrant flow test would be coordinated with NYCDEP to inform the design of the Project Site's fire service. The results of the flow test would inform the need for additional on-site infrastructure, including booster pumps or a new domestic or firewater service and connection to the NYCDEP main from either Rockaway Boulevard or Centreville Street.

In addition to the comprehensive fire control system, the Expansion Project would involve the expansion of RWNYC's state-of-the-art video surveillance system with a continually manned surveillance room. All entrances to the RWNYC facility would be fully monitored with manned security stations.

The new guest and worker population expected to be introduced to RWCNYC as a result of the Expansion Project would increase the demand for fire and police services. Based on the proportional increase in proposed development program (measured in gsf), the Expansion Project is estimated to increase the demand for emergency services over the future No-Action condition as follows (annually):

- An increase of approximately 578 911 medical calls
- An increase of approximately 406 911 crime calls
- An increase of approximately 39 FDNY response calls[5]

It is noted in the *CEQR Technical Manual* that the emergency service providers do not allocate resources based on proposed or projected developments, but continually evaluates the need for changes in personnel, equipment, or facilities and makes any adjustments necessary. The FDNY and NYPD would continue to evaluate the need for personnel and equipment and make necessary adjustments to adequately serve the area according to demand-based needs. The Applicant is also in ongoing discussions with the local fire and police service providers, who have indicated that the Expansion Project can be accommodated.[6] In addition, the Expansion Project would continue to rely on internal surveillance and security services to reduce the need for emergency services from local providers. Overall, it is expected that additional public safety, fire, and EMS units would be allocated as needed as the development occurs. Therefore, the Expansion Project would not result in any significant adverse impacts. The Applicant is committed to continued coordination with the local fire and police services as development occurs to address any concerns raised and avoid impacts to the local community.

Solid Waste

The Expansion Project would result in an overall increase in solid waste generation. Based on the citywide average rates for solid waste generation, the total solid waste generation due to the Expansion Project would be approximately 78.24 tons per week (see **Table 4-5**, below), which represents a 45.95-ton increase in weekly waste generation relative to the Approved 2017 Plan (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 45.95 tons per week would represent approximately 0.01 percent of the city's current solid waste generation. It would represent 0.02 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.

[5] This estimate is conservative in that it does not account for fire alarm activations that do not result in a FDNY response.

[6] The Applicant has engaged in discussions with NYPD 106th Precinct (Capt. Berkley Vantull, December 3, 2024), Queens District Attorney Melinda Katz (January 23, 2025), FDNY Ladder Co. 142 (Capt. Raymond McCarthy, February 3, 2025), and FDNY Engine Co. 285 (Capt. Chris Polin, February 3, 2025).

Because the Expansion Project would not introduce residential uses, solid waste from residents would not be generated and DSNY would not need to collect waste.

Table 4-5 With-Action Condition Solid Waste Generation on the Project Site

Use	Approximate Area (gsf)	Employees[1]	Solid Waste Generation Rate (lbs/wk)[3]		Solid Waste Generation	
					lbs/wk	tons/wk
RWNYC Facility	725,900	1,630	13	Per employee	21,186	10.59
Event Space	73,900					
Lobby and Circulation	232,900					
Arena	187,900					
Retail and Dining[2]	213,900	330	251		82,914	41.46
Hotel	1,376,900	698	75		52,381	26.19
				Total Solid Waste Generation	156,481	78.24
				Solid Waste Handled by Private Carters	156,481	78.24
				Solid Waste Handled by DSNY	--	--

Notes:
[1] The With-Action Condition employees were calculated based on the proportional breakdown of the existing number of employees by use.
[2] The retail and dining use includes a bar/stage and club, for which the number of employees were calculated based on an estimated 1 employee per 333.3 gsf of space.
[3] 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 also shown in **Table 4-6**, compared to the Approved 2017 Plan, the Proposed Actions would result in an approximately 45.95-ton increase in weekly solid waste handled by private carters. This would represent 0.06 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 approximately four additional collection trucks per week compared to what would be required by the Approved 2017 Plan (assuming a 12-ton truck).

Table 4-6 Comparison of Weekly Solid-Waste Generation on the Project Area (Existing, No-Action, and With-Action Conditions)

	Existing Condition	Approved 2017 Plan (No-Action Condition)	With-Action Condition	Increment (No-Action to With-Action)
Total Solid Waste Generation (tons/wk)	29.30	32.29	78.24	+ 45.95
Solid Waste Handled by Private Carters (tons/wk)	29.30	32.29	78.24	+ 45.95

Under the CWZ Program, by 2026 there will be up to three private carters authorized to serve each designated zone and up to five carters authorized for citywide containerized collection. It is expected

that their collection fleets of private carting trucks would be sufficiently flexible to accommodate this increased demand for solid waste collection.[7]

The Proposed Project is a private (non-residential or institutional) commercial project and would not be serviced by DSNY trucks, transfer stations, or processing facilities to handle waste. It would comply with all relevant laws and would choose a private carter from the Commercial Waste Zone when the program is in effect, which is expected to occur before the 2030 build year.

Overall, the uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately four commercial carter truck loads per week. This increase would represent less than one percent of the private carting fleet and would therefore not overburden existing commercial solid waste handling services. Furthermore, the Proposed Actions would not conflict with the SWMP or have a direct effect on a solid waste management facility. In addition, the Applicant would implement an organics recycling program in the future With-Action condition to divert organics from the waste stream. As a result, no significant adverse impact on the City's solid waste and sanitation services would occur.

On-Site Solid Waste Handling and Storage

Solid waste on the Project Site would be handled as follows. Forty-foot open non-recyclable material waste containers and 20-foot garbage compactors would be on the Project Site, located out of public view and away from nearby residences, and would be removed by private carters four times a week, consistent with operations under existing conditions. The Applicant also has a cardboard baler on the Project Site to recycle and compress cardboard materials. In addition, recycling receptacles would be installed throughout the Project Site that the Applicant would collect in a recycling dumpster.

[7] This number was reported in the With-Action condition of the NYC Commercial Waste Zone Program EIS (CEQR No. 19DOS003Y).

5

Open Space

This chapter assesses the potential impacts of the Proposed Actions on open space. Generally, open space is defined 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, Genting New York, LLC d/b/a Resorts World Casino New York City, is seeking approval for modification of the existing ground lease of State-owned property and issuance of a Gaming Facility license from the New York State Gaming Commission (the Gaming Commission) in conjunction with the proposed expansion of the existing approximately 1.9-million-gross-square-foot (gsf) Resorts World New York City (RWNYC) casino and installation and operation of live table games (the Proposed Actions). The Proposed Actions would facilitate the construction of an expansion to the existing facilities on a 62-acre portion of the RWNYC Lease Area, comprising Queens Block 11543, Lot 2 (the Project Site).

The Proposed Actions involve the expansion of the existing RWNYC facility by approximately 3,442,665 gsf (the Expansion Project), resulting in a total of approximately 5,331,200 gsf (existing gsf, plus the Expansion Project) comprising the following elements:

- Up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;
- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to 11,000 gaming positions;
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;

- Approximately 53,000 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and,
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

Principal Conclusions

There are three open spaces, including parks and playgrounds, located within a quarter mile of the Project Site. Any additional demand for open space resources that may be generated by the future visitors and worker population on the Project Site could be accommodated by the proposed open space facilities that would be incorporated into the Expansion Project, including a plaza and a promenade as well as private spaces such as a track side plaza and hotel amenities such as a garden. Therefore, no significant adverse impacts to open space resources are expected due to the Proposed Actions.

Project Commitments

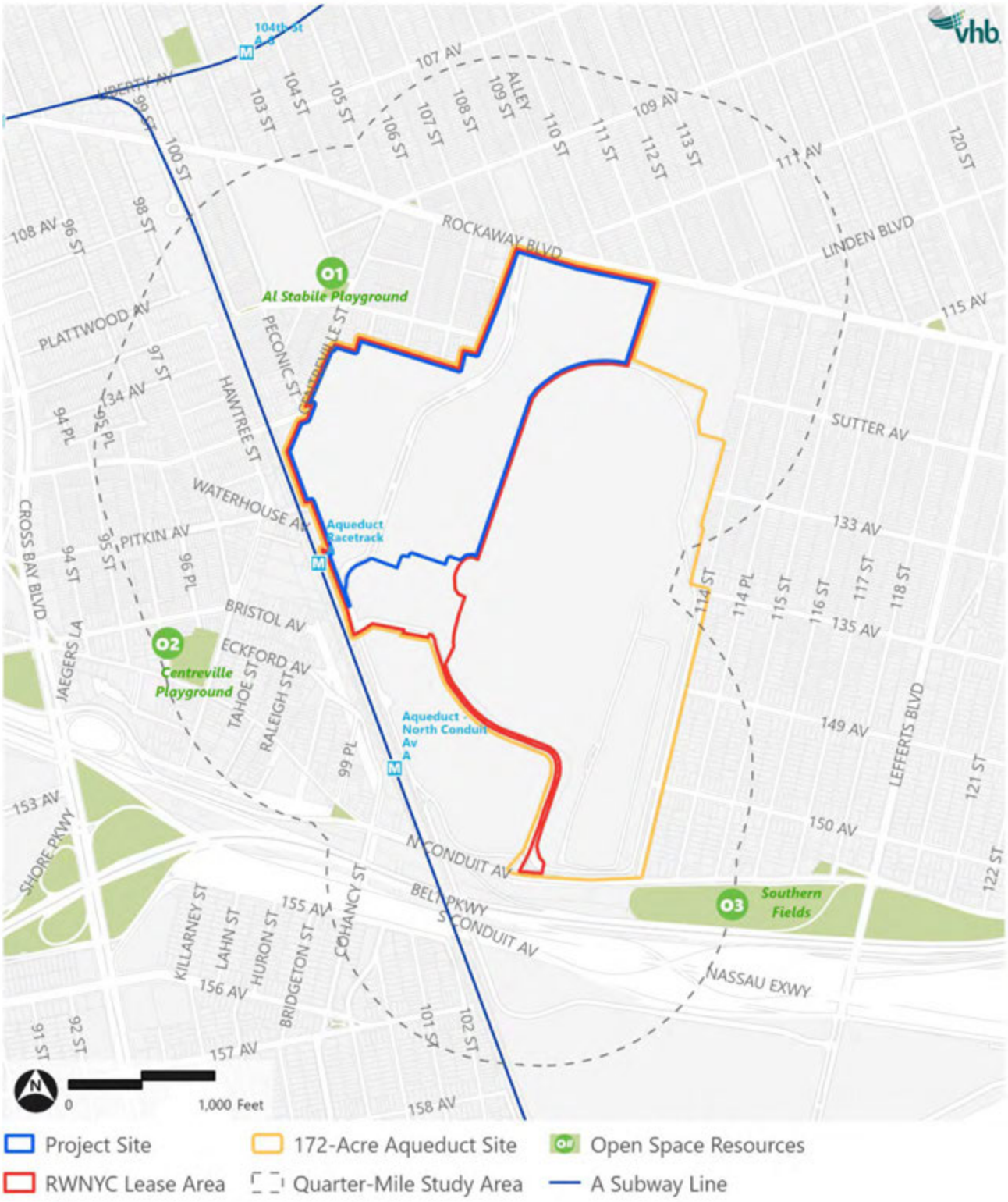
As described in further detail below, the Applicant is making several project commitments in conjunction with the Expansion Project. The project commitments discussed in this chapter include:

- The Expansion Project would include on-site public and private open space.

Methodology

The *2021 City Environmental Quality Review (CEQR) Technical Manual* methodology for an open space analysis assumes that residents and/or employees on a project site are likely to use nearby open spaces. 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 Actions would result in an expansion of existing casino, hotel, and amenity space on the Project Site, a study area of a quarter mile was used to inventory open space resources to account for the increase in non-residential population (see **Figure 5-1**). However, several factors related to the Expansion Project and Project Site make the *CEQR Technical Manual* methodology not applicable to the Proposed Actions. Those factors, discussed in more detail below, include the large size and relative isolation of the Project Site and nature of the existing and proposed uses which includes the introduction of new publicly accessible passive open space amenities – these attributes make it unlikely that project employees would travel to use nearby open spaces. This open space analysis provides details of the open space resources proposed in the Expansion Project and discusses more broadly the potential for impacts to nearby open space resources, which is more relevant methodology than what is outlined in the *CEQR Technical Manual*.

Figure 5-1 Open Space Study Area Map



Assessment

Existing Conditions

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. 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 is not publicly accessible or is available only to limited users and is not available to the public on a constant and regular basis.

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.

For this open space assessment, publicly accessible open spaces were inventoried within the study area. 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).

As shown in **Table 5-1**, there are 8.18 acres of publicly accessible open space in the study area, including 1.05 acres of passive open space. The study area contains three open spaces, consisting of a mix of small parks, playgrounds, and a field. These spaces are described below. The RWNYC Lease Area and Aqueduct Racetrack are not publicly accessible and were excluded from the inventory of open spaces.

Table 5-1 Existing Study Area Open Spaces

Map No.	Name	Owner/ Agency	Features and Amenities	Total Acres	Active (Acres)	Passive (Acres)
O1	Al Stabile Playground	NYC Parks/ Dept. of Ed.	Basketball and handball courts, playground	0.49	0.49	-
O2	Centreville Playground	NYC Parks	Baseball fields, basketball and handball courts, playground, spray showers	2.10	1.05	1.05
O3	Southern Fields	NYC Parks	Football and soccer field	5.59	5.59	-
			Study Area Total	**8.18**	**7.13**	**1.05**
			Percent of Study Area Open Space	**100%**	**87%**	**13%**

Al Stabile Playground, located at the corner of Centreville Street and 133rd Avenue, contains a field and playground, both operated jointly by NYC Parks and the NYC Department of Education. This small playground, named for local political leader Alfonzo "Big Al" Stabile, has a play area, full-court and half-court basketball, two handball courts, and a toddler-friendly swing set.

Centreville Playground is bounded by 96th Street, Albert Road, and Centreville Street. The street itself was named for the horseracing track that stood at the intersection of Woodhaven and Rockaway Boulevards between 1825 and 1899. The area was the mecca of nineteenth-century horseracing in New York City during what is known as the golden age of racing. The park has metal and timber-form play modules and handball and basketball courts.

Southern Field, located south of North Conduit Avenue, is used primarily for baseball and soccer, with chain-link fences around the perimeter of the park to protect users from surrounding automobiles.

No-Action Condition

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 in the No-Action condition is the same as under existing conditions.

With-Action Condition

Study Area Open Spaces

The Expansion Project would include the provision of publicly and privately accessible open space across the site (see **Figure 5-2**). Publicly accessible open space elements would consist of an approximately 7.7-acre linear promenade that runs the length of the property along the western property line (see **Figure 5-5**) and an approximately 3.4-acre central plaza that would serve as a pedestrian connector and publicly accessible passive open space between all of the programmed spaces on the Project Site (see **Figure 5-6**). The promenade would be a landscaped open space feature that would include walking paths and seating areas (see **Figure 5-5**). Additionally, the Expansion Project would include the expansion and enhancement of the existing berm, which would increase the density of vegetation along the northern and western perimeter of the Project Site. The promenade would run along the perimeter roadway, meandering over and around the berms over the new topography that would be created across the length of the linear open space. The promenade would be open and publicly accessible 24 hours a day, 7 days a week, with appropriate lighting and clear sight lines along the pathway. Paired with the standard security patrols of the property, this would create a safe, welcoming environment for the community. No new access points to the community are contemplated at this time (see **Figure 5-3** and **Figure 5-4**).

The central plaza would include pedestrian pathways, seating, and landscaped areas (see **Figure 5-6**). The plaza also would be open and publicly accessible 24 hours a day, 7 days a week.

Figure 5-2 Proposed Open Space Plan

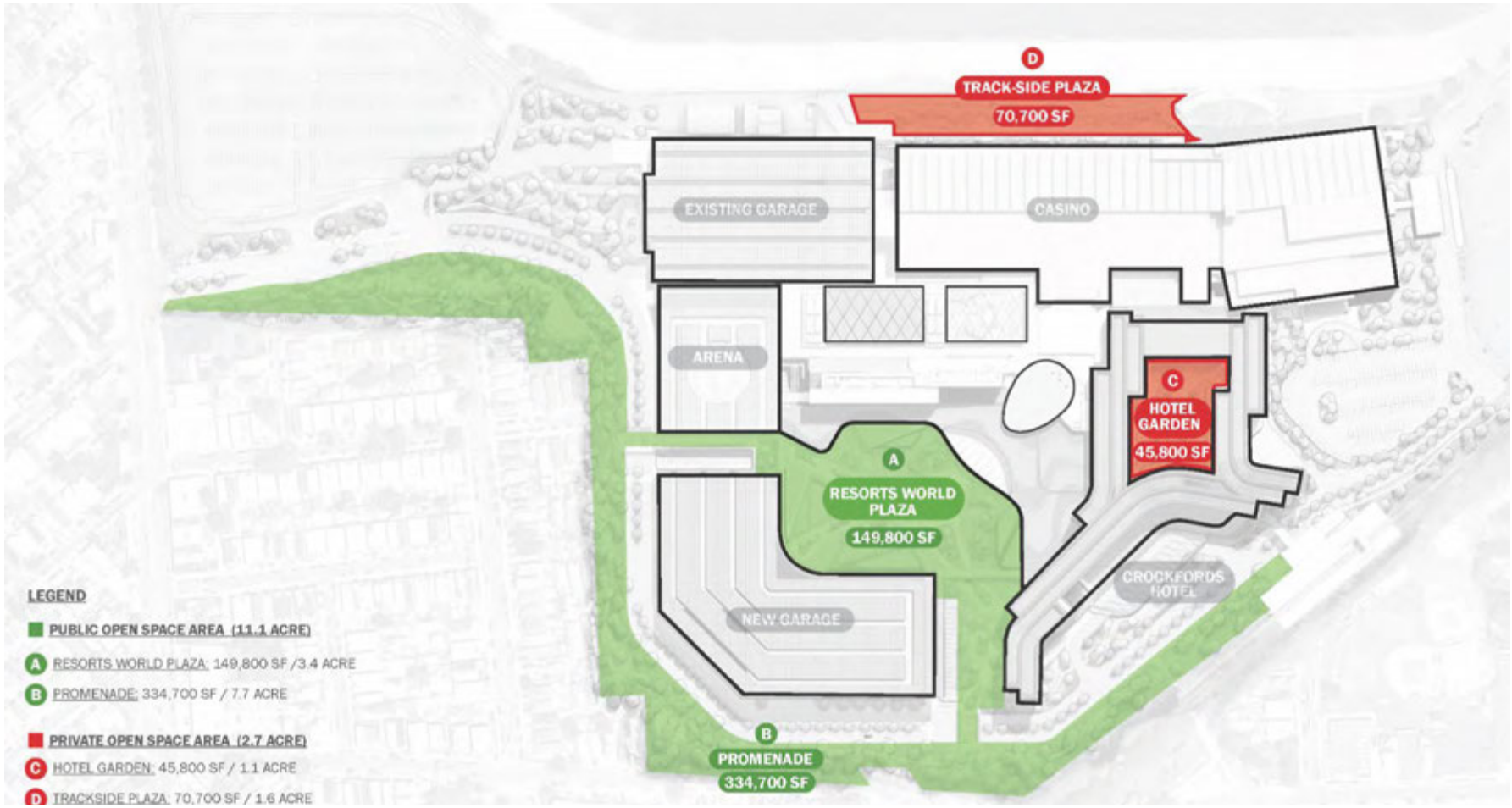


Image shown for illustrative purposes only.
Source: Perkins Eastman

Figure 5-3 Conceptual Drawing of Existing and Proposed Berm

Image shown for illustrative purposes only.

Figure 5-4 Conceptual Drawing of Existing and Proposed Trees

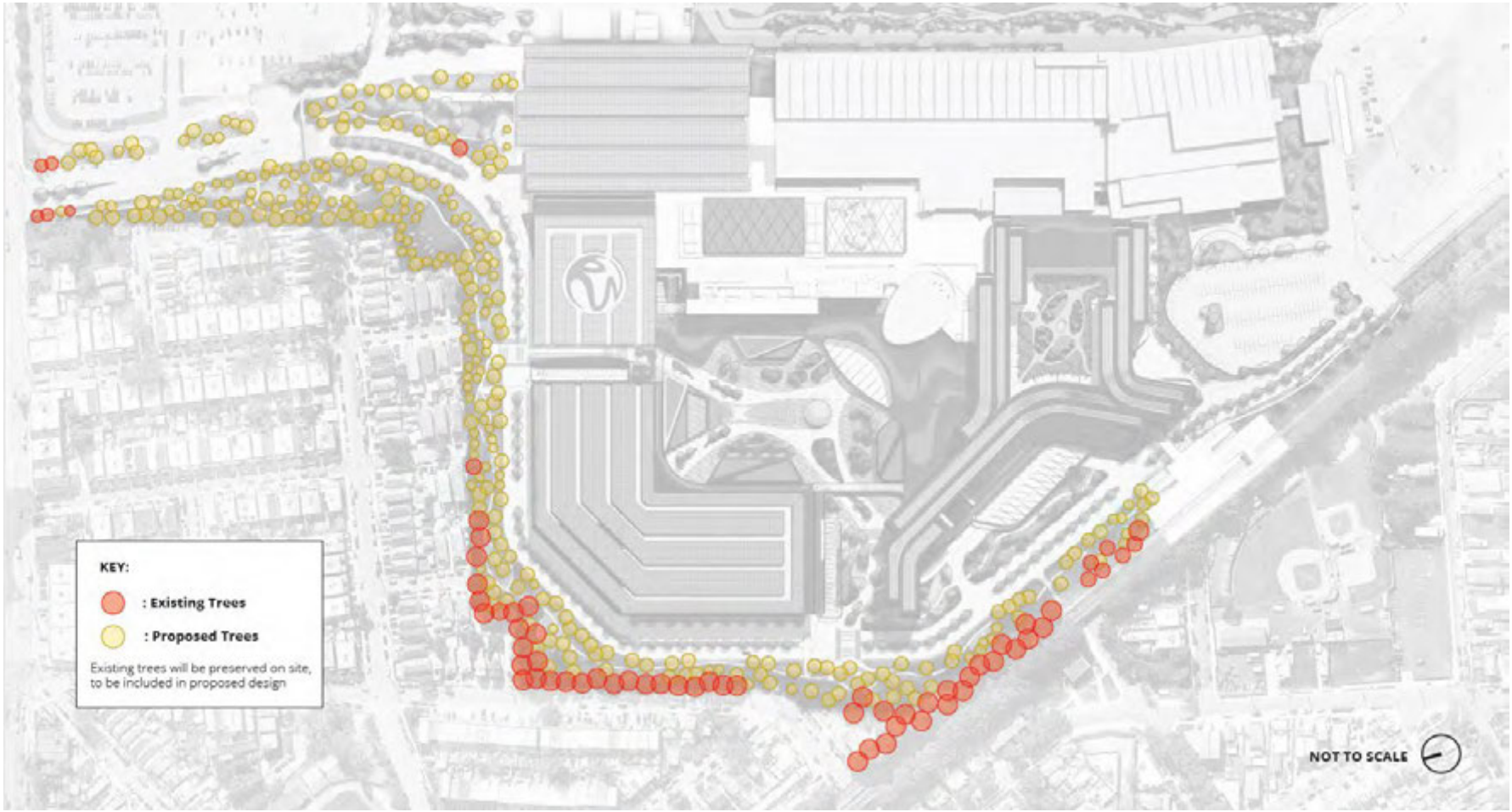


Image shown for illustrative purposes only.

Figure 5-5 Illustrative View of the Proposed Concept Plan for the Promenade

Figure 5-6 Illustrative View of the Proposed Concept Plan for the Central Plaza

Image shown for illustrative purposes only.
Source: Perkins Eastman

On the western side of Aqueduct Road, near the intersection of 108th Street and Sutter Avenue, the area around the linear pathway would become wide enough out to create a "pocket park." This area would incorporate a variety of landscaping features, including plants (e.g., grasses, shrubs, and trees), hardscaping, lighting, and seating (see **Figure 5-7**). This open space would be connected to the pedestrian paths that would extend through the site.

Figure 5-7 Illustrative View of the Proposed Concept Plan for the Pocket Park

Image shown for illustrative purposes only.
Source: Perkins Eastman

In addition to the public open space amenities detailed above, the Expansion Project would incorporate private open space. New landscaping and a plaza are proposed trackside, along the eastern side of the Project Site. The proposed landscaping would be publicly accessible and would consist of approximately 1.6 acres (see **Figure 5-8**). Moreover, an indoor conservatory would be provided adjacent to the trackside plaza (see **Figure 5-9**). The conservatory would feature a variety of plants and would feature a floor-to-ceiling glass wall that would provide views of the trackside open space, the racetrack, and the track's infield.

Figure 5-8 Illustrative View of the Proposed Trackside Landscaping and Plaza

Image shown for illustrative purposes only.
Source: Perkins Eastman

Figure 5-9 Illustrative View of the Proposed Concept Plan for the Conservatory

Image shown for illustrative purposes only.
Source: Perkins Eastman

Finally, a 1.1-acre garden would be available for use by hotel guests, casino patrons, and attendees at the proposed hotel.

It is anticipated that the proposed on-site open space amenities would meet the demands of the on-site population and that the publicly accessible open spaces would be a well-utilized community

amenity. The private amenities are also expected to be well-utilized by hotel and casino guests and other visitors to the resort.

Adequacy of Open Spaces

As mentioned above, the Aqueduct Racetrack is adjacent to the RWNYC Lease Area and is not a publicly accessible open space. The Aqueduct Racetrack contains three horse racetracks (main, inner, and turf courses), an expansive infield, 14 barns, and grandstands. The racetrack area is not accounted for in this preliminary assessment.

The nature of the Expansion Project as a gaming, hotel, and commercial use would not generate significant new demand on nearby open space resources. Visitors to the Project Site would be drawn by the on-site entertainment and amenities and, therefore, are not likely to make use of nearby open space resources beyond the boundaries of the site.

It is anticipated that any additional demand for open space resources generated by the future worker population before or after work hours would be accommodated by the proposed open space facilities on the Project Site, detailed above. The nearest park to the Project Site, Al Stabile Playground, is mostly geared toward children and therefore is not likely to be utilized by the future worker population. In addition, given the size of the Project Site, travel time to nearby resources is likely greater than the quarter-mile study area suggests, further deterring users of the site from visiting those resources. For these reasons, the Proposed Actions are not anticipated to increase demand for nearby open space and, therefore, would have no significant adverse impacts.

Finally, it should be noted that the proposed uses on the Project Site in the form of casino gaming and hotel amenities also provide a form of recreation and entertainment. As such, it is unlikely that the visitors to the site would also seek active or passive recreation in the surrounding areas.

6

Shadows

The *2021 CEQR Technical Manual* defines a shadow 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 open space resources, historic resources with sun-sensitive features or other resources of concern such as natural resources, and to assess the significance of their impact.

Introduction

According to the *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.

The Proposed Actions are expected to facilitate the construction of several new buildings that would be taller than 50 feet, the tallest of which would be approximately 131.5 feet in height. Therefore, further assessment is warranted and is provided below.

Principal Conclusions

A preliminary analysis was conducted for the Expansion Project, consisting of Tier 1 through Tier 3 screening analyses. The Tier 1 and 2 screening analyses identified four sunlight-sensitive resources within the area of potential shadow that would result from the Expansion Project (See **Figure 6-1**). The Tier 3 screening showed that in the absence of intervening structures, the Expansion Project could cast shadows on portions of the State-owned Ozone Howard Little League Fields (O3) and the Aqueduct Racetrack (O4). No shadows would be cast on the City-owned John Adams High School Track Field (O1)[1] or the publicly accessible Al Stabile Playground (O2).

As described below, the Expansion Project would cast shadows on Ozone Howard Little League Fields (O3) during three of the four analysis days. The fields would receive shading from the Expansion Project for approximately 17 minutes on the March 21/September 21 analysis day, 53 minutes on the May 6/August 6 analysis day, and would receive approximately 1 hour and 13 minutes of shading from the Expansion Project on the June 21 analysis day. This resource would receive uninterrupted sunlight for a minimum of approximately 8 hours. Peak usage of the Ozone Howard Little League Fields occurs in the evenings on weekdays and weekends. Because the project-generated shadows for the three analysis days occur in the early morning hours, and due to the availability of uninterrupted sunlight for the balance of the day, shadows cast by the Expansion Project would not hinder the usage, the enjoyment of this resource, or the viability of vegetation on the fields.

As detailed below, the Aqueduct Racetrack (O4) would receive shading on all of the analysis days. Shading from the Expansion Project would occur for a period of 22 minutes on the December 21 analysis day and would occur for a maximum of approximately 2 hours and 20 minutes on the June 21 analysis day. The racetrack would receive uninterrupted sunlight for a minimum of approximately 5 hours. It should be noted that the racetrack is not publicly accessible. Project-generated shadows would not hinder the usage, the enjoyment of this resource, or the viability of vegetation. Further, it is anticipated that the activities on the racetrack will be transferred to Belmont Park by 2029 when the Expansion Project is fully operational. Future use of the site is not known at this time.

For the reasons described above, significant adverse shadows impacts are not anticipated for either of the resources that would experience incremental shading as a result of the Expansion Project.

Project Commitments

There are no project commitments specific to this chapter.

Methodology

According to the *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

[1] Although the John Adams High School Track Field is owned by the New York City Department of Education, it is only open to students at the adjacent John Adams High School and is not publicly accessible to the surrounding community.

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:[2]

- 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.

Assessment

The preliminary screening assessment consists of three tiers of analysis:

- **Tier 1 Screening**: The first tier determines a simple radius around the proposed building representing the longest shadow that could be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier;

[2] According to the *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. However, for the purposes of a conservative assessment, several private open space resources were considered.

- **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 (3D) modeling software with the capacity to model shadows is used, and the maximum building envelope that could be achieved as a result of the Expansion 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 Expansion Project. As described above, 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 Expansion Project could enter and exit a 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 Rhino, a 3D modeling software, as well as GIS data provided publicly.

Determination of Significance

As described in the *CEQR Technical Manual*, a project-generated shadow is generally not considered significant when its duration is no longer than 10 minutes at any time of year and the shaded 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

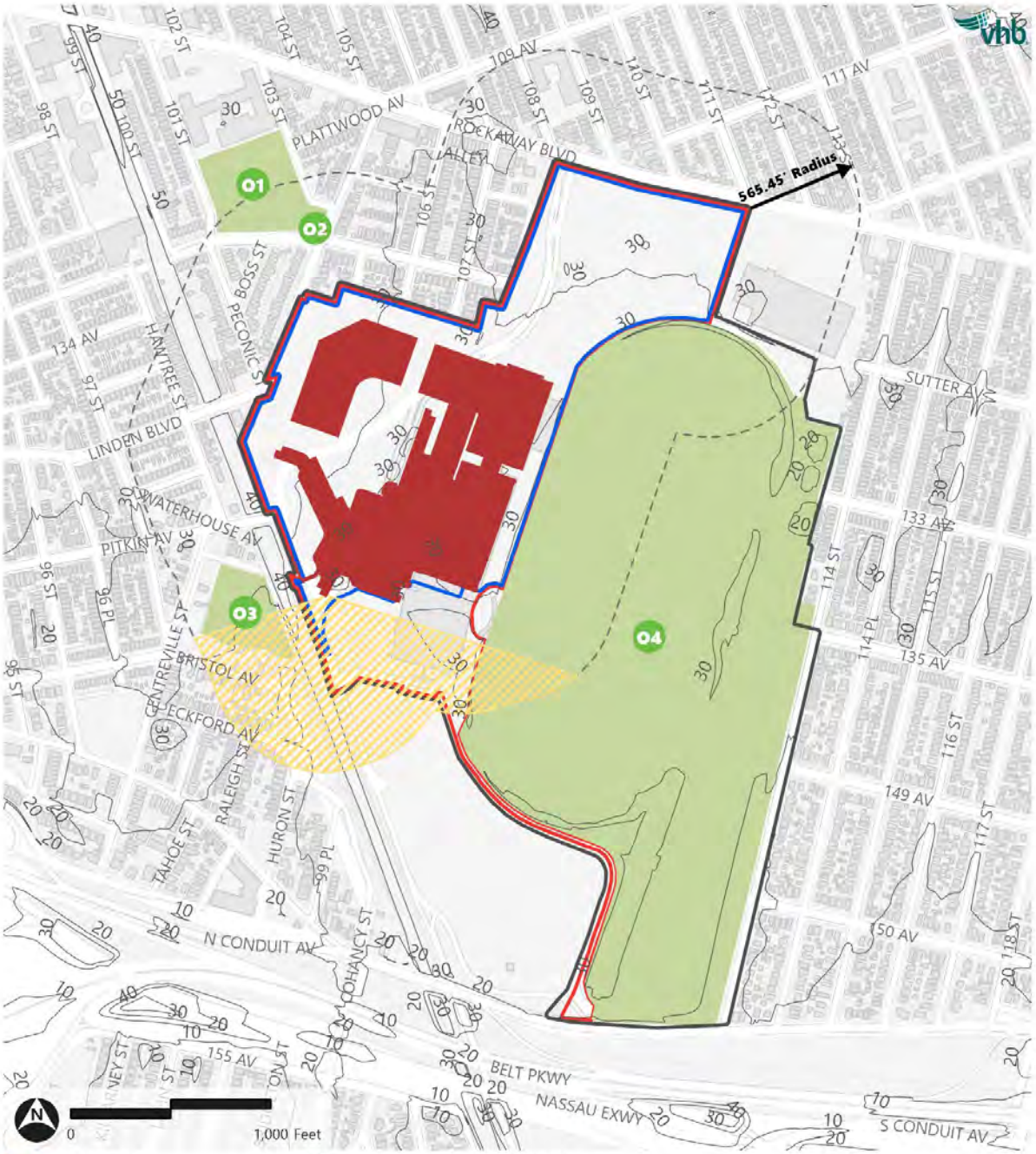
Tier 1 and 2 Screening

As described above, several buildings would be constructed as a result of the Expansion Project. The tallest building planned in the Expansion Project would have a maximum height of approximately 131.5 feet tall. The site is oriented roughly northeast to southwest between Rockaway Boulevard to the north and the A subway line to the west. The proposed new construction would consist of the following elements: the proposed garage and central utility plant would be constructed on the surface parking lot located to the northwest of the existing Hyatt Regency JFK Airport hotel and casino; a new hotel and casino would be constructed to the south of the existing casino building and central lobby; a conservatory space would be integrated on the east side of the existing casino; the arena would be constructed to the north of the existing Hyatt Regency; and photovoltaic arrays would be added to the roof of the existing parking garage. For a conservative analysis and simplicity purposes, the area of potential shadow was drawn assuming the maximum building height of 131.5 feet across the entire Project Site. This results in a shadow screening study radius of 565.45 feet from the perimeter of the Project Site. For conservative analysis purposes, the area that cannot be shaded by the Expansion Project was drawn from the southernmost point of the proposed buildings rather than from each individual building. **Table 6-1** lists the sunlight-sensitive resources identified in the Tier 1 and Tier 2 screening assessment. **Figure 6-1** shows these resources in relation to the Project Site and the area of potential shadow. The figure also shows the current topographic elevations across the Project Site and surrounding area. The elevations in the area range from approximately 30 feet to 40 feet.

Four sunlight-sensitive open space resources are located wholly or partially within the area of potential shadow, including: John Adams High School Track Field (O1), Al Stabile Playground (O2), Ozone Howard Little League Fields (O3), and the Aqueduct Racetrack (O4).

There is one State-eligible historic resource approximately 291 feet north of the Project Site known as P.S. 108 located at 108-10 109th Avenue. According to the New York State Office of Parks, Recreation, and Historic Preservation, the five-story, U-plan brick building with a stone base was built in 1925 to the design of architect William H. Gompert. Because there are no sunlight-sensitive features on the school, this resource was excluded from the analysis.

Figure 6-1 Tier 1 and Tier 2 Screening



[1] Due to the angle of the sun in New York City, the area between +108° and -108° from true north cannot receive shadows from a project

Table 6-1 Sunlight-Sensitive Resources in the Study Area

Map ID	Resource Name	Potential Resource Summary	Sunlight-Sensitive Elements
Open Space Resources			
O1	John Adams High School Track Field	Track field	Active recreation
O2	Al Stabile Playground	Trees; playground equipment	Active recreation and vegetation
O3	Ozone Howard Little League Fields	Baseball fields	Active recreation and vegetation
O4	Aqueduct Racetrack	Racetrack, landscaping	Landscaping, grassed areas

Source: NYC Department of Parks and Recreation open space database, NYC Capital Planning Platform POPS map.

Tier 3 Screening Assessment

In accordance with the *CEQR Technical Manual*, a Tier 3 screening assessment was performed because the Tier 1 and Tier 2 assessments identified sunlight-sensitive resources within ±108 degrees of true north and within the area of the longest shadow that could be cast by the Expansion 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 *CEQR Technical Manual* guidance, a model of the proposed With-Action buildings was developed in a 3D computer program (Rhino). The model was geolocated and the surrounding terrain was imported into the model to account for differences in topography. As noted above, the Tier 3 screening shows the shadows that could be cast as a result of the Expansion Project but does not account for existing buildings which may already cast shadows on the identified resources. **Figure 6-2** to **Figure 6-5** below show Tier 3 screening results.

The Tier 3 screening indicates that in the absence of intervening structures, the Expansion Project would cast shadows on portions of the State-owned Ozone Howard Little League Fields (O3) and the Aqueduct Racetrack (O4). No shadows would be cast on the City-owned John Adams High School Track Field (O1) or the publicly accessible Al Stabile Playground (O2).

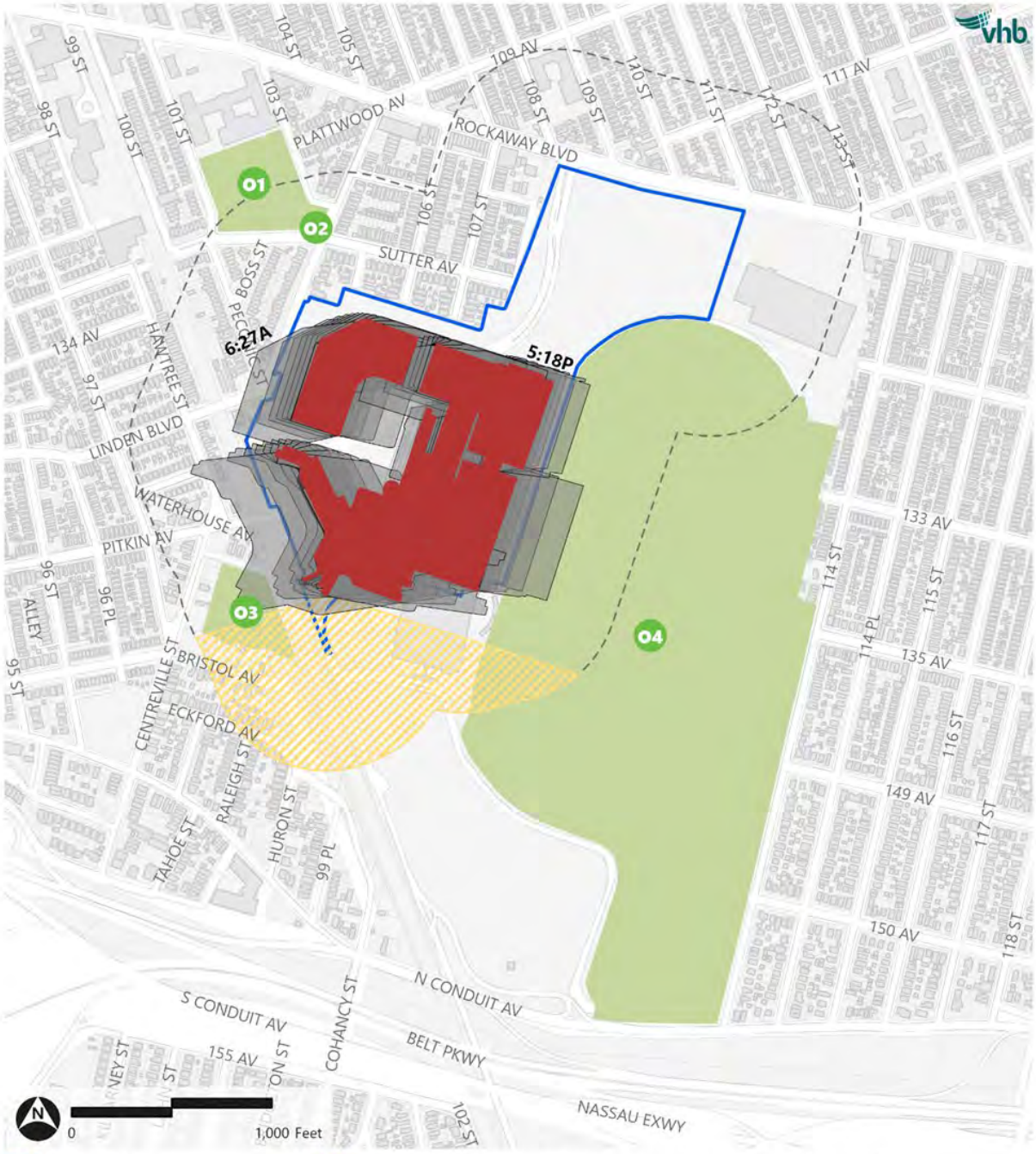
Table 6-2 Tier 1 through 3 Shadows Screening Results

Map ID	Resource Name	Tier 1-3 Screening Results
O1	John Adams High School Track Field	Screened at Tier 3
O2	Al Stabile Playground	Screened at Tier 3
O3	Ozone Howard Little League Fields	Detailed analysis warranted
O4	Aqueduct Racetrack	Detailed analysis warranted

Figure 6-2 Tier 3 Screening December 21 Analysis Day

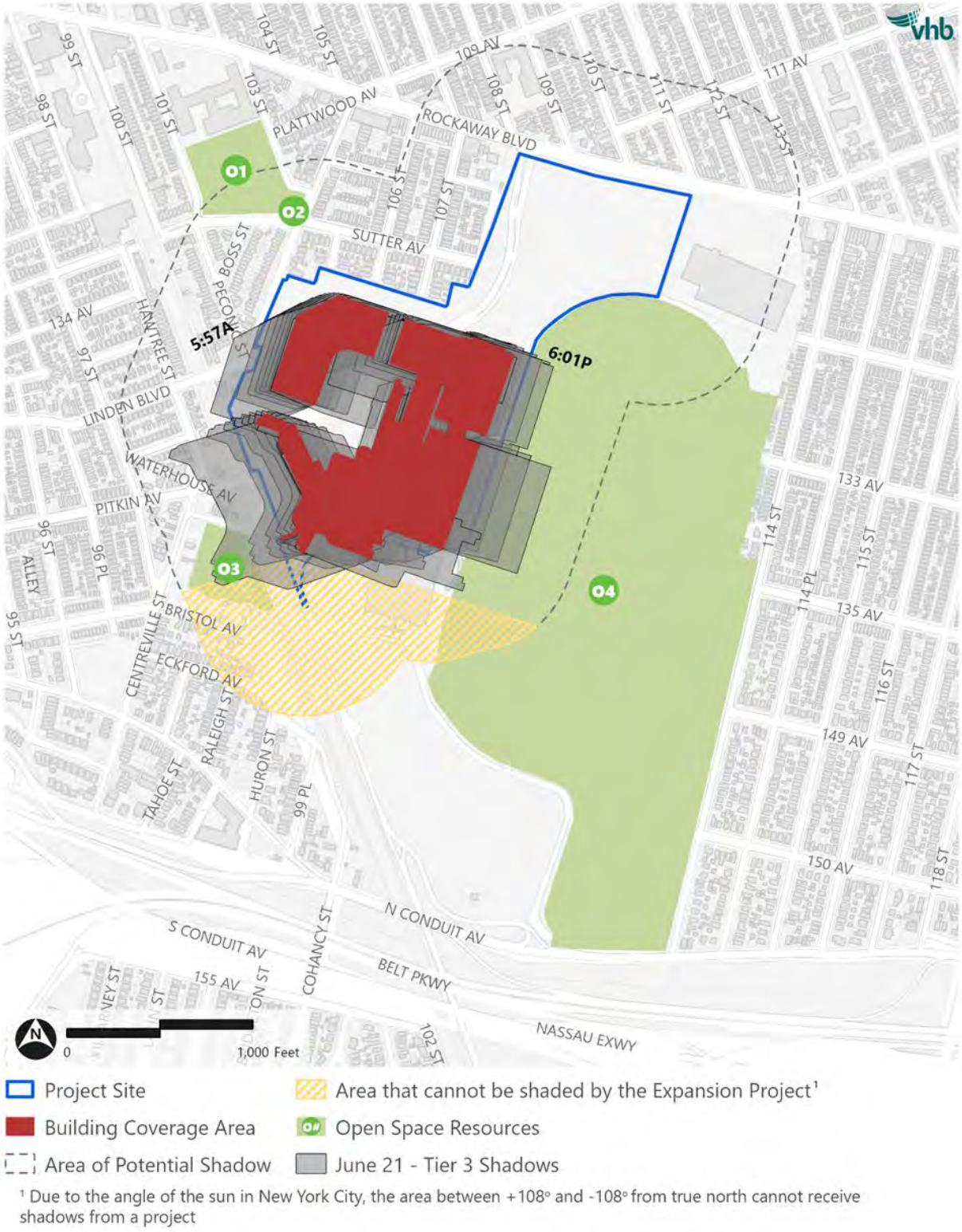
Figure 6-3 Tier 3 Screening March 21/September 21 Analysis Day

Figure 6-4 Tier 3 Screening May 6/August 6 Analysis Day



[1] Due to the angle of the sun in New York City, the area between +108° and -108° from true north cannot receive shadows from a project

Figure 6-5 Tier 3 Screening June 21 Analysis Day



[1] Due to the angle of the sun in New York City, the area between +108° and -108° from true north cannot receive shadows from a project

Detailed Assessment

No-Action Condition

As discussed in **Chapter 1, Project Description**, if a license for live gaming is not awarded, it is anticipated that the Applicant would build a second hotel and other program elements that were evaluated in the Approved 2017 Plan but were never constructed. The second hotel would be an extension of the existing structure on the Project Site.

With-Action Condition

As mentioned above, in the With-Action condition, the Proposed Actions are expected to facilitate the construction of several new buildings that would be taller than 50 feet, including a building with a maximum height of approximately 131.5 feet.

Modeling Results

The detailed shadow analysis compares the future condition resulting from the Proposed Actions (With-Action condition) to the baseline condition (No-Action condition) to illustrate the shadows cast by existing or future buildings and distinguish the increased (incremental) shadow cast by the Proposed Actions. Any new shadows projected to be cast onto the identified resources from the Proposed Actions that would not occur in the No-Action condition are considered "incremental shadows." **Table 6-3** provides the modeled incremental shadow entry/exit times for the sunlight sensitive resources. As shown in **Table 6-3**, under With-Action conditions the Ozone Howard Little League Fields (O3) would receive incremental shading on the March 21/September 21, May 6/August 6, and June 21 analysis days (see **Figure 6-6** through **Figure 6-11**), and the Aqueduct Racetrack (O4) would receive incremental shading during all four analysis days: December 21, March 21/September 21, May 6/August 6, and June 21 (see **Figure 6-12** through **Figure 6-23**).

Table 6-3 Detailed Analysis Summary of Incremental Shadow Entry/Exit Times

	Analysis Day			
	December 21	**March 21/September 21**	**May 6/August 6**	**June 21**
Resource	**8:51 AM – 02:53 PM**	**7:36 AM – 4:29 PM**	**6:27 AM – 5:18 PM**	**5:57 AM – 6:01 PM**
Open Space Resources				
O3- Ozone Howard Little League Fields	--	7:36 AM – 7:53 AM (17 minutes)	6:27 AM – 7:20 AM (53 minutes)	5:57 AM – 7:10 AM (1 hour and 13 minutes)
O4- Aqueduct Racetrack	2:31 PM – 2:53 PM (22 minutes)	3:15 PM – 4:29 PM (1 hour and 14 minutes)	3:31 PM – 5:18 PM (1 hour and 47 minutes)	3:41 PM – 6:01 PM (2 hours and 20 minutes)

Daylight Savings Time was not used.

O3 – Ozone Howard Little League Fields

The Ozone Howard Little League Fields consist of approximately 3.9-acres of baseball and softball fields located between Centreville Avenue and the A subway line. Tax records available on the New

York City Department of Finance website indicate that the fields are owned by the New York Racing Association (NYRA). This recreational facility contains four baseball/softball fields. The ballfields located along the eastern border of the park, adjacent to the Project Site, contain artificial turf. Accessory parking lots related to the fields are located along the northwestern and southwestern portion of the property.

The Expansion Project would cast incremental shadows on Ozone Howard Little League Fields during portions of three of the four analysis days. The fields would receive incremental shading from the Expansion Project for approximately 17 minutes on the March 21/September 21 analysis day from the start of the analysis period at 7:36 AM until 7:53 AM (see **Figure 6-6**). The shadows generated from the Expansion Project would primarily cover the northernmost perimeter portion of the resource, which contains paved areas. The fields would receive uninterrupted sunlight for the remainder of the analysis day, or approximately 8 hours and 36 minutes.

The fields would receive incremental shading from the Expansion Project for approximately 53 minutes on the May 6/August 6 analysis day from the start of the analysis period at 6:27 AM until 7:27 AM (see **Figure 6-7** and **Figure 6-8**). Shadows would be cast on a maximum area of approximately 15 percent of the resource (or approximately 0.58 acre) at 6:27 AM and would quickly recede by 7:20 AM. The shadows generated from the Expansion Project would primarily cover a portion of Baseball Field 1 located on the northeastern section of the property and some paved areas located at the perimeter of the property. The fields would receive uninterrupted sunlight for the remainder of the analysis day, or approximately 9 hours and 9 minutes.

On the June 21 analysis day, the fields would receive approximately 1 hour and 13 minutes of incremental shading from the Expansion Project from the start of the analysis period at 5:57 AM until 7:10 AM (see **Figure 6-9** and **Figure 6-11**). Shadows would be cast on a maximum area of approximately 28 percent of the resource (or approximately 1.11 acres) starting at 5:57 AM and would quickly recede from west to east until there would be no incremental shading from the Expansion Project by 7:10 AM. The shadows generated from the Expansion Project would primarily cover Baseball Field 1 located on the northeastern portion of the property and some paved areas located at the perimeter of the property. The fields would receive uninterrupted sunlight for approximately 10 hours and 51 minutes.

Peak usage of the Ozone Howard Little League Fields occurs on weekday evenings and on weekends. Because the project-generated shadows occur in the early morning hours and are limited in duration, shadows cast by the Expansion Project would not hinder the usage or the enjoyment of this resource. Therefore, significant adverse shadows impacts are not anticipated as a result of the Expansion Project.

O4 – Aqueduct Racetrack

The Aqueduct Racetrack comprises approximately 110 acres (this excludes the RWNYC portion of the site) and includes three horse racetracks (main, inner and turf courses), 14 barns, and grandstand areas. This property is under the jurisdiction of NYRA. Based on the 2023-24 NY State executive budget proposal, it is anticipated that the activities on the racetrack will be relocated to Belmont Park by 2026, prior to completion and occupancy of the Expansion Project.[3] However, for conservative

[3] https://www.qchron.com/editions/queenswide/hochul-budget-aims-to-close-aqueduct-race-track/article_06acdb70-a29c-11ed-b7ea-578b30657680.html

analysis purposes, this section documents the anticipated incremental shading that is anticipated on this resource, assuming that the NYRA operations are not relocated.

As described below, the Expansion Project would cast shadows on the Aqueduct Racetrack during all four analysis days. The Expansion Project would cast incremental shadows on a portion of the racetrack for approximately 22 minutes on the December 21 analysis day from 2:31 PM until 2:53 PM (the end of the analysis period) (see **Figure 6-12**). Shadows would primarily cover portions of the perimeter of the main racetrack located on the western section of the property closest to the grandstand area and portions of the turf surfaces. The racetrack would receive uninterrupted sunlight for the remainder of the analysis day, or approximately 5 hours and 40 minutes.

The racetrack would receive shading from the Expansion Project for approximately 1 hour and 14 minutes on the March 21/September 21 analysis day from 3:15 PM until 4:29 PM (the end of the analysis period) (see **Figure 6-13** through **Figure 6-14**). Shadows would cover less than 1 percent of the overall area and would primarily cover portions of the main racetrack located on the western section of the property closest to the grandstand area and portions of the turf surfaces. The racetrack would receive uninterrupted sunlight for the remainder of the analysis day, or approximately 7 hours and 53 minutes.

The racetrack would receive incremental shading from the Expansion Project for approximately 1 hour and 47 minutes on the May 6/August 6 analysis day at 3:31 PM until 5:18 PM (the end of the analysis period) (see **Figure 6-16** through **Figure 6-18**). The shadows generated from the Expansion Project would cover less than 1 percent of the overall area and would primarily cover portions of the outer racetrack located on the western section of the property closest to the grandstand area and portions of the inner track and turf surfaces. The outer racetrack would receive uninterrupted sunlight for the remainder of the analysis day, or approximately 9 hours and 14 minutes.

On the June 21 analysis day, the racetrack would receive approximately 2 hours and 20 minutes of incremental shading from the Expansion Project from 3:41 PM until 6:01 PM (the end of the analysis period) (see **Figure 6-20** through **Figure 6-23**). The shadows generated from the Expansion Project would cover less than 1 percent of the overall area and would cover portions of the outer racetrack located on the western section of the property closest to the grandstand area and portions of the inner track and turf surfaces. The racetrack would receive uninterrupted sunlight for the remainder of the analysis day, or approximately 9 hours and 44 minutes.

Although the Expansion Project would cast shading on the Aqueduct Racetrack, it would affect a small area (less than 1 percent of the overall resource). Furthermore, it is important to note that by 2030 when the Expansion Project is fully operational, it is anticipated that the activities on the racetrack will be transferred to Belmont Park. Therefore, significant adverse shadows impacts are not anticipated as a result of the Expansion Project and shadows generated by the Expansion Project would not hinder its use.

O3 – Ozone Howard Little League Fields

Figure 6-6 March 21/September 21 – 7:36 AM

Figure 6-7 May 6/August 6 – 6:27 AM

Figure 6-8 May 6/August 6 – 6:57 AM

Figure 6-9 June 21 – 5:57 AM

Figure 6-10 June 21 – 6:27 AM

Figure 6-11 June 21 – 6:57 AM

O4 – Aqueduct Racetrack

Figure 6-12 December 21 – 2:31 PM

Figure 6-13 March 21/September 21 – 3:15 PM

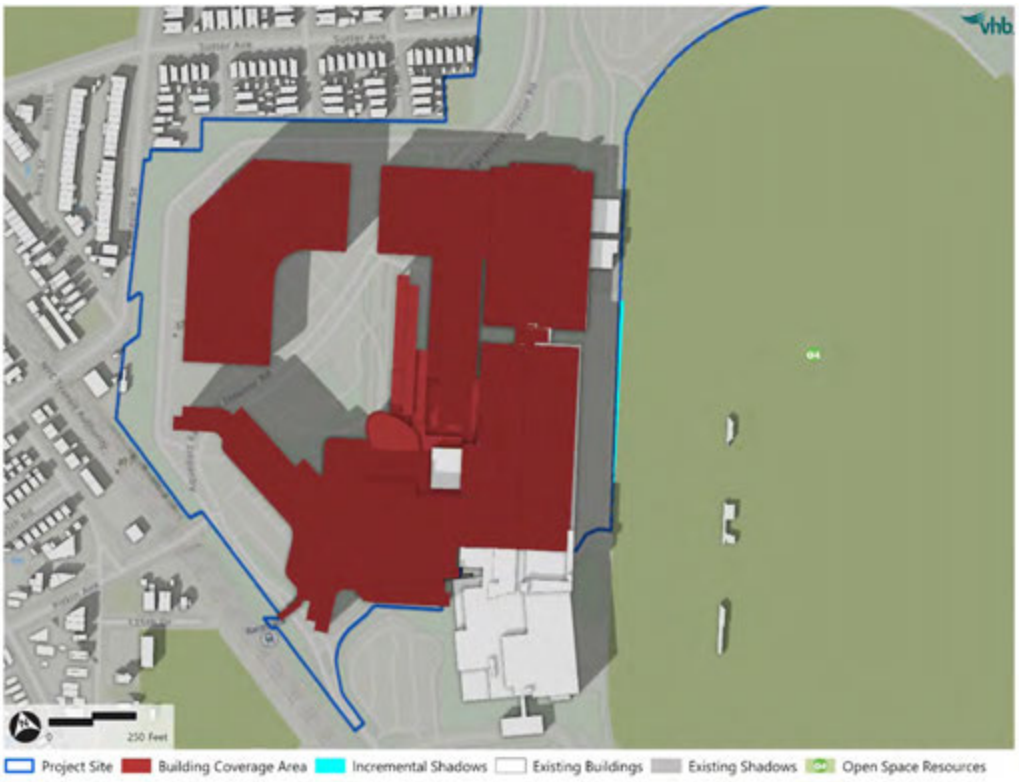


Figure 6-14 March 21/September 21 – 3:45 PM

Figure 6-15 March 21/September 21 – 4:15 PM

Figure 6-16 May 6/August 6 – 3:31 PM

Figure 6-17 May 6/August 6 – 4:01 PM

Figure 6-18 May 6/August 6 – 4:31 PM

Figure 6-19 May 6/August 6 – 5:01 PM

Figure 6-20 June 21 – 3:41 PM

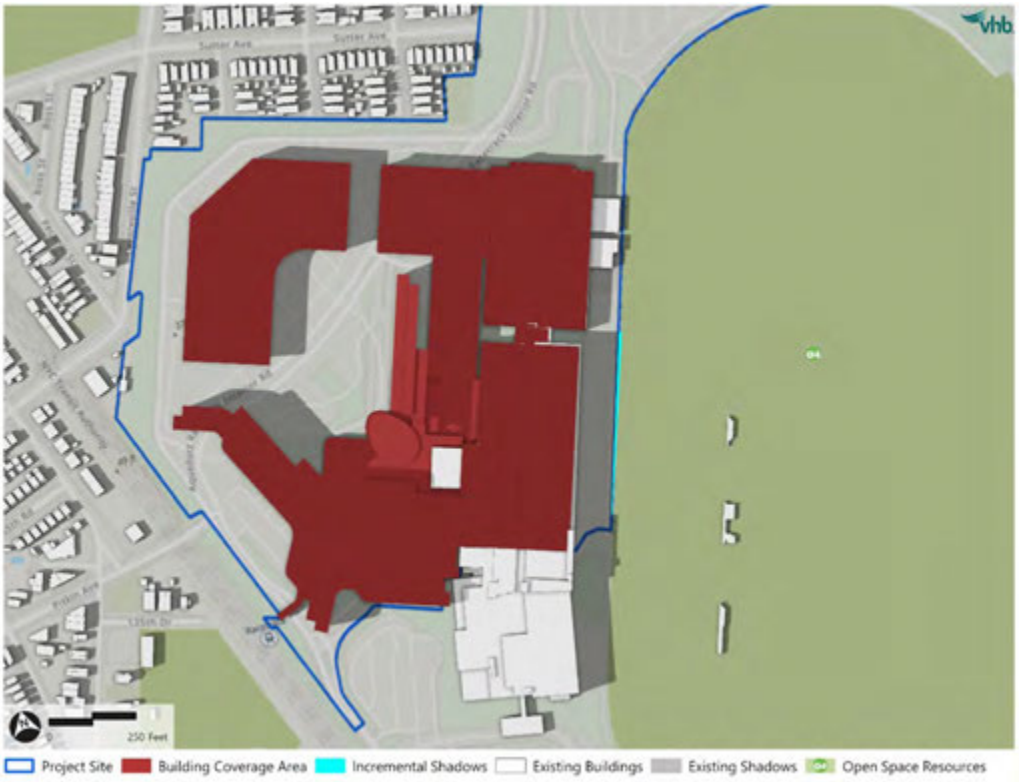


Figure 6-21 June 21 – 4:11 PM

Figure 6-22 June 21 – 4:41 PM

Figure 6-23 June 21 – 5:11 PM

Figure 6-24 June 21 – 5:41 PM

7

Urban Design and Visual Resources

An urban design assessment 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 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 for extension of their existing ground lease of State-owned property
- Issuance of a Gaming Facility license from the New York State Gaming Commission (the Gaming Commission) in conjunction with the proposed expansion of the existing Resorts World New York City (RWNYC) casino and installation and operation of live table games.

RWNYC is located at 110-00 Rockaway Boulevard (Block 11543, p/o Lot 2) in the South Ozone Park neighborhood of Queens, New York. A portion of the site is currently occupied by the existing casino and a 400-key hotel (the Hyatt Regency JFK Airport at RWNYC), along with restaurant space, meeting and

event space, and surface and structured parking, which would remain on-site as part of the Expansion Project. Together the existing development totals approximately 1,888,535 gross square feet (gsf), including the 803,900-gsf structured parking facility. RWNYC operates under a long-term ground lease, through the New York State Franchise Oversight Board (FOB), of an approximately 72.6-acre portion of the larger State-owned property on Lot 2 (RWNYC Lease Area). Lot 2 totals approximately 172 acres in land area and includes the Aqueduct Racetrack and New York State Racing Association (NYRA) building, in addition to the RWNYC casino (the Aqueduct Site). The proposed expansion would be constructed within a portion of the RWNYC ground lease area totaling approximately 62 acres (the Project Site).

The Proposed Actions involve the expansion of the existing RWNYC facility by approximately 3,442,665 gsf (the Expansion Project), resulting in a total of approximately 5,331,200 gsf (existing gsf, plus the Expansion Project) comprising the following elements:

- Up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;
- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to 11,000 gaming positions;
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

The Proposed Actions would include the approval of a gaming license from the Gaming Commission and modification of a ground lease by the FOB, which are subject to the State Environmental Quality Review Act.

Principal Conclusions

The Proposed Actions would not result in significant adverse impacts to urban design. The introduction of new amenities by the Expansion Project would further the use of the Project Site as a recreational facility. The uses are currently found in the Project Site and are only limited within the Project Site boundaries. In other words, the elements introduced by the Expansion Project other than slightly adjusted views into the Project Site are unlikely to be felt by pedestrians. As the views into the site are not to or from a visual resource, the analysis focuses on how the design of the Expansion Project would affect pedestrians in the neighborhoods immediately to the north and west of the Project Site, including from Centreville Street, 106th Street, and 107th Street. As described below, the Expansion Project includes enhancements to the planted buffer that separates the adjacent residences from the Project Site.

Infill development on the Project Site would facilitate several urban design improvements over the No-Action condition. The planning and design principles ensure a greater level of interaction between all elements of the site—from amenities and natural land features to the textures and colors of landscaping elements. The increased height and bulk of the proposed buildings overall is consistent with the higher density buildings that exist within the Project Site. The proposed buildings

would be of a similar scale to the existing buildings and structures within the complex. In addition to scale, the proposed buildings would include features to integrate with the existing environment, such as the enhanced berm along the northwest perimeter and proposed green wall that would be built into the parking garage façade. By doing so, the Expansion Project would provide a densely planted buffer between the adjoining residential neighborhood and the Project Site, minimizing the effects on pedestrian views from the residential neighborhood to the Project Site.

Although the changes introduced by the Expansion Project would be limited to the Project Site, some of the proposed open spaces would provide needed community benefits in the form of publicly accessible open space, including a 3.25-acre "plaza park" and a linear pathway with seating and landscaping for walking and passive recreation, and would allow more access into the Project Site than under Existing Conditions. Compared to the No-Action condition, the With-Action condition would improve the built environment with an expansion of existing land uses and new open spaces that would improve the urban design of the Project Site.

Project Commitments

The project commitments discussed in the chapter include:

- Enhance the urban design by adding a densely planted buffer along the property line and by providing a green wall on the parking garage façade, promoting integration with the surrounding environment and creating a visual barrier between the Project Site and the neighboring residential area.
- Maintain the facade treatments of the proposed buildings in harmony with the existing complex, including the use of materials like plaster, wood, and glass.
- Introduce a variety of public and private open spaces, including a 3.25-acre "plaza park," a linear promenade that runs the length of the property along the western property line that incorporates seating and landscaping for passive recreation, and a pocket park connected to the promenade near the intersection of 108th Street and Sutter Avenue.
- Incorporate thoughtful landscape elements, including plants (e.g., grasses and shrubs), new trees, and vegetated swales, to sequester carbon and improve ecological value, enhancing the local urban environment's comfort and appeal.
- Design roadways in accordance with Fire Department of New York (FDNY) requirements.
- Ensure sidewalks would be compliant with the Americans with Disabilities Act Standards for Accessible Design.
- Provide pedestrian ramps at corner quadrants with detectable warning surfaces. Striping and signage for crosswalks would be provided per NYS guidelines and the Manual on Uniform Traffic Control Devices.
- Include lighting features throughout the Expansion Project, including in the parking areas, along walkways, and throughout the various public and private open spaces. to prevent off-site light spill and to promote safety and support navigation throughout the Project Site. The Applicant will coordinate with the Federal Aviation Administration (FAA) and Port Authority of New York and New Jersey (PANYNJ) to provide lighting that is compliant with the relevant requirements and guidelines of these agencies.
- Adhere to industry best practices and standards of NYS and NYC regarding the preservation of tree critical root zones throughout construction.

Methodology

Per the *CEQR Technical Manual*, the urban design and visual resources assessment is conducted in three initial steps prior to an effects finding and determination, which is the fourth step. 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. Fourth, 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.

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 New York 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.

Because the Proposed Actions include changes to lot coverage through the introduction of new buildings, a detailed analysis of the potential impacts of the Proposed Actions on urban design is warranted, per *CEQR Technical Manual* guidance, and is provided below. No visual resources were identified in the quarter-mile study area. Therefore, this analysis describes existing conditions and compares the future conditions with and without the Expansion Project to determine the potential for urban design impacts.

The *CEQR Technical Manual* identifies wind as a concern when channelized wind pressure from between tall buildings and/or down-washed wind pressure from parallel tall buildings causes winds that affect pedestrian comfort and safety. The Project 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.

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 Expansion Project also rely on computer imaging and graphic renderings. Photos included in this assessment were taken on January 21, 2023, and February 19, 2023.

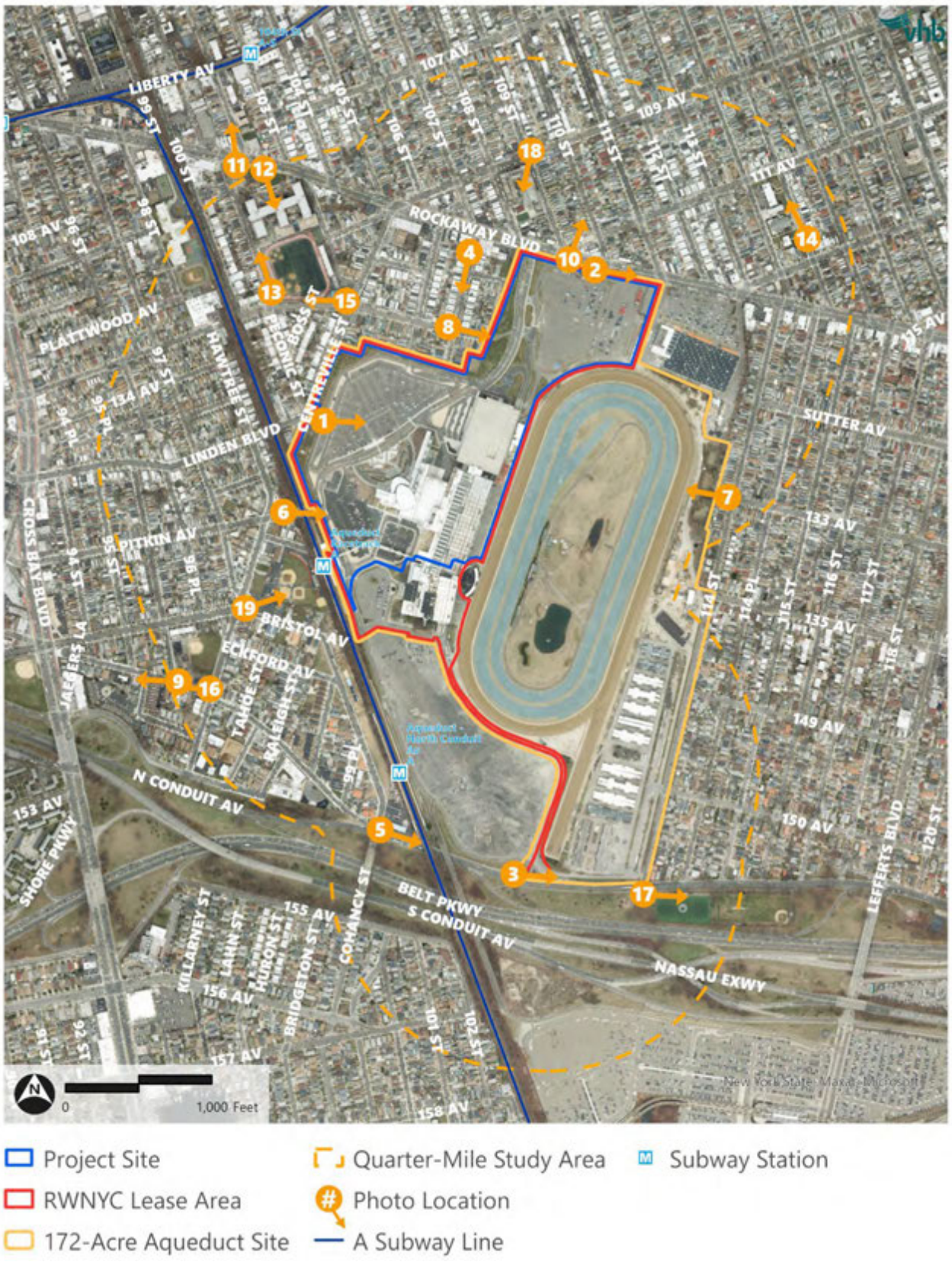
Study Area

The area within a quarter mile of the RWNYC Lease Area is defined as the study area for this analysis (see **Figure 7-1**). The study area is generally bounded by a line approximately 1,200 feet north of Rockaway Boulevard to the north, midblock between 114 Place and 115 Street to the east, a line approximately 1,300 feet west of Hawtree Street and Centreville Street to the west, and South Conduit Avenue to the south.

Existing Conditions

This section provides a summary of the existing conditions within the study area, supported by area photos. **Figure 7-1** provides an aerial image of the Project Site, RWNYC Lease Area, and quarter-mile study area, as well as a photo key for area photos. Accompanying **Photo 7-1** through **Photo 7-19** show existing conditions of the Project Site and study area.

Figure 7-1 Study Area Photo Key Map



Urban Design: Streets, Buildings, and Open Space

Project Site and RWNYC Lease Area

Buildings

The Project Site is located in the South Ozone Park neighborhood of Queens, New York, within Queens Community District 10. The Project Site is comprised of an approximately 62-acre portion of Block 11543, Lot 2, which is an area of approximately 174 acres. Located along the west side of the Aqueduct Racetrack and to the north of the NYRA grandstand is the 638,650-gsf RWNYC casino, which includes approximately 6,650 video lottery terminals (VLTs) and electronic table games; the Hyatt Regency JFK Airport at RWNYC hotel and associated parking areas in the form of a garage and parking lots; bus drop-off areas (see **Photo 7-1**); a sky bridge from the Metropolitan Transit Authority (MTA); main entry drop-off, an on-site restaurant (Sugar Factory); and a food court. RWNYC's internal drives, landscaping and surface parking occupy the western and northern portions of the Project Site. Building heights in the Project Site range from a minimum of approximately 57.5 feet with the casino entry to a maximum height of approximately 106 feet with the Hyatt Regency JFK Airport hotel.

The RWNYC lease area is located on an approximately 72.6-acre portion of Lot 2 and contains the Project Site. Outside of the Project Site, the area includes the NYRA's Aqueduct Racetrack facility, a surface parking lot, and an access road. Because no development is proposed in the area beyond the Project Site, this analysis primarily focuses on urban design impacts from the Project Site.

Streets

Rockaway Boulevard is a wide street with a width of approximately 100 feet (see **Photo 7-2**). The sidewalks located along Rockaway Boulevard in this area are approximately 15 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 Project Site contains cast-iron fencing broken by brick columns at regular intervals with trees and other decorative landscaping. Two curb cuts provide vehicular access to and from the Project Site's northern parking lots south of the intersection of Rockaway Boulevard and Aqueduct Road (see **Photo 7-3**). Additional parking lots for the Hyatt Regency hotel can be accessed traveling further south along Aqueduct Road. The Project Site can also be accessed from the south via North Conduit Avenue, which is a narrow street with a width of approximately 45 feet. The sidewalks located along North Conduit Avenue in this area are narrow with a width of approximately 7 feet. Although they are in a good state of repair, this street is more conducive to vehicles than for pedestrians because of what it connects to and the lack of walkable urban program around it. There are no street trees on the sidewalk in this area, but landscaped beds exist. A chain-link fence with overgrown vegetation separates the Project Site from the street along the North Conduit Avenue frontage.

Lighting

The Project Site currently incorporates lighting features geared toward vehicular and pedestrian navigation and safety throughout the site, including parking lot and walkway lights, as visible in **Photo 7-1** and **Photo 7-3**.

Open Space

For the purpose of urban design, the *CEQR Technical Manual* considers parking facilities to be open space, as they are accessible to pedestrians. The Project Site currently includes privately owned parking areas on-site, including a 5-story structured parking facility located just north of the casino and east of the hotel and surface parking lots located to the west and north of the parking garage, as well as immediately south of the existing casino. Views into the site are limited due to the planted berm that lines the site on the north and northwest and due to the raised MTA subway line that comprises the site's western boundary. Pedestrians can circulate within and between these parking areas within the Project Site. Because existing on-site open space is limited to parking facilities, pedestrians utilizing and circulating in these spaces are generally limited to Resorts World and hotel patrons (as compared to neighborhood use).

Study Area

Streets

The roadway network in the study area is generally a grid. Most north-south oriented streets are narrow one-way roads approximately 25 feet wide with parking on both sides. Streets along the avenues are oriented east-west and are wider at approximately 42 feet with two lanes on each side and parking. Pedestrian amenities in the South Ozone Park neighborhood include sidewalks of varying quality and width, walking signals at some intersections along the east-west roads, and crosswalks at most intersections. Sidewalk and intersection quality is good, especially within the residential neighborhoods and include street trees (see **Photo 7-4**). Pedestrians can enter at the north side of the Project Site from Rockaway Boulevard to Aqueduct Road with continuous sidewalks and crosswalks at all intersections. Safe pedestrian access is also available from the west and southwest of the Project Site at both A subway line stations, with an elevated pedestrian bridge into the Project Site from the Aqueduct Racetrack station and a sidewalk with crosswalks and a covered pedestrian path from the Aqueduct North Conduit Ave station.

Photo 7-1 View of Hyatt Regency JFK Airport at Resorts World New York Hotel on the Project Site

Photo captured on 1/21/2023

Photo 7-2 View facing East on Rockaway Boulevard and 110th Street

Photo captured on 1/21/2023

Photo 7-3 Entrance to the Project Site from Aqueduct Road

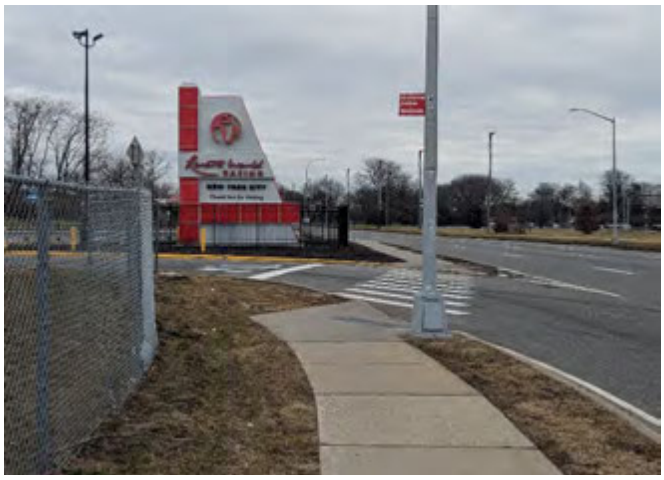


Photo captured on 1/21/2023

Photo 7-4 Sidewalk Condition and Amenities on 107th Street

Photo captured on 1/21/2023

Some of the blocks are interrupted in some locations by irregularly shaped parks such as Al Stabile Playground and Centreville Playground, and the superblock formed by the Aqueduct Racetrack. As discussed above, Rockaway Boulevard is a major roadway that traverses east-west in the study area and cuts through the grid. Other major roadways occur to the south of the study area in the form of North Conduit Avenue (see **Photo 7-5**), Belt Parkway, and Nassau Expressway. The elevated A subway line occurs to the west of the study area and has a station at Aqueduct Racetrack. Most east-west oriented streets are one-way streets, and some dead end along the western part of the subway line (see **Photo 7-6**).

Photo 7-5 View facing East on North Conduit Avenue

Photo captured on 1/21/2023

Photo 7-6 Dead-End Street Along Pitkin Street by the A Subway Line

Photo captured on 1/21/2023

Buildings

The urban design and neighborhood character of the buildings in the study area is characterized by the superblock formed by the Aqueduct Racetrack surrounded by the presence of low-density residential buildings, and a commercial corridor formed along Rockaway Boulevard.

The NYRA Aqueduct Racetrack complex is located on an irregularly shaped superblock and is located immediately to the south and east of the Project Site. It includes three horse racetracks (main, inner dirt, and turf courses), 14 barns, and grandstand areas. Most of the complex is surrounded by a chain-link fence with minimal landscaping along the edges. Views into the racetrack are obstructed with the fencing and landscaping indicating a private site (see **Photo 7-7**).

Residential uses are predominantly located in the western and southeast portions of the study area. Residential buildings are 1 to 3 stories in height and typically contain gabled roofs. Façade treatments are predominantly brick and vinyl siding. The study area contains a mix of detached and attached houses. Attached houses typically contain two conjoined buildings, separated from neighboring attached houses by narrow concrete pathways. Detached houses are similarly separated from neighboring houses by concrete pathways and driveways (see **Photo 7-8**). Streetwall conditions within the residential areas vary, though many houses contain narrow front yards improved with paved patio areas or minimal lawn and landscaped areas. Fencing, typically metal or chain-link, often line the boundaries of the front yards. Some houses are built up to the streetwall, or contain improvements (i.e., stoops). Multi-family walkup buildings are interspersed with one- and two-family residences throughout the study area. These buildings are similarly set back from the street with fencing, though these units generally have flat roofs and are primarily attached (see **Photo 7-9**).

Within the study area, commercial uses are confined to the blocks adjoining Rockaway Boulevard forming a commercial corridor. Commercial buildings along these roadways are typically 1- and 2-story mixed-use or strictly commercial brick or stucco structures. Roofs are flat, though some contain peaked parapet treatments. The ground floors contain awnings, signage, and advertisements associated with the commercial uses (see **Photo 7-10**).

Photo 7-7 View facing East toward the Aqueduct Racetrack from 133rd Avenue

Photo captured on 2/19/2023

Photo 7-8 Single-Family Detached Houses along 107th Street

Photo captured on 1/21/2023

Photo 7-9 Multi-Family Walkup Buildings on Albert Road

Photo captured on 2/19/2023

Photo 7-10 Commercial Buildings along Rockaway Boulevard

Photo captured on 1/21/2023

Ground floors also typically contain large windows and commercial displays. Some of the buildings are mixed-use with residential units in the upper floors (see **Photo 7-11**).

Some institutional uses occur in the form of public schools such as John Adams High School (see **Photo 7-12**), M.S. 137, and P.S. 108 (discussed in the **Visual Resources** section). The schools are typically 4-story brick buildings set back from the street with landscaping and metal fencing. They also have open spaces in the form of track fields and/or playgrounds that are not publicly accessible (see **Photo 7-13**). Other community facilities occur in the form of churches that contain brick or stucco façades, gabled roofs, and are set back from the street with fencing and landscaping (see **Photo 7-14**).

Photo 7-11 Mixed-Use buildings on Rockaway Boulevard

Photo captured on 2/19/2023

Photo 7-12 John Adams High School

Photo captured on 2/19/2023

Photo 7-13 John Adams High School Track Field

Photo captured on 2/19/2023

Photo 7-14 Our Lady of Perpetual Help (Church)

Photo captured on 2/19/2023

Open Space

Three public open spaces are located within the study area that are operated and maintained by the NYC Department of Parks & Recreation. These spaces are typically neighborhood parks and playgrounds open to residents and community members.

Al Stabile Playground, located at the corner of Centreville Street and 133rd Avenue, contains a field and playground, which are both operated jointly by Parks and the Board of Education. This small playground named for local political leader Alfonzo "Big Al" Stabile has a play area, full-court and half-court basketball, two handball courts, and a toddler-friendly swing set. At the time of field visit on February 19, 2023, the playground was closed due to ongoing construction to improve the space, discussed in detail in the **No-Action Condition** section (see **Photo 7-15**).

Centreville Playground is bounded by 96th Street, Albert Road and its namesake, Centreville Street. The area was the mecca of nineteenth-century horseracing in New York City, during what is known as the golden age of racing. The park has metal and timber-form play modules, and handball and basketball courts (see **Photo 7-16**).

Southern Fields, located south of North Conduit Avenue, is used primarily for baseball and soccer, with chain-link fences around the perimeter of the park to users from surrounding automobiles see **Photo 7-17**).

Photo 7-15 Al Stabile Playground (Work in Progress)

Photo captured on 2/19/2023

Photo 7-16 Centreville Playground

Photo captured on 2/19/2023

Photo 7-17 Southern Fields Entrance

Photo captured on 2/19/2023

Visual Resources

P.S. 108

There is one State-eligible historic resource approximately 291 feet north of the Project Site known as P.S. 108, located at 108-10 109th Avenue (see **Photo 7-18**). According to the New York State Office of Parks, Recreation, and Historic Preservation, the 5-story U-plan brick building with a stone base was built in 1925 according to the design of architect William H. Gompert. The school is an outstanding example of early twentieth-century Collegiate Gothic style institutional architecture.

Photo 7-18 P.S. 108 State-Eligible Resource

View facing southwest at the intersection of 109th Avenue and 109th Street.
Photo captured on 1/21/2023

P.S. 108 is separated by Rockaway Boulevard and intervening buildings. As mentioned above, Rockaway Boulevard traverses the study area such that it alters the typical north-south orientation of the street grid. For this reason, the Expansion Project would not impact views to and from the school. Furthermore, the construction of the Expansion Project would occur on the Project Site's existing parking lots, the closest of which is located 1,300 feet south of P.S. 108. Given the distance and presence of intervening buildings, the Expansion Project would not have the potential to result in indirect visual impacts on this resource and further analysis is not warranted.

Ozone Howard Little League

Ozone Howard Little League is an approximately 3.9-acre baseball and softball field located between Centreville Avenue and the A subway line (see **Photo 7-19**). It is under the jurisdiction of NYRA. It contains a total of four baseball/softball fields with artificial turf surfaces along its eastern border, adjacent to the Project Site. There are also parking lots along the northwestern and southwestern portion of the property. Ozone Howard Little League is separated from the Project Site by the A subway line and trees. For this reason, the Expansion Project would not impact views to and from the school.

Photo 7-19 Ozone Howard Little League

View facing parking lot of Ozone Howard Little League at the intersection formed by Centreville Street and Bristol Avenue with the Project Site in the background.
Photo captured on 1/21/2023

No-Action Condition

In the future without the Proposed Actions (the No-Action condition), it is anticipated that the Project Site would remain in its existing condition. However, it is possible that the Applicant could build a second hotel and other programs that were evaluated and approved in the Approved 2017 Plan but were never constructed.

Urban Design: Streets, Buildings, and Open Space

Project Site and Study Area

Streets

No new capital projects or roadway improvements are anticipated to be completed within the quarter-mile study area under the future No-Action condition by the 2030 analysis year. As such, street conditions are expected to remain unchanged as compared to existing conditions.

Buildings

As described in **Chapter 1, Project Description** if a license for live gaming is not awarded, it is anticipated that the Applicant would build a second hotel and other program elements that were evaluated and in the Approved 2017 Plan but were never constructed. The second hotel would be an extension of the existing structure on the Project Site and would therefore be of similar height and bulk to existing conditions. The second hotel would also be set back from the property line such that it would be a new wing, extending west from the existing building. The existing surface parking lot would continue to separate the buildings from the adjacent residential neighborhood.

No new developments are anticipated to be completed within the quarter-mile study area under the future No-Action condition by the 2030 analysis year. As such, building forms are expected to remain unchanged as compared to existing conditions.

However, it is anticipated that the horse racing currently held at the Aqueduct Racetrack will be moved to Belmont Park, which is undergoing renovation to make it suitable for year-round racing and training. When complete, the redevelopment will allow NYRA to consolidate all downstate racing and training activities at the new Belmont Park, unlocking the balance of the State-owned land at Aqueduct Racetrack for redevelopment opportunities, potentially including housing, additional open space and other uses that will be defined through a competitive request for proposals process.

Lighting

Existing lighting features on the Project Site would be expected to remain unchanged in the No-Action condition.

Open Space

No new publicly accessible open space is anticipated to be constructed in the study area by the analysis year. However, there is one capital improvement project for Al Stabile Playground, which would result in new spray showers, swing sets, planters, seating, permeable pavements, play equipment, and game tables.

With-Action Condition

As detailed in **Chapter 1, Project Description**, the With-Action condition consists of a two-stage conversion and expansion of the existing facilities at the Project Site to construct a world-class integrated resort and casino. Upon issuance of the Gaming Facility license, RWNYC would undertake an initial interior renovation to convert the existing event and exposition space on the third floor as well as the existing VLT areas of the casino on the ground and first floor to live gaming, accommodating a total of approximately 11,000 gaming positions. This initial conversion is expected to be completed in 2026 and would allow RWNYC to quickly deliver live gaming to the New York City market.

Following the conversion of existing space to live gaming, the Proposed Actions would facilitate the expansion of the RWNYC facility through the construction of one new hotel and an expansion of the existing Hyatt Regency hotel; expanded retail and dining offerings, including new restaurants and food court, a bar/stage area, spa and night club; expanded casino and gaming facilities as well as required support spaces (count room, surveillance room, employee lounges, etc.); build out of a full service event center to replace the existing facility that would be converted to live gaming (detailed above); and a new parking garage in the location of the existing surface parking on the Project Site.

The sections below discuss the design components of each of the Expansion Project features in detail.

Urban Design: Streets, Buildings, and Open Space

Streets

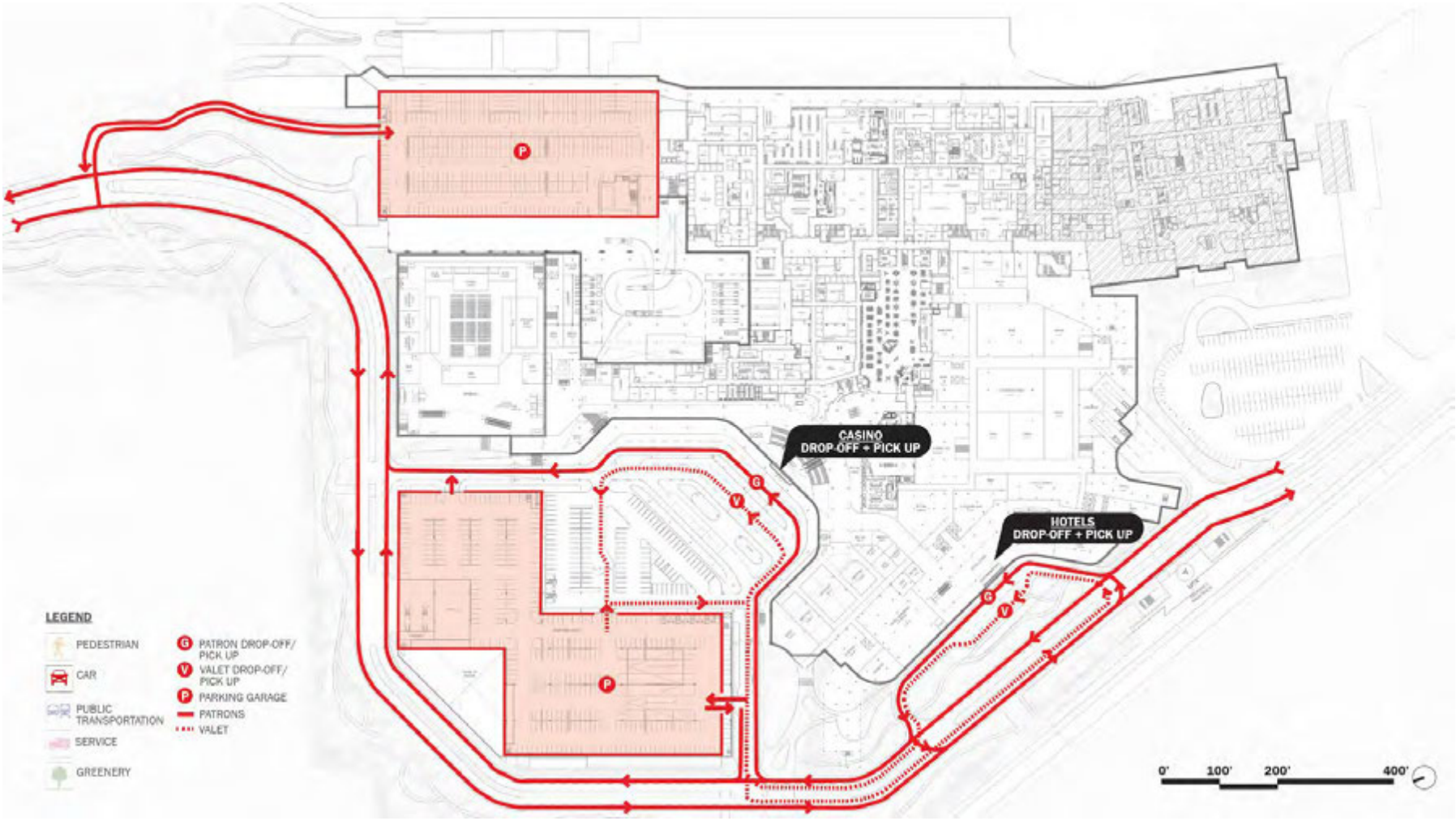
The proposed internal street network would be consistent with the existing internal circulation network with drop-off areas proposed adjacent to new hotels and the entrance to the casino (see **Figure 7-2**).

All entry and exit points from the public roadways to the site would be maintained. Only on-site roadways would be modified to accommodate the new facilities.

New entry and exit points along Aqueduct Road and the Ring Road would be required to access the proposed facilities. On-site roadways would be adjusted to accommodate new drop-off and pick-up areas, parking facilities and loading docks.

Roadways would be designed in accordance with Fire Department of New York (FDNY) requirements. FDNY requires an unobstructed width of 34 feet minimum, excluding shoulders, and an unobstructed vertical clearance of 14 feet minimum. Sidewalks would be compliant with the Americans with Disabilities Act Standards for Accessible Design. All sidewalk cross slopes would be between 1.0 percent and 1.8 percent. Pedestrian ramps would be provided at corner quadrants with detectable warning surfaces. Striping and signage for crosswalks would be provided per NYS guidelines and the Manual on Uniform Traffic Control Devices.

Figure 7-2 Proposed Internal Street Network



Source: Perkins Eastman

Buildings

As discussed in **Chapter 1, Project Description**, several new buildings are proposed to be constructed as part of the With-Action condition as discussed below and as shown in **Figure 7-3**. Because the Project Site would have privately owned businesses, all of the proposed buildings would be accessed through an internal street network via the existing Aqueduct Road on Rockaway Boulevard as shown above.

It is noted that construction of the proposed buildings (and other site improvements) would adhere to industry best practices and standards of the State and City regarding the preservation of tree critical root zones throughout construction.

Figure 7-3 Proposed Site Plan

Source: Perkins Eastman

New Garage and Central Utility Plant

The first structure would be a new garage and central utility plant located in the northeastern portion of the Project Site parallel to Centreville Avenue (see **Figure 7-4** and **Figure 7-5**). This structure would be 8 stories and would reach a total height of approximately 86 feet. It would feature a combination of plaster, wood, and glass façades. The façades closest to the Project Site boundary would also feature greenery or planted materials to help the façade to blend in with the existing tree line, which occurs along the Project Site boundary. The building would contain an approximately 1,339,600 gsf structured parking lot, approximately 3,835 parking spaces. The roof would contain photovoltaic solar arrays.

Figure 7-4 Comparative View facing South on Sutter Avenue

No-Action Condition

With-Action Condition (Illustrative Massing)

For illustrative purposes only.

Figure 7-5 Conceptual Rendering of the Proposed Development from the North

For illustrative purposes only.
Source: LIFANG

Crockfords Hotel

The second structure would be a new Crockfords 1,400-key hotel, which would contain hotel and casino space located along the southern portion of the Project Site. It would be approximately 11 stories and would reach a total height of approximately 131.5 feet (see **Figure 7-6** through **Figure 7-8**). It would feature a combination of plaster, wood, and glass façades. Hotel space would occupy all floors and would consist of approximately 872,720 gsf. The ground floor would consist of a hotel, a bar/lounge area, and retail. The building would also contain bar/lounge space, multiple restaurants, and 23,100 gsf of spa/fitness space.

Figure 7-6 Comparative View facing North from Aqueduct parking lot

No-Action Condition

With-Action Condition (Illustrative Massing)

For illustrative purposes only,

Figure 7-7 Comparative View facing Southeast from Peconic Street and Centreville Street

No-Action Condition

With-Action Condition (Illustrative Massing)

For illustrative purposes only.

Figure 7-8 Conceptual Rendering of Crockfords Hotel

For illustrative purposes only.
Source: LIFANG

Conservatory Space

The third structure would be the construction of a new conservatory space within the existing building along the southeastern portion of the Project Site (see **Figure 7-9** and **Figure 7-10**). Portions of the existing exposition space and casino, located adjacent to the racetrack to the north of the NYRA grandstand, would be partially demolished and replaced with a new wing of the facility that would provide additional interior amenity that would overlook a new open space amenity along the east side of the conservatory. These uses could contribute to the conservatory's function as a gathering and circulation space at the rear of the site, similar to the main lobby, where visitors can shop, dine, and view events at the racetrack.

Figure 7-9 Conceptual Rendering of Conservatory

For illustrative purposes only.
Source: LIFANG

Figure 7-10 Conceptual Rendering of Conservatory

For illustrative purposes only.
Source: LIFANG

Multi-Purpose Arena

The sixth structure would be a multi-purpose arena that would be located along the northern boundary of the Project Site. The new arena would have a capacity of approximately 7,000 seats and would consist of 3 stories and reach 86 feet in height. It would include food and beverage and public circulation space on the first and second floors (See **Figure 7-11** and **Figure 7-12**).

Figure 7-11 Conceptual Rendering of the Multi-Purpose Arena

For illustrative purposes only.
Source: LIFANG

Figure 7-12 Comparative View facing South from 107th Place and Sutter Avenue

No-Action Condition

With-Action Condition (Illustrative Massing)

For illustrative purposes only.

Pool Deck

The seventh structure would be a 3-story pool deck reaching 90.5 feet located adjacent to the casino and hotel entrance. It would contain 22,300 gsf of pool deck space as well as 3,500 gsf of bar/stage space and 12,800 gsf of public circulation space.

Additional Improvements

The Applicant also proposes to renovate the existing parking garage located to the northeastern portion of the Project Site (see **Figure 7-13** and **Figure 7-14**). Currently, the parking garage consists of a 6-story, approximately 57-foot-tall building with approximately 803,900 gsf of structured parking. The building features a multi-colored façade with entry points accessed from Aqueduct Road on Rockaway Boulevard. Under the Expansion Project, the parking garage would remain, but approximately 119,100 gsf of photovoltaic solar arrays would be installed on the roof to contribute to sustainability goals of the Expansion Project.

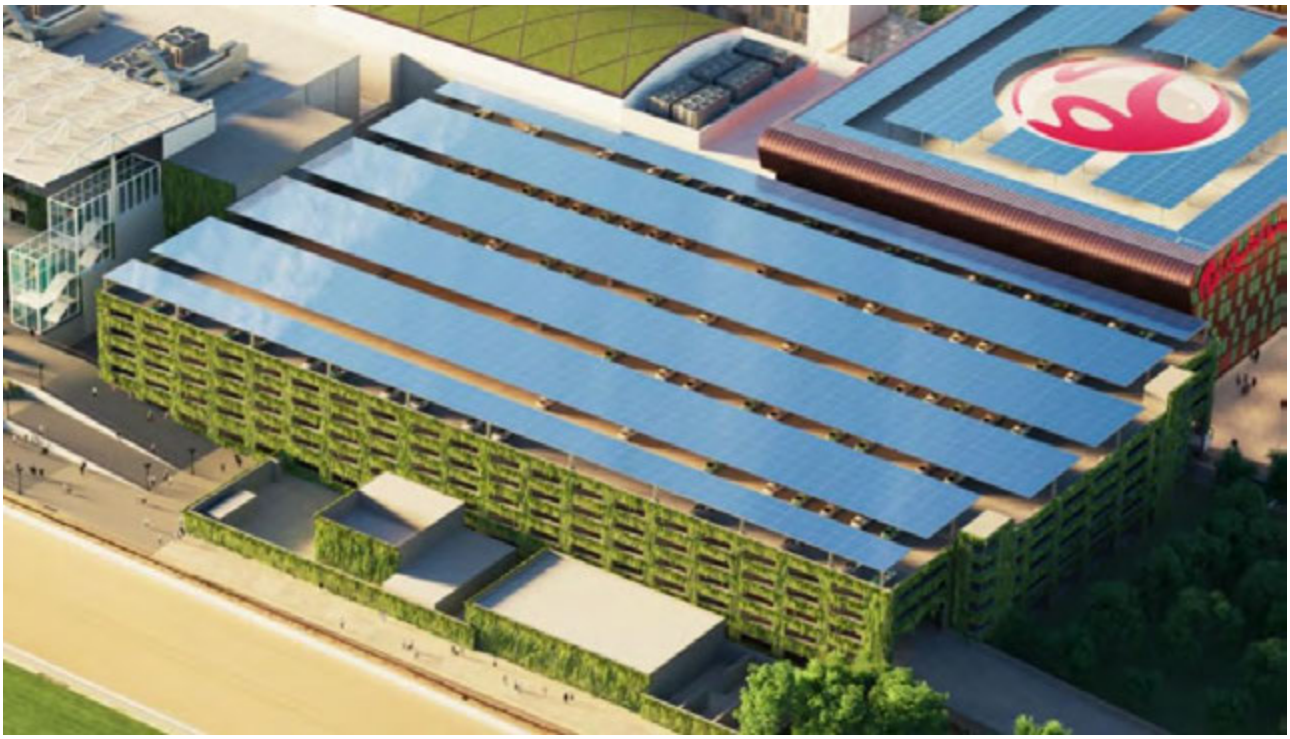
Figure 7-13 Comparative View facing Southeast on Rockaway Boulevard toward the RWNYC Entrance

No-Action Condition

With-Action Condition (Illustrative Massing)

For illustrative purposes only.

Figure 7-14 Conceptual Rendering of Improvements to the Existing Parking Garage



For illustrative purposes only.
Source: LIFANG

Lighting

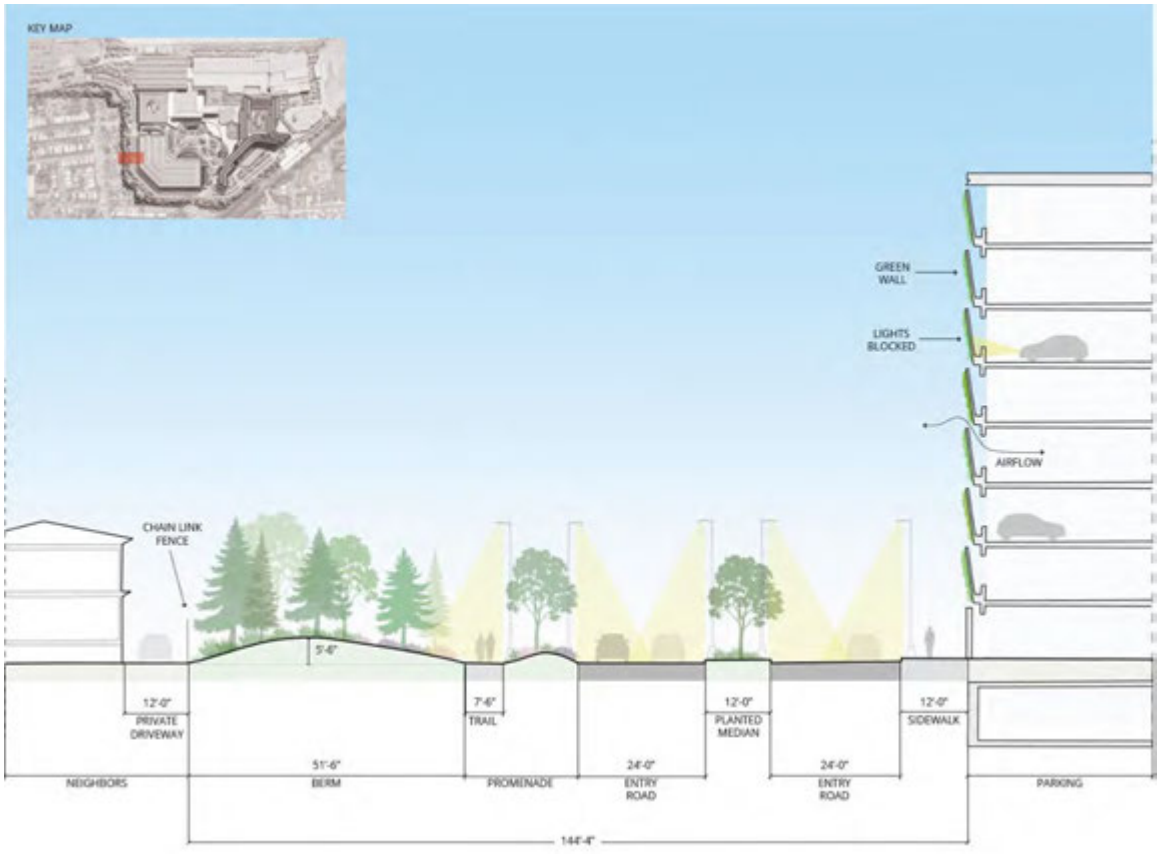
The Expansion Project would incorporate lighting features with the same goal and purpose as under existing conditions: to promote safety and support navigation throughout the Project Site. Lighting features would be included in the parking areas, along walkways, and throughout the various public and private open spaces. Decorative lighting would include static signage illumination, water feature illumination, and other localized lighting effects, and would be designed to prevent off-site light spill. To prevent off-site light spill into neighboring residential areas, light fixtures along walkways and roadways would include shields and lighting from perimeter structures such as the arena and the parking garage would incorporate elements into their façade that block light pollution from interior sources. The parking garage would incorporate a green wall and solid low wall to block utility light and car headlights, while the arena would incorporate a light filtering interlayer within its façade to minimize light impact on the adjacent residential neighborhood (see **Figure 7-15** and **Figure 7-16**). While the Proposed Actions would result in a change in lighting on the Project Site associated with the proposed buildings and site features, given that the Expansion Project would be a continuation of the existing use on-site, overall lighting conditions and character are not anticipated to change significantly.

While the detailed lighting design will be developed further along in the site design process, due to the Project Site's proximity to John F. Kennedy International Airport, the proposed lighting will be compliant with the requirements and guidelines of the Federal Aviation Administration (FAA) and Port Authority of New York and New Jersey (PANYNJ). Specifically, the site lighting would comply with the following guidelines, as outlined in *Advisory Circular 150/5190-4B - Airport Land Use Compatibility Planning*:

- Proposed LED paneling would face away from aviation pathways to avoid interference, and photovoltaic solar arrays would be designed to reduce or avoid glare being reflected back to the airport approach;
- Lighting would be designed to be downward facing to illuminate roadways, parking, sidewalks, and pathways;
- The lighting design would avoid linear patterns or neon lights that might cause confusion in proximity to airport runways;
- Proposed large format billboards associated with the arena would comply with FAA guidelines; and
- Outdoor laser light shows would not be permitted for any performances or events hosted on the Project Site.

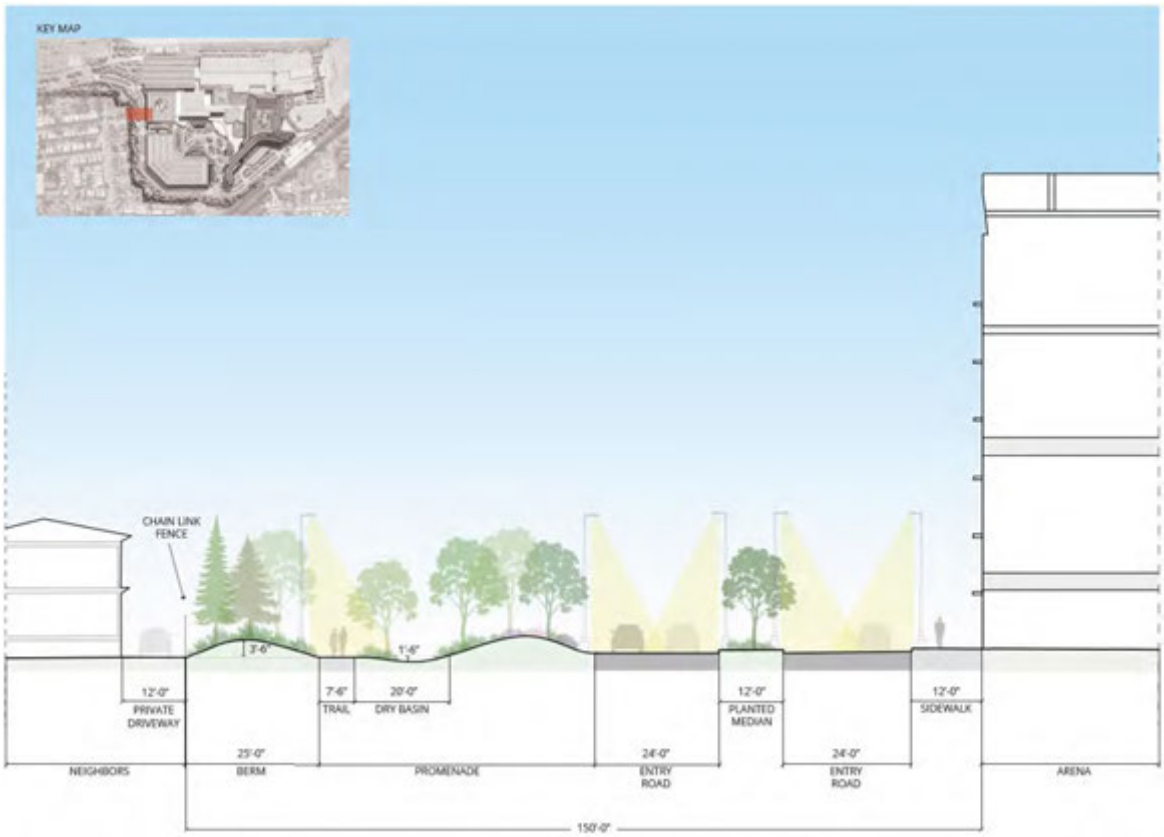
Formal review and approval from the FAA and PANYNJ would be obtained prior to project construction.

Figure 7-15 Illustrative Section of Berm and Lighting (At the Proposed Parking Garage)



For illustrative purposes only.
Source: EDSA

Figure 7-16 Illustrative Section of Berm and Lighting (at the Proposed Arena)



For illustrative purposes only.
Source: EDSA

Open Space

The Expansion Project would include the provision of publicly and privately accessible open space across the site as well as the enhancement of the existing berm along the northern and western perimeter of the Project Site (see **Figure 7-17**). The berm will provide a densely vegetated buffer between the Expansion Project and the residential neighborhood, providing a 162-foot buffer between the proposed arena and the residential neighborhood, and a 157-foot buffer between the proposed parking garage and the residential neighborhood (see **Figure 7-15** and **Figure 7-16**). Additionally, the existing fence that runs along the portion of the berm's perimeter that borders the residential neighborhood would remain (see **Figure 7-15** and **Figure 7-16**). Publicly accessible open space elements would consist of a linear pathway that runs the length of the property along the berm located at the northern and western property line and an approximately 3.25-acre plaza park, which would be located on a platform between the proposed parking garage and the casino main lobby. Public access points to the proposed open spaces would be located on Rockaway Boulevard and the MTA's A subway line station entry (see **Figure 7-18**). The linear pathway would be a landscaped open space feature that would include walking paths and seating areas. The linear pathway would be integrated within the existing berm, which would be expanded and enhanced to provide a more robust vegetative buffer between the Expansion Project and the neighboring residential area to the west of the Project Site (see **Figure 7-19**). The berm will include a mix of evergreen and deciduous trees with shrubs at its westernmost point to ensure a year-round visual buffer between the residential neighborhood and the Project Site. Additionally, the berm will contain full cutoff lighting fixtures with shields to prevent light pollution (see **Figure 7-15** and **Figure 7-16**). The plaza park would include pedestrian pathways, seating, and landscaped areas (see **Figure 7-20**).

Figure 7-17 Illustrative Site Plan

Figure 7-18 Conceptual Drawing of the Proposed Open Space Gateways

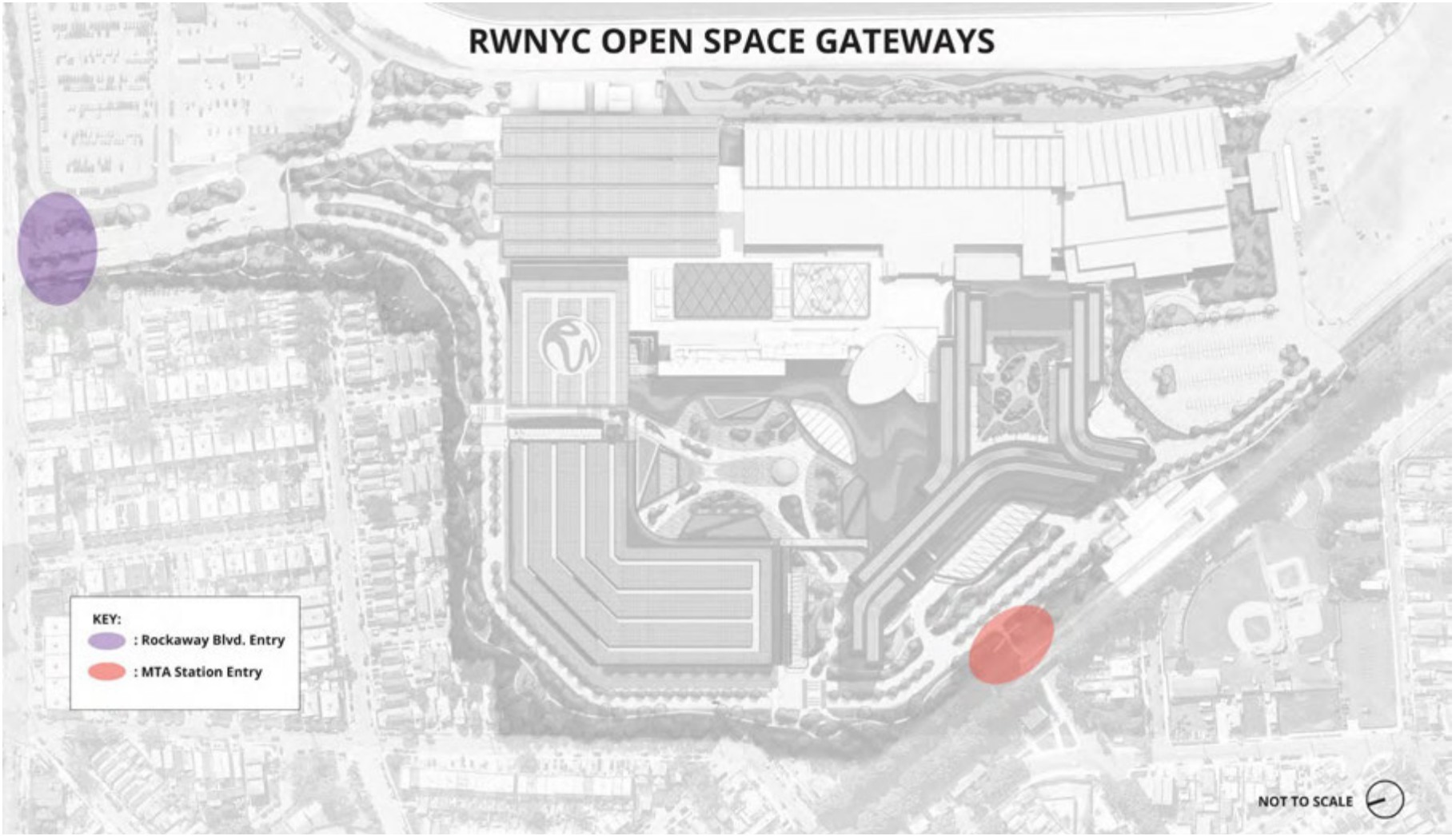


Figure 7-19 Conceptual Drawing of the Existing and Proposed Berm

Figure 7-20 Illustrative View of the Proposed Concept Plan for the Plaza Park

Image shown for illustrative purposes only.
Source: EDSA

On the western side of Aqueduct Road, near the intersection of 108th Street and Sutter Avenue, the area around the linear pathway would become wide enough to create a "pocket park." This area would incorporate a variety of landscaping features, including plants (e.g., grasses, shrubs, trees), hardscaping, lighting, and seating (see **Figure 7-21** and **Figure 7-22**). This open space would be connected to the pedestrian paths that would extend through the site.

Figure 7-21 Illustrative View of the Pocket Park

Image shown for illustrative purposes only.
Source: LIFANG

Figure 7-22 Illustrative View of the Pocket Park

Image shown for illustrative purposes only.
Source: EDSA

In addition, the Expansion Project would include a landscaped promenade on the western side of the Project Site (see **Figure 7-23**).

Figure 7-23 Illustrative View of the Promenade

Image shown for illustrative purposes only.
Source: EDSA

In addition to the public open space amenities detailed above, the Expansion Project would incorporate private open space that includes an indoor/outdoor pool and a rooftop spa, which would be available to guests of the hotel (see **Figure 7-24**).

Figure 7-24 Illustrative View of the Hotel Pool

Image shown for illustrative purposes only.
Source: EDSA

Additionally, an indoor conservatory would be provided trackside. The conservatory would feature a variety of plants and would feature a floor to ceiling glass wall that would provide views of the trackside open space, the racetrack, and the track's infield.

Finally, outdoor terraces would be available for use by hotel guests, casino patrons and attendees at the conference center.

Assessment

Under the With-Action condition, the Expansion Project would include the construction of four new buildings and would be an expansion of existing land uses on the Project Site, including live gaming, hotel, event space, and retail. The Expansion Project would also provide new publicly accessible open space elements consisting of the plaza park as well as publicly accessible pedestrian connections. These new buildings and the new open spaces would seek to activate the currently underutilized portions of the Project Site with increased foot traffic throughout the Project Site. The Expansion Project would provide infill development in areas that are currently underutilized and would remain so under the No-Action condition. The Expansion Project would facilitate new development on the entirety of the Project Site, activating the block with open space amenities for use by the general public.

As discussed in **Chapter 2, Land Use, Zoning, and Public Policy**, these uses are an expansion of uses currently found in the Project Site and are only limited within the Project Site boundaries. The elements introduced by the Expansion Project would result in different views, particularly on some residential streets immediately to the north of the site. However, pedestrian views into the Project Site from Rockaway Boulevard at the main entrance would not be very different from what is seen today and would be buffered by the enhancement of the existing berm, which would provide a more densely vegetated border at the Project Site perimeter (see **Figure 7-13**). Additionally, pedestrian views to the Project Site from the residential neighborhood located adjacent to the northern and western boundary of the Project Site would also be buffered by proposed berm's dense vegetation.

Two curb cuts provide vehicular access to and from the Project Site's northern parking lots south of the intersection of Rockaway Boulevard and Aqueduct Road and additional parking lots for the Hyatt Regency JFK Airport hotel can be accessed traveling further south along Aqueduct Road. The Project Site can also be accessed from the south via North Conduit Avenue. Although sidewalk is in a good state of repair, pedestrian activity in this area is generally moderate as visitors access the site through other modes. Based on these conditions, the Project Site is designed more for the visitors to the existing hotel and casino uses and thus, the Expansion Project is consistent with intended uses as an entertainment facility for the Project Site.

Infill development on the Project Site would facilitate several urban design improvements over the No-Action condition, and the introduction of new amenities would further the use of the Project Site as an open space amenity for the surrounding community. The Expansion Project would incorporate building forms and various design elements that would be consistent with and improve upon the character of the site by eliminating expansive surface parking lots with new entertainment and hospitality uses and structured parking. The site plan seeks to provide a greater level of interaction between all elements of the site, from amenities and natural land features to the textures and colors of landscaping elements. The design establishes a streamlined sense of arrival that welcomes visitors through a coherent whole between the arrival drive, drop-off areas, parking courts, and entry nodes.

The proposed building heights would represent an increase of at least 56 feet over the existing buildings on the Project Site, which would remain in place under the No-Action condition. The

heights of the new buildings would range from approximately 57.5 feet to approximately 131.5 feet tall and the integration of setbacks and recesses would complement the existing configuration of the Project Site. The increased height and bulk of the proposed buildings overall is consistent with the massing and overall scale of the existing buildings. Additionally, planted walls are proposed along the northern façades of the existing parking garage, arena, proposed parking garage, and central to minimize the contrast between the buildings and the existing and proposed landscaping (see **Figure 7-25** and **Figure 7-26**). The addition of this greenery would allow the structures to meld with the existing tree line along the western boundary of the Project Site and better blend in with the vegetation. Furthermore, the Expansion Project would include the expansion and enhancement of the existing berm and the landscaping located along the northern and western boundary of the Project Site, which would provide a visual buffer between the Project Site and the surrounding uses.

Figure 7-25 Comparative View facing East on Linden Boulevard and Hawtree Street

No-Action Condition

With-Action Condition (Illustrative Massing)

For illustrative purposes only.

Figure 7-26 Comparative View facing East on Pitkin Avenue and Hawtree Street

No-Action Condition

With-Action Condition (Illustrative Massing)

For illustrative purposes only.

Although the changes introduced by the Expansion Project would be limited within the Project Site's boundaries, some of the proposed open spaces would provide needed community benefits in the form of publicly accessible open space and would allow more access into the Project Site than under existing conditions. The Expansion Project's open space design features an open green pathway and park system that serves the growing number of on-site employees, guests, and the local community within the study area. This green pathway would consist of an undulating landscape berm and planted areas that would provide a visual and acoustic buffer to the neighborhood residences. Thoughtful placement of hundreds of new trees and acres of green space along the Project Site perimeter would assist in greening the facility and the community. This buffered landscape would provide new habitat and sequester thousands of pounds of carbon annually. The plaza park would serve as an experiential landscape for guests arriving and moving across the site from parking to amenity program. The park would consist of vegetated areas and gardens, and shaded zones for human and climate comfort at all times of year. The Project Site's outdoor spaces would establish connections to the local community and fill a need for green outdoor public space in the neighborhood. By creating an atmosphere that fosters work, play, and community, the gardens and indoor/outdoor connections create a parklike experience, which contributes to the Project Site's function as a recreational and entertainment facility.

Overall, the Proposed Actions would result in changes to the visual character of the Project Site through increased site coverage that would result in the new parking garage and Central Utility Plant being developed near the northwestern property line. The composition of the new buildings and their relationship to the surrounding built context, and site plan create a robust, active, and engaging urban fabric that would provide significant improvements to the overall urban design character of the study area.

8

Hazardous Materials

This section assesses whether the Expansion Project may increase the exposure of people or the environment to hazardous materials, and, if so, whether this increased exposure would result in potential significant public health or environmental impacts.

Introduction

A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic).

According to the *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 Expansion Project.

Principal Conclusions

Based on the Recognized Environmental Conditions (RECs) identified in the Phase I Environmental Site Assessment (ESA), a Remedial Investigation Work Plan (RIWP) has been submitted. The Phase II Remedial Investigation (RI) will be conducted to characterize the existing conditions of the Project

Site and investigate specific sources of suspected contamination locations. If determined to be necessary, a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) would be prepared and implemented to address contaminants of concern identified. The Phase II RI and implementation of the proposed remedial measures would need to be completed prior to the issuance of building permits by the NYS Office of General Services (OGS), acting on behalf of the New York State Gaming Commission (the Gaming Commission). Therefore, in complying with the conditions set forth by NYS OGS that testing be performed and mitigation measures be proposed (if applicable), no significant adverse impacts would occur related to hazardous materials as a result of the Proposed Actions. Further, the Proposed Actions would not affect disadvantaged communities or cause an inequitable burden within the EJ study area, and therefore, no significant adverse environmental justice impacts are anticipated.

Project Commitments

As described in further detail below, the Applicant is making several project commitments in conjunction with the Expansion Project. The project commitments discussed in the chapter include:

› The Phase II Remedial Investigation and implementation of the proposed remedial measures (if applicable) would be completed prior to the issuance of building permits by NYS OGS. In complying with the conditions set forth by NYS OGS, no significant adverse impacts would occur related to hazardous materials as a result of the Proposed Actions.

Methodology

The potential for hazardous materials was evaluated based on the following documents:

› Phase I ESA, Resorts World New York City Casino, 110-00 Rockaway Boulevard, Block 11543, Lot 2, Jamaica, Queens County, New York, dated July 20, 2023, prepared by VHB Engineering, Surveying, Landscape Architecture and Geology, P.C. (VHB).

The Phase I ESA report was prepared in accordance with ASTM Practice E1527-21, dated November 2021, and the United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries (AAI), 40 Code of Federal Regulations (CFR) Part 312. The United States Environmental Protection Agency (EPA) "All Appropriate Inquiry" requirement establishes specific regulatory requirements for conducting appropriate inquiries into the previous ownership, uses, and environmental conditions of a property for the purposes of qualifying for certain landowner liability protections under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

As indicated in **Chapter 1, Project Description**, the Proposed Actions would result in the modification of the existing ground lease of State-owned property and issuance of a Gaming Facility license from the Gaming Commission in conjunction with the proposed expansion of the existing approximately 1,888,535-gross-square-foot (gsf) Resorts World New York City (RWNYC) casino and installation and operation of live table games (the Expansion Project). The Expansion Project involves the expansion of the existing RWNYC facility by approximately 3,442,665 gsf, resulting in a total of approximately 5,331,200 gsf (existing square footage, plus the proposed expansion) comprising the following elements:

› Up to approximately 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;

- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to approximately 11,000 gaming positions, which will include a mix of live gaming and will continue to include video lottery terminals (VLTs) and electronic table games (ETGs);
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,300 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical/utility space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and,
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

Preliminary Assessment

Existing Conditions

A portion of the Project Site is currently occupied by the existing casino and a 400-key (approximately 249,500-gsf) hotel (the Hyatt Regency JFK Airport at RWNYC). The casino includes retail, restaurant/food and beverage space, and meeting and event space. Approximately 4,779 parking spaces are provided on the RWNYC property in surface and structured parking to serve the hotel and casino. Together, the existing development totals approximately 1,888,535 gsf, including the 803,900-gsf structured parking facility. Under a long-term ground lease through the New York State Franchise Oversight Board (FOB), RWNYC operates an approximately 72.6-acre portion of the larger State-owned property on Lot 2 (the RWNYC Lease Area). Lot 2 totals approximately 172 acres in land area and includes the Aqueduct Racetrack and the New York Racing Association (NYRA) building, in addition to the RWNYC casino and hotel (the 172-acre Aqueduct Site). The proposed expansion would be constructed on an approximately 62-acre portion (the Project Site) of the existing 72.6-acre RWNYC Lease Area.

Phase I Environmental Site Assessment

The Phase I ESA report dated July 20, 2023, was completed for the Project Site and included analyses as specified in the ASTM Method E1527-21 (see **Appendix B**). The goal of the Phase I ESA process is to identify 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 current ASTM Standard, the Phase I ESA reviewed 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 also included reconnaissance of the Project Site and the immediate surroundings.

Based upon the results of the Phase I ESA, the following RECs were identified for the Project Site:

› REC No. 1 – Adjoining Properties

According to the historical data review, the south adjoining property (Shore Shot Transmissions and Aqueduct Racetrack) was identified as an automotive transmission repair shop between 2005 and 2008 and in the NY UST and NY AST databases under NYSDEC PBS ID No. 2-258342 as an active facility with one in-service 4,000-gallon gasoline UST, one in-service 4,000-gallon diesel fuel UST, one in-service 240-gallon waste oil AST, and one in-service 525-gallon diesel fuel AST. Five 550-gallon diesel-fuel USTs were closed by removal on November 1, 1998, one 250-gallon waste oil UST was closed by removal on October 7, 1999, and two 20,000-gallon fuel oil USTs were closed by removal on October 1, 2008.

The west adjoining property at 98-20, 98-21 and 98-31 Linden Boulevard operated as a gasoline service station between 1969 and 1994, and a general automotive repair shop between 1994 and 2014.

The west adjoining property at 135-36 and 135-38 Centerville Street was identified as "Sonny's Auto Service" and registered as a historic generator of ignitable waste between 1986 and 2007 and identified in the NYSDEC Spill Incident database under ID No. 0513162 for an unknown amount of gasoline spilled on February 15, 2006, affecting the groundwater. NYSDEC subsequently closed the spill case on March 31, 2006.

The southwest adjoining property at 137-32 Centerville Street was identified as a gasoline service station between 1976 and 2001, and as a general automotive repair shop between 1992 and 1993. The handling, storage, and/or disposal of materials and substances used during the historic operations at the adjoining properties are unknown. Therefore, the historic operations at the adjoining properties represent a potential source of impact to the subsurface.

› REC No. 2 – North Nearby Property

According to the historical data review, the north nearby property at 106-14 Rockaway Boulevard is located 0.07 miles upgradient of the Project Site and was identified as a "Dry Cleaning Facility" between 2000 and 2009. Therefore, the historic operations at the north nearby property represent a potential source of off-site impact to the subsurface.

Additional investigation is recommended to investigate these RECs.

Future No-Action Condition

In the No-Action condition, it is assumed that certain components of the 2017 EEA program that were analyzed but never constructed would be built on the Project Site, namely a second proposed hotel. The full program as approved in 2017 is considered the baseline No-Action future condition for the purpose of this analysis. The 2017 EEA program is outlined in **Chapter 1, Project Description**. With respect to hazardous materials, the No-Action condition would result in the potential for subsurface contamination at the Project Site to go uninvestigated and therefore unmitigated.

Future With-Action Condition

In the future With-Action condition, the Proposed Actions include a two-stage conversion and expansion of the existing facilities at the Project Site to construct a world-class integrated resort and casino. Upon issuance of the Gaming Facility license, RWNYC would undertake an initial interior renovation to convert the existing event and exposition space on the third floor, as well as the

existing VLT areas of the casino on the lower floors, to live gaming accommodating a total of 6,650 gaming positions. This initial conversion is expected to be completed in 2026 and would allow RWNYC to quickly deliver live gaming to the NYC market.[1] Full buildout would result in approximately 11,000 gaming positions in the 2030 build year.

Following the conversion of existing space to live gaming, the Proposed Actions would facilitate the expansion of the RWNYC facility through the construction of a new hotel; expanded retail and dining offerings, including new restaurants and spa, a bar/stage area, and club; expanded casino and gaming facilities and required support spaces (count room, surveillance room, employee lounges, etc.); build out of a conference center to replace the existing facility that would be converted to live gaming (detailed above); a new 7,000 seat arena; a central utility plant to service the project; a new central plaza; a new conservatory; and a new parking garage in the location of the existing surface parking on the Project Site as detailed in **Chapter 1, Project Description**. This second stage of development is expected to be complete in 2030. With respect to hazardous materials, the With-Action condition would require the Applicant to conduct subsurface testing and provide mitigation, as necessary. Based on the Phase I ESA findings, there is potential for impacted groundwater, soil and soil vapor to exist at the Site.

Task 1: Sampling Protocols (Future With-Action Condition)

In order to investigate the Site prior to redevelopment, VHB prepared a Phase II Remedial Investigation Workplan (RIWP) that was submitted to the New York City Department of Environmental Protection (NYCDEP) and NYS OGS for review. On February 5, 2025, NYCDEP provided their comments to the RIWP. Based on NYCDEP's comments, the scope of the original Phase II RIWP was increased for a combined total of 99 soil samples, 28 groundwater samples, and 39 soil vapor samples.

The RIWP includes a description of the proposed subsurface investigation tasks, including sampling methods, a site map with the proposed sampling locations, and a Site-Specific Investigation Health and Safety Plan. The number and locations of proposed samples would characterize the existing conditions of the Project Site and investigate specific sources of suspected contamination locations (i.e., petroleum-based contamination and non-petroleum-based contamination). A RI would determine what remediation strategy (if any) is necessary following review of the sampling data.

Task 2: Remediation Determination and Protocol

A RI Report that summarizes the analytical and field findings of the RI would be submitted following receipt of the analytical laboratory data. Based on the analytical results, a remedial action determination would be made and provided in a RAP for submittal. The proposed remedial measures (if warranted) will be documented for review and approval by NYS OGS prior to issuance of a building permit for the new construction associated with the proposed expansion live gaming.

A CHASP would be submitted as an Appendix to the RAP for review and approval prior to Remedial Action Implementation. The CHASP would be implemented during excavation and construction

[1] The initial conversion of the existing RWNYC facility to live gaming would involve interior renovations only on the Project Site. No additional gross square footage would be constructed. It is anticipated that the existing exposition and event space on the third floor would be converted for gaming purposes as a first step, followed by renovations on the lower levels, in order to provide continuous gaming operations during the initial stage and minimize disruption as much as possible. In the initial conversion, there would be no increase in gaming positions beyond the 6,650 studied and permitted under the 2017 EEA.

activities in order to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater.

Following the remedial action implementation, the Applicant would provide documentation that the remedial action was completed in accordance with the RAP. A Remedial Closure Report (RCR) would be prepared to document the cleanup standards that were achieved and would provide documentation of the soil excavation and off-site removal activities; Community Air Monitoring Program (CAMP) results; endpoint soil sample results; and installation of a vapor barrier membrane, active sub-slab depressurization system, composite cover system, and institutional controls (if required).

In addition to the above, regulatory requirements relating to asbestos-containing materials, lead-based paint, and polychlorinated biphenyls-containing building materials would be followed as part of standard site redevelopment practices.

A Phase II Remedial Investigation and implementation of the proposed remedial measures would need to be completed prior to the issuance of building permits by NYS OGS for the new construction associated with the proposed expansion for live gaming. Therefore, no significant adverse impacts would occur related to hazardous materials as a result of the Proposed Actions.

Environmental Justice Analysis

An analysis of environmental justice (EJ) considers whether a proposed project would cause or increase an inequitable burden on disadvantaged communities. Guidance on addressing and determining potential effects on EJ communities is provided in New York State Department of Environmental Conservation (NYSDEC) Commissioner Policy 29 (CP 29), EO-22 and EO-29 section XIII. According to CP 29, a potential environmental justice area (PEJA) refers to "a minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."[2]

In furtherance of New York State environmental justice goals, the New York State Climate Leadership and Community Protection Act (CLCPA) and associated Climate Justice Working Group also identified disadvantaged communities (DACs).[3] The CLCPA defines DACs as communities burdened by negative public health effects, environmental pollution, and climate change impacts as well as communities that comprise high concentrations of low- and moderate-income households. Under the CLCPA, DACs receive priority for at least 35 percent of state spending on clean-energy and energy-efficiency programs.

This assessment of environmental justice for the Expansion Project involves three steps:

1. Identify PEJAs and DACs within the Expansion Project's area of potential effect, based on the criteria set forth by the NYSDEC and CLCPA;
2. Identify the Expansion Project's potential adverse effects on these communities; and,

[2] NYSDEC Commissioner Policy 29, Available at https://extapps.dec.ny.gov/docs/permits_ej_operations_pdf/cp29a.pdf. Acessed September 20, 2024.

[3] https://climate.ny.gov/resources/disadvantaged-communities-criteria/

3. Evaluate the Expansion Project's potential adverse effects on disadvantaged communities relative to its overall effects, in order to determine whether any potential adverse impacts on those communities would be disproportionate.

The study area for this environmental justice analysis encompasses the area most likely to be affected by the Expansion Project and considers the area where potential impacts resulting from construction and operation of the Expansion Project could occur. The study area includes both the PEJAs and the DACs intersecting the 1/4-mile radius of the Project Site, in keeping with the study areas analyzed for other technical analysis areas included in this document, such as land use and zoning. As detailed below, the study area includes 19 Census Block Groups (corresponding to the PEJAs) and six Census Tracts (corresponding to the DACs).

Existing Conditions

U.S. Census Bureau race, ethnicity and poverty status data were gathered from the 2022 American Community Survey (ACS) for the 19 block groups within the study area. As shown in **Table 8-1**, approximately 84.8 percent of the population in the study area as a whole is minority—greater than the percentage for the borough of Queens, which is approximately 76.2 percent. The percentage of the study area households that are below the poverty line is lower (approximately 10.4 percent) than in Queens as a whole (approximately 13.7 percent).

Given the existing demographic characteristics, as well as the PEJAs and DACs identified within the 1/4-mile radius of the Project Site, almost the entire study area comprises one or more communities subject to environmental justice analysis and consideration.

Table 8-1 Study Area Minority and Low Income Populations

Queens Census Tract[1]	Block Group[2]	Percentage Below the Poverty Level (%)	Percentage Minority Population (%)[3]
86	1	11.2	78.9
	2	11.7	65.5
88	1	11.0	72.5
	2	10.5	71.6
94*	1	16.0	92.3
96	1	9.0	95.8
	2	12.6	97.2
100	1	0.0	96.6
	2	20.5	78.1
102*	1	10.4	96.5
	2	20.9	99.7
104	2	7.2	91.4
838	4	9.8	67.2
840*	3	0.0	79.7
	4	4.2	87.5
846.01*	2	5.6	85.5
846.02*	1	0.0	88.6
864*	1	13.1	85.3
	2	10.3	84.5
	Total Study Area	**10.4**	**84.8**
	Queens County	**13.7**	**76.2**

SOURCE: US Census Bureau. 2018-2022 American Community Survey 5-year Estimates

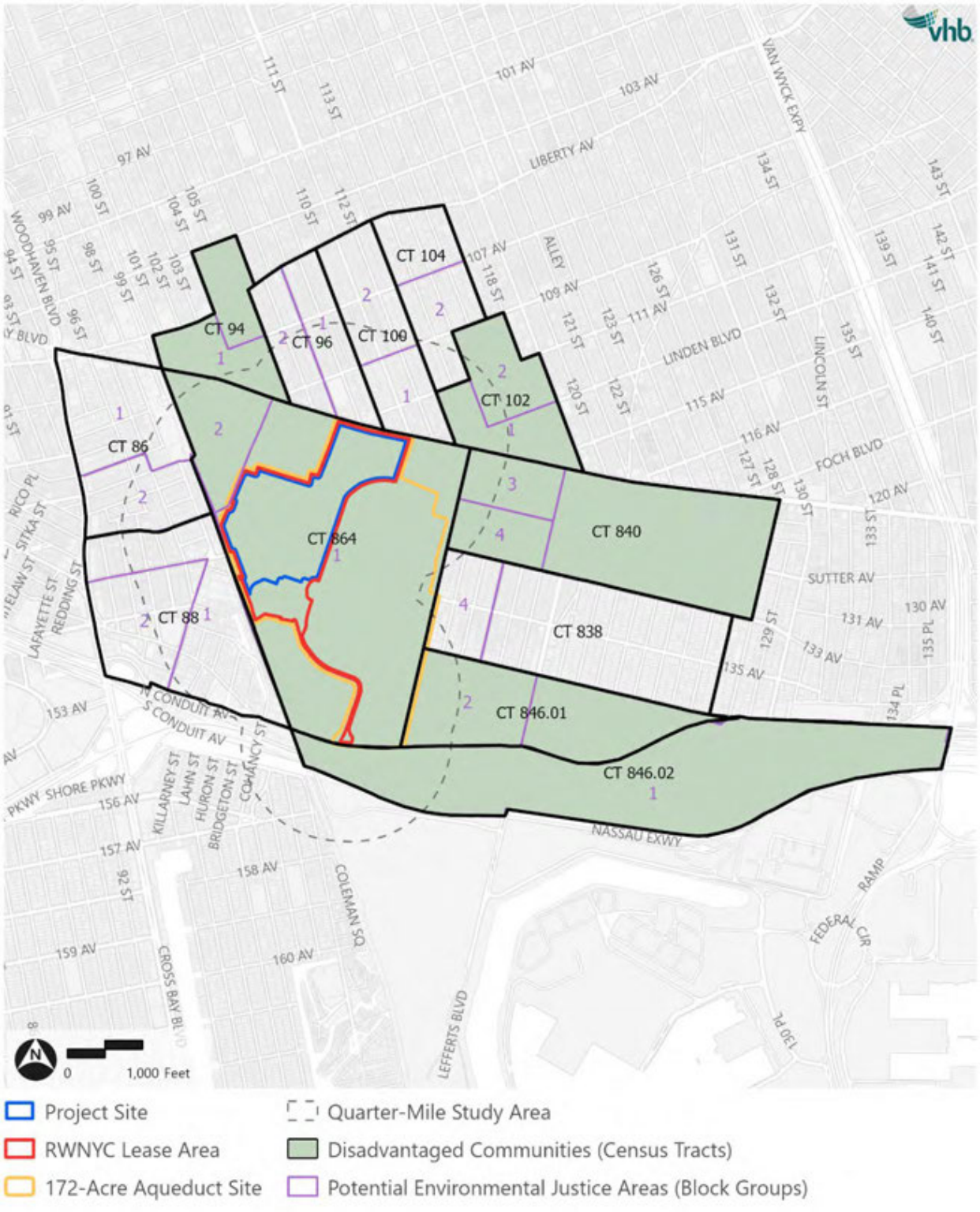
NOTE:

[1] Starred (*) Census Tracts are designated Disadvantaged Communities (DACs)

[2] All Block Groups in this table are designated Potential Environmental Justice Areas (PEJAs)

[3] Minority populations are defined as including persons that self-identified as American Indian, Asian and Pacific Islanders, African American or Black, or Hispanic. For the purposes of this environmental justice analysis, Alaskan Natives and persons of some other race or two or more races are conservatively considered to represent minority populations.

Figure 8-1 Study Area Potential Environmental Justice Areas and Disadvantaged Communities



Potential for Impacts

The EJ analysis considers whether the Proposed Actions would cause or increase a disproportionate or inequitable burden on disadvantaged communities. In other words, it considers if impacts within the study area would be appreciably more severe or greater in magnitude than those that would be experienced in non-EJ communities.

As detailed above, with the implementation of the remediation investigation and other measures to be implemented where necessary, no significant adverse impacts related to hazardous materials are anticipated. Therefore, the Proposed Actions would not affect disadvantaged communities or cause an inequitable burden within the EJ study area, and therefore, no significant adverse environmental justice impacts are anticipated.

9

Water and Sewer Infrastructure

This section evaluates the potential effects of the Proposed Actions and the resulting Expansion Project on New York City's water supply, wastewater treatment, and stormwater management infrastructure, in accordance with the *2021 CEQR Technical Manual*.

Introduction

New York City's water and sewer network is fundamental to the operation, health, safety, and quality of life of the City and its surrounding environment, and it must be sized to fit the users and surface conditions to function adequately. Ensuring these systems have adequate capacity to accommodate land use or density changes and new development is critical to avoid environmental and health problems such as sewer backups, street flooding, or pressure reductions.

As described in **Chapter 1, Project Description**, the Applicant, Genting New York, LLC d/b/a Resorts World Casino New York City, is proposing a two-stage conversion and expansion of the existing facilities at the Project Site in order to construct a world-class integrated resort and casino. The project consists of an expansion of the Resorts World New York City (RWNYC) facility through the construction of new hotels and an expansion of the existing Hyatt Regency JFK Airport hotel to include up to 1,400 new hotel keys, expanded retail and restaurant offerings (an increase of approximately 79,647 gross square feet [gsf]), new casino and gaming space (252,169 gsf), a new 7,000-seat arena, and a new parking garage in the location of the existing surface parking (an increase of approximately 2,349 spaces in approximately 1,339,600 gsf). The Proposed Actions involve the expansion of the existing RWNYC facility by approximately 3,442,665 gsf (the Expansion Project), resulting in a total of approximately 5,331,200 gsf (existing gsf, plus the Expansion Project).

According to the *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 1 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 Queens would warrant a sewer infrastructure analysis.

Principal Conclusions

As described below, a preliminary assessment was conducted and determined that the Expansion Project would not result in a significant adverse impact on the City's water and sewer infrastructure. Although the Expansion Project 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.

The site is not located within a low-pressure area, and hydrant flow tests conducted indicated adequate water pressures to service the site without negatively impacting surrounding properties. It is anticipated that booster pumps would be incorporated at the proposed garage structure to ensure fire suppression demands are provided for the Expansion Project. As the site engineering design progresses, existing water pressures and flows within the New York City Department of Environmental Protection (NYC DEP) system would be obtained, and this data would be used to model the internal water distribution systems and identify the available water pressures and flows for building plumbing/sprinkler systems. The Expansion Project would result in an incremental daily water demand of approximately 0.626 mgd in 2030. The projected increase would be approximately 0.05 percent (0.08 percent total) of New York City's average daily demand of 1.3 billion gallons per day (gpd). Therefore, no analysis of the water supply system is warranted.

The Proposed Actions would result in a net incremental increase of 3,167,534 gsf of hotel, casino, and other related new developments, as compared with the No-Action condition, in a combined sewered area. An analysis of the Expansion Project's potential impacts on the City's wastewater and stormwater conveyance and treatment system is therefore warranted and is provided below. The preliminary analysis of sewers focuses on the potential effects of increased sanitary and stormwater flows on the City's infrastructure serving the site. The sanitary sewage generation and its impact on wastewater treatment are also analyzed in this chapter.

The Expansion Project is projected to generate an incremental sanitary sewage increase of 376,000 gpd, for a total sewage usage of approximately 593,000 gpd in 2030. This projected increase in wastewater flow would not have a significant adverse impact on the ability of the sewage collection system to convey water to the Jamaica Wastewater Resource Recovery Facility (WRRF).

The Expansion Project is expected to result in an approximate 5.5 percent reduction in impervious surfaces compared to the existing condition. The proposed expansion will be designed to meet the water quality and detention requirements in accordance with the Unified Stormwater Rule (USWR) design manual. Stormwater discharges from the site are tributary to the existing 24-inch NYC DEP site connection that would be maintained as part of the project, and no new stormwater site connections

are proposed. Based on preliminary calculations, the total Water Quality Volume (WQv) and Sewer Operations Volume (Vv) that would be infiltrated/retained on-site is approximately 307,270 cubic feet and 246,020 cubic feet, respectively, which exceed the minimum storage volumes required.

The final value and treatment design would be determined during final design of the project. Treatment and detention methods are expected to include green roofs, rain gardens, detention/infiltration systems, or other green infrastructure practices. The previous phase of the project occurred prior to the implementation of the USWR, so it is expected that the Expansion Project would significantly reduce wet weather runoff volumes, thereby lessening the stormwater burden on the downstream combined sewer infrastructure.

Project Commitments

As described in further detail below, the Applicant is making project commitments in conjunction with the Expansion Project. The project commitments discussed in the chapter include:

› The Expansion Project would be designed to meet the water quality and detention requirements in accordance with the USWR design manual.

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 1 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 Expansion Project would generate an incremental water demand of 626,000 gpd. Therefore, the Expansion Project does not meet the *CEQR Technical Manual* threshold requiring a detailed analysis.

As part of the site engineering design, current water pressures and flows within the NYC DEP system will be obtained and this data will be used to model the internal water distribution systems and identify the available water pressures and flows for building plumbing/sprinkler systems. Based on the design criteria required for the 2017 proposed casino expansion, it is anticipated that the existing NYC DEP water supply system can yield the minimum design flows and water pressures at building booster pumps for the Expansion Project.

Existing and future water demand and sanitary sewage generation are calculated based on use rates set by the *CEQR Technical Manual*. The 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 expansion 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. Since the *CEQR Technical Manual* was written prior to the implementation of the USWR, there is no specific methodology within the manual that captures the new stormwater water quality and detention analysis requirements. As such, an abbreviated USWR stormwater analysis was performed based on the buildout of the Expansion Project, which is also discussed in detail below.

Existing Conditions

RWNYC is located at 110-00 Rockaway Boulevard (Block 11543, part of Lot 2) in the Jamaica neighborhood of Queens, New York. A portion of the site is currently occupied by the existing casino and a 400-key hotel (the Hyatt Regency JFK Airport at RWNYC). The casino includes retail, restaurant/food and beverage space, and meeting and event space. Together the existing development totals approximately 1,888,535 gsf, including an 803,900 gsf structured parking facility. Under a long-term ground lease through the New York State Franchise Oversight Board (FOB), RWNYC operates on an approximately 72.6-acre portion of the larger State-owned property on Lot 2. Lot 2 totals approximately 172 acres in land area and includes the Aqueduct Racetrack and New York State Racing Association (NYRA) building, in addition to the RWNYC casino. The proposed expansion would be constructed on an approximately 62-acre portion (the Project Site) of the existing 72.6-acre RWNYC ground lease area.

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 from a reservoir system with a total storage capacity of approximately 550 billion gallons.[1] 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.

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 the water reaches consumers by gravity alone, with roughly 4 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 in the vicinity of 110-00 Rockaway Boulevard, Queens on December 2, 2016, as part of a data collection effort in accordance with NYC DEP. The tests

[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/

measured static pressures of 54 pounds per square inch (psi) and residual pressures between 50 and 52 psi.

NYC DEP water networks are present in the streets surrounding the site, as follows:

- 20-inch ductile iron water main in Centreville Street, built in 1979
- 20-inch ductile iron water main in Rockaway Boulevard, built in 1982
- 8-inch ductile iron water main in Rockaway Boulevard, built in 1930

Under existing conditions, domestic water demands are served by a 12-inch water connection to the 20-inch NYC DEP water main located in Centreville Street.

Water consumption and wastewater generation rates were derived from the *CEQR Technical Manual* and are provided in **Table 9-1**.

Table 9-1 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
Commercial	0.1	gpd/sf	0.17	gpd/sf
Hotel	120	gpd/rm/person[2]	0.17	gpd/sf
Arena[3]	5 gpd/seat + 25 gpd/employee		0.17	gpd/sf

Notes:
[1] Consumption rates obtained from the *CEQR Technical Manual* Table 13-2 "Water Usage and Sewage Generation Rates for Use in Impact Assessment"
[2] 1.75 people per key assumed
[3] Consumption rates based on the Atlantic Yards Project Final Environmental Impact Statement

Existing water consumption and sewage generation for the Project Site is shown in **Table 9-2**.

Table 9-2 Existing Water Consumption and Sewage Generation

Land Use	**Area (gsf)**	**Domestic Water/Wastewater Generation (gpd)**	**Air-Conditioning (gpd)**
Hotel	270,310	84,000	45,953
Lobby/Public Circulation	42,113	4,211	7,159
Retail/Dining	149,030	21,522	25,335
Casino/Gaming Facilities	466,306	46,631	79,272
Function/Event Space	128,197	12,820	21,793
Arena	0	0	0
Water Consumption Subtotals		***169,184***	***179,513***
Sewage Generation Subtotal (gpd)		**170,000**	
Total Water Consumption (gpd)		**349,000**	
Total Wastewater Consumption (gpd)		**170,000**	

Stormwater and Sanitary Sewage Conveyance System

The Project Area is in a part of New York City that is served by combined sewer systems located in the Jamaica WRRF tributary area (see **Figure 9-1**). The Jamaica WRRF is regulated through a SPDES permit (Permit #NY0026115) issued by NYSDEC. According to the 2018 Combined Sewer Long Term Control Plan for Jamaica Bay Tributaries, the Jamaica WRRF has a design dry weather flow capacity of 100 mgd and is designed to receive a maximum flow of 200 mgd with 150 mgd receiving secondary treatment. Sewer flows over 150 mgd receive primary treatment and disinfection. Under the First Amended Nitrogen Consent Judgement, Jamaica WRRF has been upgraded for Biological Nitrogen Removal, resulting in significant decreases in nitrogen loadings into Jamaica Bay.

NYC DEP combined sewer networks are present in the streets surrounding the site, as follows:

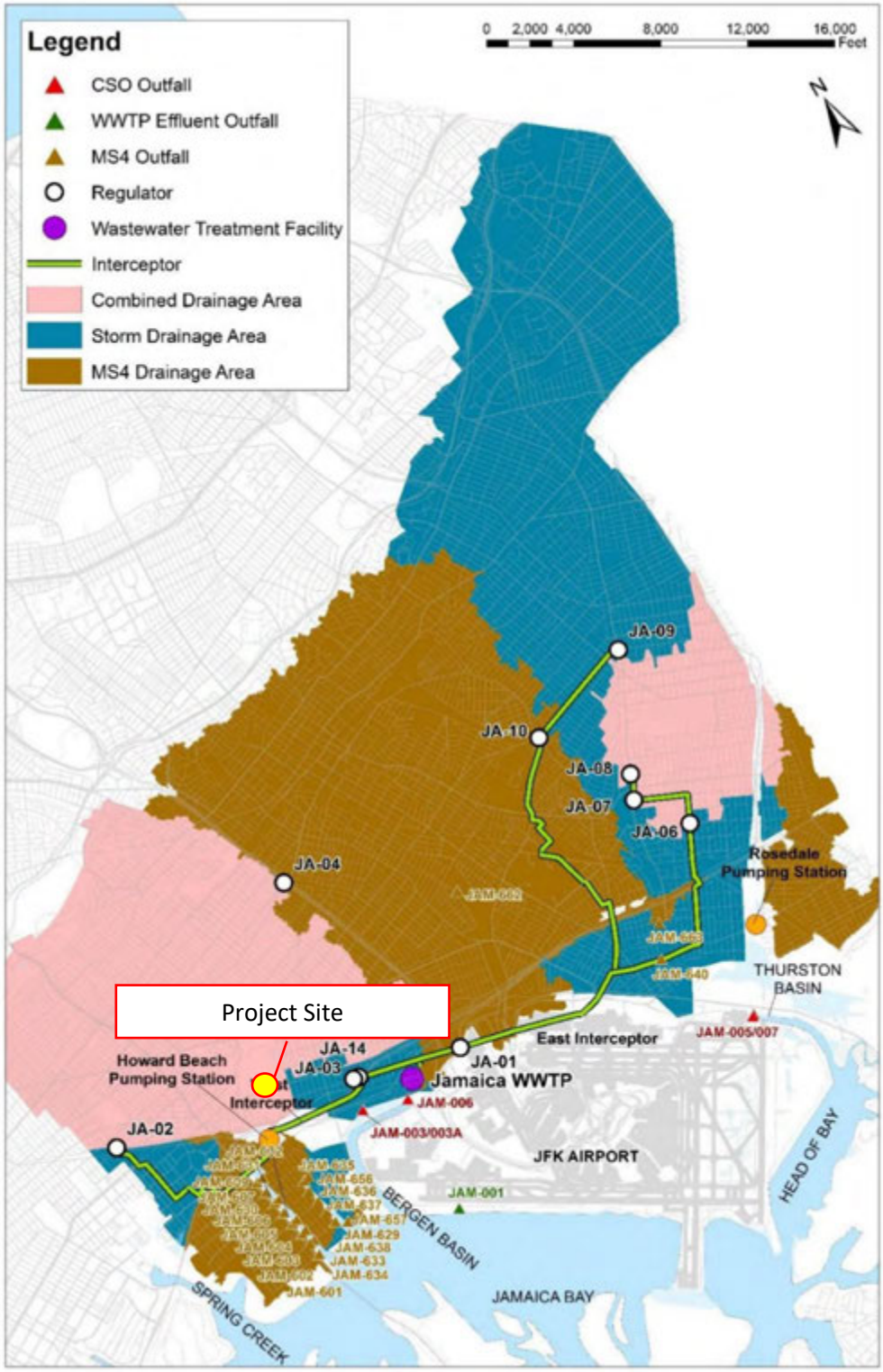
- A 30-inch RCP in Huron Street, built in 1957, and a 12-inch VCP in Eckford Street, built in 1946, which ultimately combine into a 72-inch RCP (1935) near the intersection of Centreville Street and North Conduit Avenue.
- An 8-foot by 7-foot twin, reinforced concrete combined sewer in Rockaway Boulevard.

Under existing conditions, sanitary discharge from the NYRA building is conveyed by an 8-inch sewer that drains by gravity to a 24-inch sewer in Rockaway Boulevard before joining the 8-foot by 7-foot twin combined sewer. Modifications to the NYRA building are not proposed as part of this project. The remaining site sewage is conveyed through an existing 12-inch diameter sewer connection to the existing NYC DEP 12-inch VCP sewer in Eckford Street.

Stormwater runoff from the north parking lot joins the sanitary discharge from the NYRA building at the property limits before entering the Rockaway Boulevard combined sewer system. No modifications or enhancements to the north parking lot are proposed. Stormwater runoff from the existing parking garage, hotel, casino, west and south parking lots, Aqueduct Road, and a portion of the surrounding landscape areas are conveyed to a 60-inch diameter HDPE detention system, which connects to a 385-foot by 8-foot by 10-foot precast concrete box culvert within Aqueduct Road south of the NYC Transit (NYCT) Station. This box culvert then discharges via a 24-inch diameter storm connection under the NYCT track to the 30-inch diameter NYC DEP sewer in Huron Street.

The 12-month rolling average to the Jamaica WRRF is 84 mgd, which is well below the maximum permitted capacity (see **Table 9-3**).

Figure 9-1 Jamaica WRRF Collection System



Source: NYC DEP's Combined Sewer Overflow Long Term Control Plan for Jamaica Bay Tributaries, June 2018

Table 9-3 Jamaica WRRF Average Monthly Flows

Month (2021)	Flow (mgd)
January	81
February	83
March	80
April	81
May	80
June	77
July	83
August	83
September	85
October	82
November	78
December	76
Average	81
12-Month Rolling Average	84

Note:
[1]Average monthly flows and 12-month rolling average were provided by NYC DEP.

Sanitary Flows

For purposes of this analysis, the amount of sanitary sewage is calculated as all water demand generated by the existing uses on the Project Site except water used by air-conditioning, which is typically not discharged to the sewer system. Existing water consumption and sewage generation for the site is shown in **Table 9-2** above. Existing sanitary flows comprise approximately 0.17 percent of the dry-weather flow capacity of the Jamaica WRRF.

Stormwater Flows

Table 9-4 summarizes the surface coverage and surface areas as well as the weighted runoff coefficient (the fraction of precipitation that becomes surface runoff for each surface type).

As described above, the Project Site is served by a combined sewer system. At the site, stormwater runoff flows primarily to the south to the 30-inch sewer in Huron Street via a 24-inch storm connection under the NYCT track, as depicted in **Table 9-5**.

Table 9-4 Existing Surface Coverage

Affected Facility	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scope	Total
Jamaica WRRF	Area (%)	19%	62%	0%	19%	**100%**
	Surface Area (sf)	503,500	1,683,700	0	521,700	**2,708,900**
	Runoff Coefficient[1]	1.00	0.85	0.70	0.20	**0.75***

Notes:
* Weighted runoff coefficient calculations are based on the NYC DEP flow volume calculation matrix provided in the *CEQR Technical Manual*.
[1] Runoff coefficients for each surface type as per NYC DEP.

The total sewage and stormwater flows generated at the Project Site under existing conditions, during different storm events, are presented in million gallons (MG) in **Table 9-5**.

Table 9-5 NYC DEP Flow Volume Matrix – Existing Conditions, Sewage, and Stormwater Generation During Different Storm Events

Rainfall Volume (in.)	Rainfall Duration (hr.)	Total Area (Acre)	Weighted Runoff Coefficient (C)	Sewage and Stormwater to Combined Sewer System (MG)	Stormwater Runoff (MG)
0.00	3.80	62.18	0.75	0.03	0.00
0.40	3.80	62.18	0.75	0.53	0.51
1.20	11.30	62.18	0.75	1.60	1.52
2.50	19.50	62.18	0.75	3.30	3.17

The Future Without the Proposed Actions

As described in **Chapter 1, Project Description**, absent the Proposed Actions, it is assumed that the Project Site would be developed according to the Approved 2017 Plan. The full program analyzed in the Approved 2017 Plan was determined to have no significant adverse impacts. Therefore, though certain components of the Approved 2017 Plan program were never constructed on the Project Site, namely a second proposed hotel, the full program as approved in 2017 is considered the baseline future No-Action condition for the purposes of this analysis.

No-Action consumption and sewage generation for the site is shown in **Table 9-6**. As compared to the existing condition, the No-Action condition results in an incremental water usage and sewage generation of approximately 0.1 mgd and 0.05 mgd, respectively.

Table 9-6 No-Action Water Consumption and Sewage Generation

Land Use	Area (gsf)	Domestic Water/Wastewater Generation (gpd)	Air-Conditioning (gpd)
Hotel	504,180	126,000	85,711
Lobby/Public Circulation	35,526	3,553	6,039
Retail/Dining	134,253	20,379	22,823
Casino/Gaming Facilities	473,731	47,373	80,534
Function/Event Space	193,719	19,372	32,932
Arena	0	0	0
Water Consumption Subtotals		*217,000*	*228,000*
Sewage Generation Subtotal (gpd)		217,000	
Total Water Consumption (gpd)		445,000	
Total Wastewater Consumption (gpd)		217,000	

Table 9-7 below summarizes the surface coverage and surface areas as well as the weighted runoff coefficient (the fraction of precipitation that becomes surface runoff for each surface type) for the No-Action condition.

Table 9-7 No-Action Surface Coverage

Affected Facility	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scope	Total
Jamaica WRRF	Area (%)	24%	57%	0%	19%	100%
	Surface Area (sf)	650,136	1,537,064	0	521,700	2,708,900
	Runoff Coefficient[1]	1.00	0.85	0.70	0.20	0.76*

Notes:
* Weighted runoff coefficient calculations are based on the NYC DEP Flow Volume Calculation Matrix provided in the *CEQR Technical Manual*.
[1] Runoff coefficients for each surface type as per NYC DEP.

The total sewage and stormwater flows generated at the Project Site under the No-Action condition, during different storm events, are presented in million gallons (MG) in **Table 9-8** below.

Table 9-8 NYC DEP Flow Volume Matrix – No-Action Condition, Sewage, and Stormwater Generation During Different Storm Events

Rainfall Volume (in.)	Rainfall Duration (hr.)	Total Area (Acre)	Weighted Runoff Coefficient (C)	Sewage and Stormwater to Combined Sewer System (MG)	Stormwater Runoff (MG)
0.00	3.80	62.18	0.76	0.03	0.00
0.40	3.80	62.18	0.76	0.55	0.51
1.20	11.30	62.18	0.76	1.64	1.54
2.50	19.50	62.18	0.76	3.38	3.21

The Future with the Proposed Actions

The With-Action condition would result in the expansion of the RWNYC facility and would include up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space; approximately 725,900 gsf of casino/gaming facility space accommodating up to 11,000 gaming positions; approximately 213,900 gsf of retail and dining space; an approximately 187,900-gsf arena with a total of approximately 7,000 seats; approximately 73,900 gsf of event center and meeting room space; approximately 232,900 gsf of lobby or public circulation space; approximately 145,800 gsf of mechanical/electrical space; an approximately 97,500-gsf central utility plant; an approximately 79,700-gsf conservatory; and approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces. The results of the analysis of the With-Action condition on water and sewer infrastructure is described below.

Conveyance Systems

Water

Approximately 900-linear feet (LF) of 12-inch building fire service and 1,300 LF of 12-inch domestic water service would be removed to accommodate the new facility. New fire and domestic water services would be required for a portion of the new facility—the Expo and Central Utility Plant (CUP) buildings. These services would require taps to the 20-inch-diameter NYC DEP water main in Centreville Street.

The domestic service main would interconnect with the existing internal domestic distribution system to supplement water flow within the system. The fire service distribution system would be dedicated to the fire/sprinkler booster pumps located in the proposed garage structure. Providing dedicated domestic and fire service distribution mains would provide the greatest available water pressures and flows from the NYC DEP main to the casino development. It is estimated that the projected peak domestic water demand for the new facility would be approximately 1,400 gpm.

As the site engineering design progresses, existing water pressures and flows within the NYC DEP system will be obtained and this data will be used to model the internal water distribution systems and identify the available water pressures and flows for building plumbing/sprinkler systems. Individual domestic water services would be provided to the gaming facility site for each major

building component. The water services would be sized such that it can accommodate peak demands. A 20,000-gallon domestic water storage tank is being considered in the event of a utility water shortage at each building connection. Alternatively, a central storage tank would be provided in the CUP and then water would be distributed to each project element.

Based on the design criteria required for the 2017-approved casino expansion, it is anticipated that the existing NYC DEP water supply system can yield the minimum design flows and water pressures at building booster pumps for the proposed casino expansion.

New taps and on-site water mains would be subject to, and would comply with, NYC DEP and NYC DOB requirements. New service connections would include backflow-prevention devices and meters in NYC DEP–approved, above-grade heated enclosures. The existing hydrant loop would be relocated and extended to accommodate the new facility and would comply with FDNY requirements.

Gray water and heating, ventilating, and air-conditioning (HVAC) condensate are being considered to offset domestic water use for irrigation and/or for flushing urinals and toilets. Laundry water discharge and HVAC condensate resulting from cooling would be collected near laundry areas and piped to a treatment skid before entering a collection cistern located nearby. This cistern would service as the first source of water for irrigation purposes. Additionally, a second set of domestic cold-water supply lines to nearby toilets and urinals is being evaluated to offset potable water use at these fixtures.

Sanitary Flows

Anticipated sanitary sewer flows for the new facilities onsite will be coordinated with the mechanical, electrical, and plumbing engineer. New sanitary sewers would be designed to utilize a gravity system wherever feasible. However, pumping may be required from parts of the new facility that have elevation challenges. The existing 12-inch sanitary site connection in Eckford Street currently conveys flow from all existing buildings on site except for the NYRA, which is not being altered as part of the proposed expansion. Based on an initial assessment, the 12-inch existing sewer does not have capacity for additional sanitary flow. Therefore, new on-site sanitary sewers would be required to convey sewerage by gravity to a central pump station, discharging to an adjacent pressure relief manhole, before continuing by gravity to the 96-inch by 84-inch combined sewer in Rockaway Boulevard. The new sanitary sewer connection would require a NYC DEP Site Connection Proposal application.

Water reuse is being evaluated to offset cooling tower water use. Black water from the site sanitary drains could route through a treatment system before entering a collection cistern located at the ground floor of the new garage.

Stormwater

Approximately 33-acres of the RWNYC Lease Area would be disturbed as part of the Expansion Project. The disturbed area is comprised of two drainage areas. Stormwater runoff generated from one drainage area would be routed through the existing detention system, which contains a controlled flow outlet before being discharged from the site via the 24-inch connection beneath the NYCT track to the 30-inch NYC DEP sewer in Huron Street. Stormwater generated within the second drainage area, consisting of the northern parking lot, would be discharged unrestricted to the NYC DEP sewer in Rockaway Boulevard, as it does under existing conditions.

Of the disturbed area, 30 acres are located within the Huron Street watershed, and about 3 acres are located within the Rockaway Boulevard watershed. This project's stormwater design focuses on conveying a large portion of the Huron Street drainage area to on-site green infrastructure practices prior to the overflow tie-in to the existing detention system and NYC DEP sewer system. Of the 33-acres of disturbed area, approximately 28 acres would be routed to green infrastructure practices, such as bioretention basins and stormwater planters, or infiltration basins such as drywells and open-bottom chambers. This corresponds to approximately 110-cubic-feet-per-second of proposed developed storm runoff being handled on-site. This flow rate assumes a rainfall intensity of 5.95-inches-per-hour which is based on a 6-minute time of concentration for the 5-year design storm per NYC DEP. The remaining 5 acres would flow to the existing detention system before discharging to the NYC DEP sewer in Huron Street.

Stormwater management practices would, at minimum, treat about 189,300 cubic feet and detain about 229,600 cubic feet of runoff to meet NYC DEP water quality and quantity requirements, respectively. All stormwater runoff would be managed so that it does not sheet flow outside the site boundary.

Stormwater roof leaders from the existing buildings that conflict with the proposed facilities would be rerouted prior to the commencement of site removal operations. New drainage structures would be required at low points around the Project Site. Traditional stormwater systems such as inlets and piping may capture sheet flow from roadways and roof runoff. A combination of green infrastructure practices such as vegetated swales, green roofs, stormwater planters, bioretention basins, stormwater galleries, and dry wells would be used, where feasible, to meet the USWR requirements and sustainability goals of the project. A portion of the proposed hotel roof and plaza would be a green roof, and above-grade stormwater planters may be considered in hardscape or entry plaza areas. A cistern collecting recovered and treated rainwater from the roof drains is also being evaluated to be used as the first source of makeup water for the cooling towers, which is intended to minimize the amount of potable water usage.

Based on the current stormwater management plan for the new facility, the need for a new NYC DEP site connection for storm discharge is not anticipated.

Water and Sanitary Flows

As shown in **Table 9-9**, the total water usage anticipated as a result of the Proposed Actions is approximately 1.071 mgd, which is an increment of approximately 0.626 mgd, compared to the No-Action condition's projected demand of approximately 0.445 mgd. As the incremental 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.

The Expansion Project is also planning water reduction strategies and investigating reclamation measures. Already using low-flow flush and flow fixtures, the project is evaluating the potential to use reclaimed stormwater for irrigation, flushing toilets, and central plant makeup water. In addition, individual water branches would be provided to irrigation and water features that can be controlled for operation during off-peak hours.

Table 9-9 With-Action Water Consumption and Sewage Generation

Land Use	Area (gsf)	Domestic Water/ Wastewater Generation (gpd)	Air-Conditioning (gpd)
Hotel	1,376,900	420,000	234,073
Lobby/Public Circulation	232,900	23,290	39,593
Retail/Dining	213,900	27,662	36,363
Casino/Gaming Facilities	725,900	72,590	123,403
Function/Event Space	73,900	7,390	12,563
Arena (7,000 Seats)	187,900	41,275	31,943
Water Consumption Subtotals		***592,207***	***477,938***
Sewage Generation Subtotal (gpd)		**593,000**	
Total Water Consumption (gpd)		**1,071,000**	
Total Wastewater Consumption (gpd)		**593,000**	

The incremental sanitary sewage generated by the With-Action condition, as compared with the No-Action condition, would be 376,000 gpd. This increase in wastewater generation would be approximately 0.38 percent of the Jamaica WRRF capacity of 100 mgd. With the Jamaica WRRF currently operating at 84 percent of its permitted capacity, there is sufficient capacity to treat the additional amount of sewage that would be generated in the future with the Expansion Project. The current operating capacity of 84 percent was provided by NYC DEC and is derived based on the 12-month rolling average, as shown in **Table 9-3**, relative to the published Jamaica WRRF capacity of 100 mgd.

In accordance with the New York City Plumbing Code (Local Law 33 of 2007), the Expansion 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

Table 9-10 summarizes the surface cover areas and weighted runoff coefficient for the With-Action condition.

Table 9-10 With-Action Surface Coverage

Affected Facility	Surface Type	Roof	Pavement and Walkways	Other[2]	Grass and Soft Scope	Total
Jamaica WRRF	Area (%)	38%	37%	5%	20%	**100%**
	Surface Area (sf)	1,026,400	1,002,300	147,900	543,400	**2,720,000**
	Runoff Coefficient[1]	1.00	0.85	0.70	0.20	**0.77***

Source: Perkins Eastman Site Plan (05 August 2024)

Notes:

* Weighted runoff coefficient calculations are based on the NYC DEP Flow Volume Calculation Matrix provided in the *CEQR Technical Manual*.

[1] Runoff coefficients for each surface type as per NYC DEP.

[2] "Other" comprises Green Roof land cover types with a runoff coefficient equal to 0.70.

The NYC DEP Flow Volume Calculation Matrix was completed for the With-Action condition. The calculations from the flow volume calculation matrix help to determine the change in wastewater flow volumes to the combined sewer system from the With-Action condition and includes four rainfall volume scenarios with varying durations. As shown in **Table 9-8**, depending on the rainfall volume and duration, the total volume to the combined sewer system from the Project Site under the No-Action condition would be between approximately 0.03 mgd and 3.38 mgd. As shown in **Table 9-11** below, for the With-Action condition, the combined sewer system flow would be between 0.09 mgd and 3.74 mgd, representing a 0.06 and 0.36 mgd incremental increase.

Table 9-11 NYC DEP Flow Volume Matrix – With-Action Conditions

Rainfall Volume (in.)	Rainfall Duration (hr.)	Total Area (Acre)	Weighted Runoff Coefficient (C)	Sewage and Stormwater to Combined Sewer System (MG)	Stormwater Runoff (MG)
0.00	3.80	62.44	0.77	0.09	0.00
0.40	3.80	62.44	0.77	0.62	0.52
1.20	11.30	62.44	0.77	1.85	1.57
2.50	19.50	62.44	0.77	3.74	3.26

Table 9-12 below compares the estimated stormwater flows under No-Action and With-Action conditions using the NYC DEP flow volume calculation matrix. As shown in **Table 9-12**, depending on the rainfall volume and duration, the maximum With-Action increment is 0.36 mgd. According to the *CEQR Technical Manual,* if the Expansion Project would result in an increase of 2 percent or more over No-Action conditions for dry and wet weather flows from the Project Site for any rainfall event that would discharge to a drainage area of concern, then a detailed analysis may be necessary. Dry weather flows (zero rainfall, normal conditions) associated with sanitary discharges are expected to increase in excess of 2 percent. However, the Jamaica WRRF is well below the treatment capacity, and no adverse impacts are expected at the Jamaica WRRF from the increase in sanitary sewage resulting from the Expansion Project. In addition, the project is expected to result in a considerable decrease in wet weather runoff volumes to the NYC DEP combined sewer system due to the substantial stormwater management practices proposed at the Project Site in accordance with NYC DEP USWR requirements.

Table 9-12 No-Action and With-Action Combined Stormwater Runoff Generation

		Total Volume to Combined Sewer System (MG)		
Rainfall (inches)[1]	Duration (hours)	No-Action Conditions	With-Action Condition	Increment
0.00	3.80	0.03	0.09	0.06
0.40	3.80	0.55	0.62	0.07
1.20	11.30	1.64	1.85	0.21
2.50	19.50	3.38	3.74	0.36

Notes:
[1] Storm event rainfalls per NYC DEP flow volume calculation matrix.
MG = million gallons

The Flow Volume Matrix calculations do not reflect the use of any sanitary and stormwater source control management practices to reduce sanitary flow and stormwater runoff volumes to the combined sewer system. As noted above, the proposed expansion would incorporate low flow plumbing fixtures to reduce sanitary flow in accordance with the New York City Plumbing Code. In addition, stormwater management plans (SMPs) would be required in accordance with the NYC DEP USWR guidelines, which includes requirements for bringing the site into compliance with the allowable stormwater release rate and on-site detention and retention requirements.

The USWR increases on-site stormwater detention requirements, reduces allowable release rates for developments discharging to combined sewer systems, and requires a retention-first approach to SMP design. The WQv aims to manage and reduce runoff from small, frequent storms that often trigger the majority of combined sewer overflows (CSOs). The USWR manual defines this event as the 90th-percentile rain event. Runoff reduction (RR) criteria aim to maintain a minimum level of RR during small storms, which is generally always met when treating the entire WQv. If site constraints make it impossible to treat the WQv, then a minimum runoff reduction volume for all newly constructed impervious areas must be met. The Vv and maximum release rate requirements are associated with 10-year events and work in tandem to maintain optimal flow rates in the City's combined sewer system to further limit the amount of CSO events.

According to the Conceptual Stormwater Management Plan, dated July 26, 2024, (see **Appendix C**) the required WQv and Vv is equal to 189,300 cubic feet and 229,600 cubic feet, respectively. The total WQv and Vv provided within on-site SMPs is 189,300 cubic feet, and 287,100 cubic feet, respectively, which meets or exceeds the minimum volumes required. The stormwater management approach will continue to be refined throughout the engineering design process and in consultation with NYC DEP.

The incorporation of the appropriate sanitary flow and stormwater source control SMPs would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Project Site. Sewer treatment capacity at the Jamaica WRRF is adequate to handle wastewater flow resulting from the Expansion Project.

10

Energy, Sustainability, 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 Statewide GHG emissions reduction goals.

Introduction

As discussed in the *2021 City Environmental Quality Review (CEQR) Technical Manual*, increased concentrations of GHGs 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.

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 according to the *CEQR Technical Manual*. Consistent with the *CEQR Technical Manual*, 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 established GHG reduction goal.

Principal Conclusions

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

Following the methodology provided in the *CEQR Technical Manual* and the project's energy model report, it is estimated that the Expansion Project would result in approximately 8,709 metric tons of carbon dioxide equivalent (CO_2e) emissions from its annual operations and 19,024 metric tons a year of CO_2e emissions from mobile sources. This represents less than 0.06 percent of the City's overall 2020 GHG emissions of 48.4 million metric tons.

The Expansion Project is designed to comply with several City and State regulations. The GHG assessment concludes that the Expansion Project would comply with the 2020 Energy Conservation Construction Code of New York State, which governs performance requirements of heating, ventilation, and air conditioning systems (HVAC) as well as the exterior building envelope of new buildings. The Expansion Project is also designed to comply with New York City Local Law 97 of 2019 through its use of all-electric HVAC and domestic hot water and proposed on-site renewable energy systems in all new construction. The Expansion Project would incorporate various mitigation measures to reduce GHG emissions, including the use of electric heating and cooling systems; installation of a rooftop solar array; construction in accordance with both City and State 2020 Energy Conservation Construction Codes; water usage reduction measures; encouragement of public transportation and high-occupancy vehicle trips; and organics recycling, consistent with the State Climate Leadership and Community Protection Act.

Regarding climate change, the Project Site is located well outside of the City's Coastal Zone and is located in neither the 100-year floodplain nor the 500-year floodplain. Therefore, the Expansion Project would not be at risk of sea level rise or flood-related impacts now or in the future. As discussed in **Chapter 2, Land Use, Zoning, and Public Policy**, the Expansion Project would be in compliance with Local Law 97, introduced in 2019 for NYC to achieve reductions in GHG emissions by 2050, and would also comply with the 2020 Energy Code. The Expansion Project would also comply with NYC's Local Law 86, the "Green Building Law," through its anticipated qualification for Leadership in Energy and Environmental Design (LEED) certification, a program led by the U.S. Green Building Council to promote sustainable building construction and design. Overall, the assessment concludes that the Expansion Project supports the goal of moving toward carbon neutrality and clean energy sources and is supportive of and consistent with *PlaNYC: Getting Sustainability Done*. Therefore, significant adverse impacts to climate change are not anticipated as a result of the Proposed Actions.

Project Commitments

As described in further detail below, the Applicant is making several project commitments in conjunction with the Expansion Project. The project commitments discussed in this chapter include:

- The Expansion Project would include the construction of a central utility plant (CUP) with simultaneous heating and cooling heat pump (HP) chillers as a primary stage of both heating and cooling. The efficient electrification of the heating and cooling equipment would result in a complete (100 percent) reduction in local fossil fuel usage and allow the building's carbon footprint to be reduced as the grid gets greener. Together, these measures would aid in the State's goals to reduce emissions by 40 percent by 2030.

- The Expansion Project's all-electric design fully aligns with the Scoping Plan for the 2019 Climate Leadership & Community Protection Act (CLCPA) and could take full advantage of the grid sourcing increasing renewable energy, resulting in less GHG emissions. This conversion would aid in the State's goals to reduce emissions by 85 percent in 2050.
- The Expansion Project includes installation of a rooftop solar array that is estimated to offset 8 percent of estimated energy use (6,245,000 kWh per year), and the Applicant would look to purchase renewable energy credits. Installing a solar array and purchasing renewable energy credits is in line with the Scoping Plan for the CLCPA task to transform power generation in the State to renewable sources.
- The Expansion Project would be built in accordance with the latest State and City codes, including the 2020 Energy Conservation Construction Codes of New York State and 2020 New York City Energy Conservation Code—both of which govern building efficiency in the choice of HVAC system and the exterior building envelope.
- As part of its commitment to New York City, the Applicant aims to comply with the intent and spirit of Local Law 97-even though the property is not subject to that requirement because it is State-owned. It would do so using the all-electric HVAC design and renewable energy installation mentioned above. The Expansion Project is projected to comply with Local Law 97 through 2034 without the need to procure any additional off-site resources; starting in 2035, the project can use off-site renewable resources to offset electricity use as would be required by Local Law 97.
- The Expansion Project would install low-flow flush and flow fixtures to reduce water usage and is evaluating using reclaimed stormwater for irrigation, flushing toilets, and HVAC make-up water.
- The Expansion Project is adjacent to a subway stop and would encourage public transportation and high-occupancy vehicle trips (shuttle or bus) to reduce single occupancy vehicle trips to the site and reduce mobile source emissions. These measures are in line with the Scoping Plan for the CLCPA call to promote mobility-oriented developments and mixed-used development near public transportation.
- The Expansion Project would include an organics recycling program to divert organics from the waste stream.
- Construction of the Expansion Project would follow federal and state regulations and codes for construction that limit equipment emissions by model year, limit idle time for vehicles and equipment on-site, and include other measures to reduce emissions.
- Construction equipment used on the Expansion Project would meet EPA's established emission limits (i.e., the use of equipment meeting EPA's Tier 3 emission standards in conjunction with diesel particulate filters and Tier 4 emission standards).
- Industry standard practices such as equipment engine maintenance would be employed to contribute to the overall goal of reducing GHG emissions from construction. Thus, construction of the Proposed Project would adhere to the State goals to reduce GHG.

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 earth's surface, 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 that are emitted as a result of human activities and their GWPs are presented in **Table 10-1**.

Table 10-1 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

- **CO_2**: CO_2 enters the atmosphere via the combustion of fossil fuels (oil, natural gas, and coal), solid waste decomposition, human and animal respiration, trees and wood product harvesting and manufacturing, and as the by-product 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 photosynthesis. Although not the GHG with the strongest effect per molecule, CO_2 is by far the most abundant and, therefore, the most influential GHG.
- **CH_4**: CH_4 is emitted during the production, transport, and burning of fossil fuels like coal, natural gas, and oil. Methane emissions also result from livestock digestion and other agricultural practices, as well as by the decay of organic waste in municipal solid waste landfills. CH_4, in addition to N_2O (described next) has a high global warming potential compared to CO_2.
- **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:** HCFCs, PFCs, and SF_6 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], 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 significant direct or indirect sources of HFCs, PFCs, or SF_6 associated with the Proposed Actions are not anticipated.

Because GHG emissions resulting from human activity profoundly impact the earth's climate, countries are reducing emissions by many means, including implementation of policy measures that address energy consumption and production, land use, and other areas. The U.S. has not ratified international agreements that set emissions targets for GHGs. However, the U.S. signed the United Nations' Paris Agreement[1] in December 2015, which pledged deep cuts in emissions.[2] The agreement has a stated goal of reducing annual emissions to 26 to 28 percent lower than 2005 levels by 2025.[3] Note that as of January 2025, the US has withdrawn from the Paris Agreement.

The U.S. Environmental Protection Agency (EPA) is required to regulate GHGs under the Clean Air Act. The EPA regulates GHG emissions from newly manufactured on-road vehicles in conjunction with the National Highway Traffic Safety Administration. EPA also regulates transportation fuels via the Renewable Fuel Standard program. The Renewable Fuel Standard program requires a volume of renewable fuels to be used to replace or reduce the quantity of fossil fuel used in transportation fuel, home heating oil, or jet fuel. The Clean Power Plan was implemented by EPA in 2015. It established guidelines and limits on emissions from power plants, as well as facility performance standards. After legal challenges beginning in 2016, the Federal Government released the Affordable Clean Energy (ACE) Rule in 2019 to update the government's approach to limiting emissions from power plants. The ACE Rule establishes emission guidelines for states to use when developing plans to limit carbon dioxide at coal-fired units.

In 2022, New York State Governor Kathy Hochul issued Executive Order No. 22, which directed State agencies (i.e., the affected entities subjected to the order) to lead by example and adopt a sustainability and decarbonization program. The order established the GreenNY Council, which comprises representatives from several New York State agencies to implement the rulings of the order. Section VII of the order requires affected entities to reduce GHG emissions by implementing the following measures:

1. Sourcing 100 percent electricity (with exceptions) from 2030 onward for all agency-owned operations from energy systems that are eligible under the Clean Energy Systems (CES) ("Eligible Systems") as part of an all-of-government approach to meet the goals of the Climate Act in a cost-effective manner.
2. Avoiding the combustion of fossil fuels for new infrastructure, building systems, or equipment (with exceptions) to the extent feasible.
3. Achieving 11 trillion British thermal units (Btu) of energy savings at agency facilities by 2025 as outlined in the BuildSmart 2025 program.
4. Reducing embodied carbon emissions from common construction materials in all new construction or construction projects consisting of adaptive reuse or significant renovations that cost greater than 50 percent of the cost of new construction starting in 2023.

[1] Conference of the Parties, 21st Session. *Adoption of The Paris Agreement, decision -/CP.21*. Paris, December 12, 2015.

[2] As of February 2025, the United States is not a signatory to the Paris Agreement, however, this is subject to change before the 2030 analysis year.

[3] Unites States of America. *Intended Nationally Determined Contributions (INDCs)* as submitted. March 31, 2015.

5. Having 100 percent of the agency's light-duty non-emergency vehicle fleets be Zero Emission Vehicles (ZEVs) by 2035 and 100 percent of the agency's medium- and heavy-duty vehicle fleet be ZEVs by 2040.
6. Evaluating the inclusion of distributed energy resources and energy storage to the maximum extent practicable.
7. Utilizing the New York State Department of Environmental Conservation (NYSDEC) Value of Carbon Guidance, where appropriate, to aid agencies in decision making on greenhouse gas emission reductions.

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 and updated in 2020 to align with the 2019 CLCPA. The plan outlines a vision for transforming the State's energy sector that would result in increased energy efficiency, increased carbon-free power production, and reduced emissions. The 2015 plan establishes the following clean energy goals:

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; and
3. Increasing building energy efficiency by 600 trillion Btu by 2030 from 2012 levels.

To meet its commitment to the Regional Greenhouse Gas Initiative (RGGI), New York State has 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 have also announced plans to reduce GHG emissions from transportation through the use of biofuel, alternative fuel, and efficient vehicles.

The New York State CLCPA was established in June 2019 to "adopt measures to put the state on a path to reduce statewide greenhouse gas emissions by eighty-five percent by 2050 and net zero emissions in all sectors of the economy."[4] The CLCPA sets new goals for reducing statewide GHG emissions and ultimately aims to achieve net zero GHG emissions by setting emission reduction targets and promoting clean energy.[5] The CLCPA also establishes the Climate Action Council (CAC) to develop strategies to achieve these goals.

The CLCPA directs the NYSDEC to establish rules and regulations to ensure compliance with statewide emissions reduction limits (40 percent reduction from 1990 emissions levels by 2030, and 85 percent reduction from 1990 emissions levels by 2050). These regulations must include:

> *…legally enforceable emissions limits, performance standards, or measures or other requirements to control emissions from greenhouse gas emissions sources and measures to reduce emissions from greenhouse gas emission sources that have a cumulatively significant impact on statewide greenhouse gas emissions, such as internal combustion vehicles that burn gasoline or diesel fuel and boilers or furnaces that burn oil or natural gas.*

[4] The New York State Senate. *Senate Bill S6599.* Available at: https://www.nysenate.gov/legislation/bills/2019/s6599.

[5] The Natural Resources Defense Council. *Unpacking New York's Big New Climate Bill: A Primer.* Available at: https://www.nrdc.org/experts/miles-farmer/unpacking-new-yorks-big-new-climate-bill-primer-0.

On December 19, 2022, the CAC approved a Scoping Plan[6] for the CLCPA. The document sets forth a series of policies and recommendations that cover six sectors—Transportation, Buildings, Electricity, Industry, Agriculture and Forestry, and Waste. The Scoping Plan encourages transitioning to zero-emission vehicles and equipment. For Buildings, the Scoping Plan encourages efficient operation of buildings, capital investments in high-performance building envelopes, and efficient HVAC systems.

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.

The Climate Change Adaptation Task Force was launched by NYC in 2008. This task force was charged with developing strategies to secure the City's critical infrastructure against the potential threats introduced by climate change—such as rising sea levels, rising temperatures, and shifting precipitation patterns. It is composed of 40 City, State, and federal agencies, public authorities, and private companies that are involved in the operations, maintenance, and regulation of critical infrastructure in New York City. They identified at least 100 types of infrastructure that are vulnerable to the impacts of climate change, 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 academics, 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 advise the mayor and the task force on issues 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 16s global climate model simulations and three GHG 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 NPCC future climate projections. In 2024, the NPCC released an updated report with the most recent 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 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 report—the Natural Hazard Mitigation Plan, Coastal Storm Plan, Heat Emergency Plan, Debris Management

[6] New York Climate Act Scoping Plan https://climate.ny.gov/resources/scoping-plan/.

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, which identifies wastewater treatment plants and pumping stations vulnerable to flooding, estimates potential costs of future damages, and recommends protective measures such as waterproofing or relocating elevation-critical equipment out of flood elevations to reduce the risk of damage and loss of services.

The NYC Department of City Planning (DCP) developed the Waterfront Revitalization Plan (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 permits obstruction rules for buildings to elevate mechanical, electrical and plumbing equipment, among other modifications and provisions.

Methodology

GHG Emissions Assessment

NYSDEC has published the guidance "Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements"[7] (the NYSDEC GHG Policy) for NY State Environmental Quality Review filings. The NYSDEC GHG Policy for assessing energy use and emissions focuses on establishing the boundaries of the assessment, quantifying indirect and direct GHG emissions from the project, and assessing mitigation options. The NYSDEC GHG Policy describes the methodology for estimating emissions from each direct and indirect source associated with a project. However, the policy recognizes that the state of practice is evolving and that better methods may develop with time. The GHG assessment presented in this filing uses the methodology described in the *CEQR Technical Manual*, which is consistent with the requirements of the NYSDEC GHG Policy.

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 the development of 350,000 square feet or greater. The Proposed Actions would result in a total development increment of approximately two million gross square feet (less parking) primarily

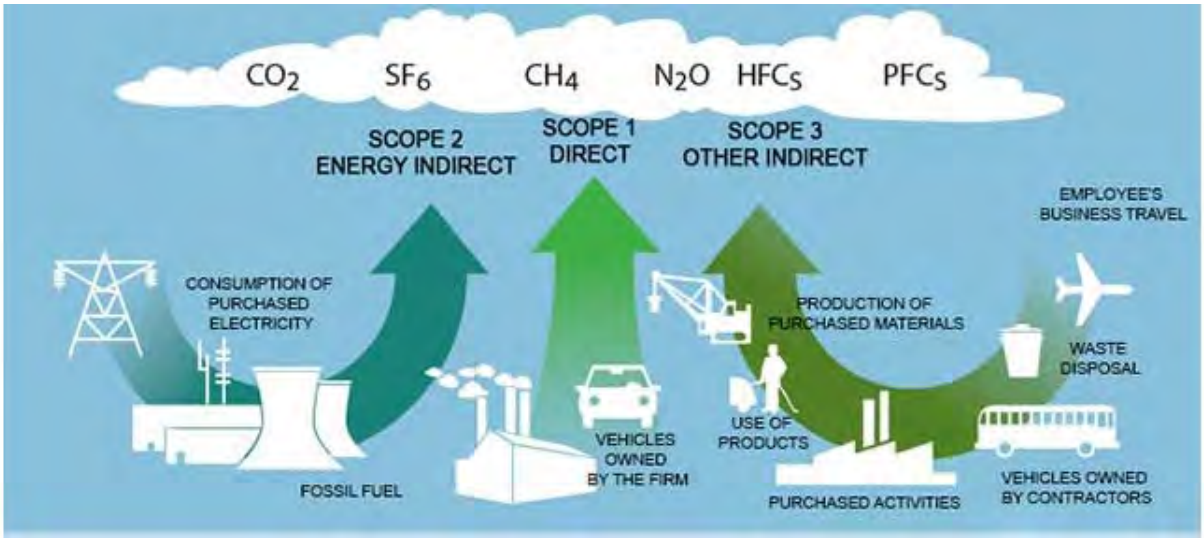
[7] New York State Department of Environmental Conservation, "Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements." July 15,2009.

composed of various commercial uses. Operational GHG emissions were assessed using the estimated energy consumption of the Expansion Project derived by energy modeling.

GHG emissions are divided into the following three types, three scopes, as illustrated in **Figure 10-1**:

- Scope 1, or direct emissions, are emissions associated with sources owned or controlled directly by an entity;
- Scope 2, or indirect emissions, are emissions that are a consequence of an entity's activities but occur from sources not owned or controlled by that entity; and
- Scope 3, or other indirect emissions, are emissions produced by an entity's value chain.

Figure 10-1 Three Scopes of GHG Emissions



Source: http://synergyfiles.com/2017/04/scope-ghg-emissions/

A project's GHG emissions under CEQR are assessed in two steps. First, GHG emissions of the proposed action are estimated; second, the proposed action is assessed in comparison with the appropriate 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 *CEQR Technical Manual* also requires an assessment of projects that would fundamentally change the City's solid waste management system by changing solid waste transport mode, distances, or disposal technologies. The Expansion Project is not expected to result in such a change to 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 assess the potential effects of sea-level rise, storm surge, and

coastal flooding. However, the Project Site is located well outside of the City's Coastal Zone and is also located outside the 100-year floodplain and the 500-year floodplain. Therefore, the Expansion Project would not be at risk of sea level rise or flood-related impacts now or in the future.

As discussed in **Chapter 2, Land Use, Zoning, and Public Policy,** the Expansion Project would be in compliance with Local Law 97, introduced in 2019 for New York City to achieve reductions in greenhouse gas emissions by 2050, as well as the 2020 Energy Code. The Expansion Project would also comply with NYC's Local Law 86, the "Green Building Law," through its anticipated qualification for LEED certification, a program led by the U.S. Green Building Council to promote sustainable building construction and design. Overall, the Expansion Project supports the goal of moving towards carbon neutrality and clean energy sources and is, therefore, supportive of and consistent with the *PlaNYC: Getting Sustainability Done* plan.

Assessment

Operations Direct GHG Emissions

Direct GHG emissions from the Expansion Project would result from on-site backup diesel generators and natural gas boilers at the proposed main central utility plant (CUP). The generators and boilers would be used for backup purposes and would only be in operation to maintain system temperature during the very coldest days of the year when the heating load exceeds the ability of the heat pump plant. Generators would operate on standby. As such, further assessment was not conducted for these sources.

Operations Indirect GHG Emissions

Indirect GHG emissions would be generated to produce electricity for the Expansion Project. Indirect GHG emissions are estimated by determining the amount of electricity a project is expected to consume over the course of a year. The mechanical, electrical and plumbing engineer for the Expansion Project estimated the anticipated energy consumption using eQuest 3.64 and Helioscope 8,760-hour analysis as the energy models. Energy modeling is based on the proposed building elements, such as (but not limited to) the specific type of use(s) and users of the buildings, building configuration and architecture type, building envelope (walls/windows), interior fit-out (where known), HVAC equipment efficiency ratings, and on-site energy generation.

The CUP would utilize heat pump chillers, electric chillers, ice chillers, air to heat pump modules, cooling towers, electric boilers and ice storage tanks to generate the HVAC needs via fully electric sources to comply with the decarbonization goals of New York City and New York State. The plant will also have new central electrical services that will distribute power to all expansion portions of the site, along with full generator backup provided at the CUP for the entire project site. The Expansion Project also would include installation of an expansive (4,730 kW) photovoltaic array to provide on-site power generation.

The results of the energy modeling estimated that the Expansion Project would use 242,589 million British Thermal Units (MMBtu) of electricity per year, with the majority of electricity being consumed for space cooling and process loads (plug-in equipment, kitchens, elevators, pool and spa, etc.). The Expansion Project is anticipating a design energy use intensity of 82 kilo British Thermal Units (kBtu)/sf, roughly half of the peer facilities in the Northeast region. The Expansion Project is

proposing substantial energy conservation measures to be implemented in the individual building design and at the CUP. The design will eliminate building fossil fuel usage through fuel switching, utilizing fully electric space and water heating systems. The Applicant has confirmed with Con Edison that the projected electrical loads required for the Expansion Project can be accommodated by their system (see **Appendix D**).

Estimates of the GHG emissions from the electricity are presented in **Table 10-2**. A total of 8,709 metric tons of CO_2e per year would be generated with the proposed photovoltaic array to satisfy the Expansion Project's annual electricity consumption according to *CEQR Technical Manual* rates. This is approximately equivalent to a carbon intensity of 3 kg CO_2e per sf. **Table 10-2** also presents the energy consumption without the photovoltaic array—9,475 metric tons of CO_2e per year.

Table 10-2 GHG Emissions from Electricity Generation

	With Photovoltaic Array[2]	Without Photovoltaic Array	Unit
Building Annual Electricity Use[1]	242,589.6	263,903.7	MMBtu
***2021 CEQR Technical Manual* CO_2e Carbon Conversion Factor**	35.902	35.902	kg CO_2e/MMBtu
Electricity CO_2e	8,709,452	9,474,671	kg CO_2e
	8,709	9,475	MT CO_2e

[1] From Project Energy Model report

[2] The 4.7 MW photovoltaic array mounted on the parking garages and arena would offset demand on the electric grid.

Mobile Source Emissions

The number of annual vehicle trips by mode (cars, taxis, and trucks) that would be generated by the Expansion Project was calculated using the transportation planning assumptions developed for the traffic analysis and presented in **Chapter 11, Transportation**. The number of project-generated trips by autos, taxis and trucks was obtained from the traffic analysis. Annual vehicle miles traveled (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 Queens, 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 Expansion Project. The resultant GHG emissions are presented in **Table 10-3**. The total CO_2e emissions from the mobile sources attributable to the Expansion Project would be 19,024 metric tons annually. Note that this estimate captures both Scope 1 and Scope 3 trips.

Table 10-3 GHG Emissions from Mobile Sources

Vehicle Type	Annual VMT generated	Annual CO_2e [MT]
Auto	39,072,919	13,587
Taxi	3,076,795	953
Truck	3,025,330	4,484
Total	45,175,044	19,024

Note: All trips assumed the *CEQR Technical Manual* default distribution for local, arterial, and expressway roadways.

Construction Emissions

As per *CEQR Technical Manual* guidance, emissions associated with construction of the Expansion Project have been assessed qualitatively. Construction of the Expansion Project would follow federal and state regulations and codes for construction that limit equipment emissions by model year, limit idle time for vehicles and equipment onsite, and include other measures to reduce emissions. Construction equipment used on the Expansion Project would meet EPA's established emission limits (i.e., the use of equipment meeting EPA's Tier 3 emission standards in conjunction with diesel particulate filters and Tier 4 emission standards). The use of diesel-powered construction and operation equipment is unavoidable due to the nature of the project. The use of heavy equipment during construction would be temporary. Industry standard practices such as equipment engine maintenance would be employed to contribute to the overall goal of reducing GHG emissions from construction. Thus, construction of the Proposed Project would adhere to the State goals to reduce GHG.

GHG Mitigation Measures and Consistency with the GHG Reduction Goals

The overall GHG emissions from the Proposed Project would constitute approximately 0.06 percent of the 2020 New York City annual GHG emissions of 48.4 million metric tons (MMT) of CO_2e. The NYS CLCPA has adopted emissions targets to reduce GHG emissions by 40 percent by 2030 and 85 percent in 2050 from a 1990 baseline. The Scoping Plan for the CLCPA recognizes buildings as a major contributor to GHG emissions and recommends policy be implemented that requires efficient electrification of heating equipment and building performance standards that encourage high-performance building envelopes.

In addition, the *CEQR Technical Manual* outlines the following major goals towards 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 Expansion Project is consistent with the State CLCPA and *CEQR Technical Manual* goals as it plans to employ the following GHG mitigation measures:

- The Expansion Project would include the construction of a CUP with simultaneous heating and cooling Heat Pump chillers as a primary stage of both heating and cooling. The efficient

electrification of the heating and cooling equipment would result in a complete (100 percent) reduction in local fossil fuel usage and allow the building's carbon footprint to be reduced as the grid gets greener. Together, these measures would aid in the State's goals to reduce emissions by 40 percent by 2030.

- The Expansion Project's all-electric design fully aligns with the Scoping Plan for the CLCPA and could take full advantage of the grid sourcing increasing renewable energy, resulting in less GHG emissions. This conversion would aid in the State's goals to reduce emissions by 85 percent by 2050.
- The Expansion Project includes installation of a rooftop solar array that is estimated to offset 8 percent of the estimated energy use (6,245,000 kWh per year), and the Applicant would look to purchase renewable energy credits. Installing a solar array and purchasing renewable energy credits is in line with the Scoping Plan for the CLCPA task to transform power generation in the State to renewable sources.
- The Expansion Project would be built in accordance with the latest State and City codes, including the 2020 Energy Conservation Construction Codes of New York State and 2020 New York City Energy Conservation Code—both of which govern building efficiency in the choice of HVAC system and the exterior building envelope.
- As part of its commitment to New York City, the Applicant aims to comply with the intent and spirit of Local Law 97-even though the property is not subject to that requirement because it is State-owned. It would do so using the all-electric HVAC design and renewable energy installation mentioned above. The Expansion Project is projected to comply with Local Law 97 through 2034 without the need to procure any additional off-site resources; starting in 2035, the project can use off-site renewable resources to offset electricity use as would be required by Local Law 97.
- The Expansion Project would install low-flow flush and flow fixtures to reduce water usage and is evaluating using reclaimed stormwater for irrigation, flushing toilets and HVAC make-up water.
- The Expansion Project is adjacent to a subway stop and would encourage public transportation and high-occupancy vehicle trips (shuttle or bus) to reduce single occupancy vehicle trips to the site and reduce mobile source emissions. These measures are in line with the Scoping Plan for the CLCPA call to promote mobility-oriented developments and mixed-used development near public transportation.
- The proposed conditions of the Expansion Project would include an organics recycling program to divert organics from the waste stream.

Accordingly, the Proposed Project would be in compliance with the City and State GHG reduction goals and would contribute toward meeting the State GHG emissions targets.

11

Transportation

This chapter assesses the potential for the Proposed Actions 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 Expansion Project is located within the Aqueduct Racetrack property in South Ozone Park, Queens. The property is bounded by Rockaway Boulevard to the north, 114th Street to the east, North Conduit Avenue to the south, and 108th Street and the A subway line to the west. **Figure 11-1** shows the location of the Project Site. The Aqueduct Racetrack property consists of the Resorts World New York City (RWNYC) casino, hotel, and parking facilities in its northern portion (the Project Site); the New York Racing Authority (NYRA) building in the middle of the property; the Aqueduct Racetrack to the immediate east of the RWNYC and NYRA buildings; and a Port Authority of New York and New Jersey (PANYNJ) parking lot to the south. The existing casino building includes 6,500 gaming positions (a mix of video lottery terminals and electronic table games), a 400-room hotel, and an approximately 87,802 square-foot (sf) conference center that typically hosts conferences and trade shows. There are currently 4,779 parking spaces associated with RWNYC, within a six-level parking garage and three surface parking lots.

Figure 11-1 Project Location

The Proposed Actions would expand the existing casino building and include construction of a new, 3,727-space parking garage and new hotel buildings over the existing surface parking lot to the west of the casino building. The Proposed Actions would expand the number of casino gaming positions to 11,000 and would allow for a mix of live table games in addition to the existing video lottery terminals and electronic table games. The Expansion Project would consist of additional hotel rooms, increasing the Project Site's total to up to 1,963 hotel rooms;[1] a new, 187,900-sf, 7,000-seat arena; and a 19,300-sf ballroom space (with an approximate capacity of 1,287 seats). The Expansion Project would also increase the Project Site's total parking capacity to 7,309 parking spaces.

Without the Proposed Actions, i.e., the No-Action condition, the Project Site could be developed with 6,650 casino gaming positions, 600 hotel rooms, and 91,772 sf of multipurpose event space (assumed to operate similar to a conference center). The parking capacity would increase from 4,779 parking spaces to 4,960 parking spaces.

Table 11-1 summarizes the No-Action and With-Action conditions, and the net change of component sizes by land use. The Expansion Project would consist of an increase of 4,350 casino gaming positions, 1,400 hotel rooms, 7,000 arena seats, 19,300 sf of ballroom/event space (1,287 seats), 2,349 parking spaces, and displacement of 91,772 sf of conference center space compared to the No-Action condition.

Table 11-1 Project Increment for Analysis

Use	No-Action	With-Action	Analysis Increment
Casino	6,650 gaming positions	11,000 gaming positions	+4,350 gaming positions
Hotel	600 rooms	2,000 rooms	+1,400 rooms
Multipurpose Event Space (Conference Center)	91,772 sf	---	-91,772 sf
Arena	---	187,900 sf 7,000 seats	+187,900 sf +7,000 seats
Ballroom	---	19,300 sf 1,287 seats	+19,300 sf + 1,287 seats
Parking	4,960 spaces	7,309 spaces	+2,349 spaces

[1] The Expansion Project would introduce 1,600 new hotel rooms. The existing 400 hotel rooms would be reconfigured and reduced to 363 hotel rooms. To provide a conservative analysis, the reduction in existing hotel rooms and associated trips was not assumed, and the Transportation analysis analyzes a total of 2,000 hotel rooms in the With-Action condition.

Principal Conclusions

Intersection Traffic

The Proposed Actions would generate a total of 2,458 vehicles per hour (vph) (2,026 "ins" and 432 "outs") in the Friday PM peak hour, 2,533 vph (1,953 "ins" and 580 "outs") in the Saturday PM peak hour, and 2,548 vph (749 "ins" and 1,799 "outs") in the Saturday night peak hour. Of the 31 intersections analyzed, the Proposed Actions would result in significant adverse traffic impacts at ten intersections (at 18 movements) during the Friday PM peak hour, ten intersections (at 14 movements) during the Saturday PM peak hour, and nine intersections (at ten movements) during the Saturday night peak hour.

The identification and evaluation of traffic capacity improvements needed to mitigate potential significant adverse traffic impacts created by the Proposed Actions are presented in **Chapter 17, Mitigation**.

Highways

The Expansion Project is located in close proximity to the Belt Parkway and the Nassau Expressway, and analyses were performed at key highway segments that project-generated trips would use to access the Project Site. The highway segments analyzed are located on the Belt Parkway within the vicinity of the Lefferts Boulevard overpass and the Van Wyck Expressway Service Road/North Conduit intersection. No significant adverse impacts would occur at the eleven highway segments analyzed for the Friday PM, Saturday midday, and Saturday night peak hours.

Parking

The Expansion Project would provide a total of 7,309 onsite parking spaces, including construction of a new 3,727-space parking garage. The Proposed Actions' peak parking demand of 6,008 spaces would be expected on Saturday during the 8 PM to 9 PM hour. Overall, the Expansion Project would provide enough spaces to accommodate the Friday and Saturday peak project demand.

Transit

There are two subway stations located within the Aqueduct Racetrack property close to the Project Site—the Aqueduct Racetrack subway station and Aqueduct – North Conduit Avenue subway station (both stations are served by the A subway line). Analyses of the station elements at these two subway stations were performed for the weekday PM commuter peak hour, specifically for a Friday when weekday station activities are highest. The analysis determined that all station elements analyzed would operate at acceptable levels of service in the With-Action condition.

A subway line haul analysis was conducted for the A subway line and determined that the subway line would continue to operate within capacity during the Friday PM peak hour, and therefore, subway line haul impacts are not expected as a result of the Expansion Project.

Overall, the Expansion Project would not result in the potential for significant adverse transit impacts (neither for bus nor subway).

RWNYC is exploring the potential to provide a new southbound platform at the Aqueduct Racetrack station, which currently only has northbound service. Access to the southbound platform would be provided via an overpass over the tracks, with one new stair along each platform. It is assumed that subway riders that access the Aqueduct Racetrack property from the Aqueduct – North Conduit Avenue Station would use the proposed southbound platform at the Aqueduct Racetrack station. Design and construction of the southbound platform would require MTA approval and coordination. An analysis of the proposed stairways was conducted and determined 60-inch-wide stairways would operate at acceptable LOS C.

Vehicular and Pedestrian Safety

Five intersections have been identified as high-crash locations, according to New York City Department of Transportation (NYC DOT) criteria. The intersections of Rockaway Boulevard at Liberty Avenue/96th Street and North Conduit Avenue at Lefferts Boulevard had at least five bicycle and/or pedestrian crashes recorded within a consecutive 12-month period and were identified as high-crash locations. In addition to these intersections, three additional locations located along the Rockaway Boulevard, Woodhaven Boulevard, and Liberty Avenue corridors have been identified by NYC DOT as priority corridors as part of the NYC Vision Zero Program and experienced at least three bicycle and/or pedestrian crashes within a consecutive 12-month period. These intersections are therefore considered high-crash locations per NYC DOT's criteria.

Project Commitments

The project commitments discussed in the chapter include:

- Reconfiguration of the internal roadway network within the Project Site to accommodate the Expansion Project and provide new access connections to the project's buildings.
- Reconfiguration of the trackside roadway along the west side of the Aqueduct Racetrack between North Conduit Boulevard and the Expansion Project to accommodate the increase in vehicle traffic demand from the project.
- Operational improvements at the Rockaway Boulevard entrance, at the intersection of Rockaway Boulevard and Aqueduct Road, to accommodate the increase in vehicle traffic demand from the project. Implementation of the measures, summarized below, would be subject to NYC DOT's approval.
  - Restriping of the westbound Rockaway Boulevard approach to provide an additional left turn lane.
  - Extension of the Aqueduct Road median to provide pedestrian refuge on the south crosswalk.
  - Modification of the intersection's signal timing and phasing plan.
- Potential measures to improve pedestrian safety at the intersection of Rockaway Boulevard/Liberty Avenue and 96th Street, such as signage identifying designated crosswalks at this intersection and at the adjacent intersection of Liberty Avenue and Rockaway Boulevard. Implementation of these measures would be subject to NYC DOT's approval and adoption.
- Potential safety improvements at the intersection of North Conduit Avenue and Lefferts Boulevard such as implementation of delineator poles, slow turn wedges and/or striping, and increased visibility for motorists during the dark hours. Implementation of these measures would be subject to NYC DOT's approval and adoption.

- The New York State Franchise Oversight Board considered input from NYC DOT, an involved agency, and has not come to agreement with the Applicant, RWNYC, on information in the draft transportation chapter pertaining to trip generation rates associated with the casino use as well as the Applicant's exclusion of weekday traffic analysis. RWNYC used 2019 traffic counts from the site whereas NYC DOT suggests a trip generation rate based on 2013 and 2016 traffic counts from the site as well as those from other off-site casinos. Though mitigation is proposed within the DEIS, additional traffic studies and mitigation may be required prior to initiation of the project.

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 Actions 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;
- 50 peak hour Citywide Ferry Service (CWFS) ferry trips; and
- 200 peak hour pedestrian trips.

If the Proposed Actions result 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, highways, 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 existing operations of the Resorts World Casino New York facility, the *CEQR Technical* Manual, information from other New York City environmental impact studies such as the *Resorts World Casino Expanded EAS (2017)* and *Willets Point Development FSEIS (2013)*, and other sources. The assessment was conducted for Friday and Saturday, the peak days of RWNYC casino and proposed arena activities, during the periods with the highest travel demand (Friday PM, Saturday PM, and Saturday night periods).

The Friday PM peak hour coincides with the commuter peak period and is the weekday period with the highest level of background traffic volumes. Due to the presence of the RWNYC casino and neighboring Aqueduct Racetrack, existing background traffic volumes are higher on a Friday as compared to a conventional weekday (Tuesday, Wednesday, and Thursday). The Saturday PM peak hour overlaps with peak background traffic volumes on the roadway network, and the Saturday night peak hour overlaps with the peak of casino activities. The study area is in close proximity to JFK Airport, and as a result, highway traffic volumes peak during the Saturday midday period. Therefore, analyses were conducted for the Saturday midday period as it pertains to the highways as opposed to the intersection network, which peaks during the Saturday PM peak hour.

Table 11-2 provides the travel demand assumptions used.[2]

[2] The New York State Franchise Oversight Board considered input from NYC DOT, an involved agency, and has not come to agreement with the Applicant, RWNYC, on information in the draft transportation chapter pertaining to trip generation rates associated with the casino use as well as the applicant's exclusion of weekday traffic analysis. RWNYC used 2019 traffic counts from the site whereas NYC DOT suggests a trip generation rate based on 2013 and 2016 traffic counts from the site as well as those from other off-site casinos. Though mitigation is proposed within the DEIS, additional traffic studies and mitigation may be required prior to initiation of the project.

Table 11-2 Travel Demand Characteristics

Rates	Casino	Hotel	Conference Center	Arena	Ballroom
Person Trip Gen Rate (Weekday/Saturday)	8.05[1]/8.82[1] *daily rate per gaming position*	10.9/12.7[5] *daily rate per room*	46.2/46.2[9] *daily rate per 1,000 sf*	2.07/2.07[11] *daily rate per seat*	1,287/1,287 *Maximum occupancy*
Temporal Distribution					
Friday PM	5.6%[2]	8.0%[6]	12.7%[9]	35.0%[11]	80.0%[14]
Saturday Midday	5.1%[2]	4.6%[6]	14.4%[9]	35.0%[11]	80.0%[14]
Saturday PM	6.0%[2]	8.0%[6]	5.0%[9]	35.0%[11]	80.0%[14]
Saturday Night	7.1%[2]	6.6%[6]	0.0%[9]	37.5%[11]	20.0%[14]
Modal Split (Friday/Saturday)					
Auto	71% / 68%[3]	13% / 11%[7]	71% / 71%[9]	71% / 71%[12]	71% / 71%[12]
Taxi	2% / 2%[3]	2% / 2%[7]	8% / 8%[9]	8% / 8%[12]	8% / 8%[12]
Bus	3% / 3%[3]	0% / 0%[7]	4% / 4%[9]	2% / 2%[12]	4% / 4%[12]
Subway	20% / 19%[3]	0% / 0%[7]	15% / 15%[9]	15% / 15%[12]	15% / 15%[12]
Shuttle Bus	4% / 8%[3]	22% / 18%[7]	-	-	-
Charter Bus	-	-	-	4% / 4%[12]	-
Walk	0% / 0%[3]	63% / 69%[7] (internal trips)	2% / 2%[9]	0% / 0%[12]	2% / 2%[12]
Vehicle Occupancy					
Auto	2.06 / 2.13[3]	2.06 / 2.13[3]	2.30 / 2.60[9]	2.75 / 3.00[11]	2.20 / 2.20[14]
Taxi	1.42 / 1.55[3]	1.42 / 1.55[3]	1.80 / 1.70[9]	2.75 / 3.00[11]	2.30 / 2.30[14]
Shuttle Bus	25[4]	25[4]	-	-	-
Charter Bus	-	-	-	40[13]	-
Directional Split (In/Out)					
Friday PM	52%/48%[2]	52%/48%[6]	3%/97%[9]	100%/0%[11]	90%/10%[14]
Saturday Midday	62%/38%[2]	57%/43%[6]	50%/50%[9]	100%/0%[11]	90%/10%[14]
Saturday PM	50%/50%[2]	51%/49%[6]	5%/95%[9]	100%/0%[11]	90%/10%[14]
Saturday Night	52%/48%[2]	52%/48%[6]	50%/50%[9]	0%/100%[11]	100%/0%[14]
Delivery Trip Gen (Weekday/Saturday)	0.0/0.0[3] *daily rate per gaming position*	0.24/0.08[3] *daily rate per 1,000 sf*	0.70/0.04[9] *daily rate per 1,000 sf*	0.70/0.04[12] *daily rate per 1,000 sf*	0.0/0.0[14] *peak hour rate per seat*
Delivery Temporal Distribution					
Friday PM	0.0%[3]	0.0%[3]	0.0%[10]	0.0%[12]	0.0%[10]
Saturday Midday	0.0%[3]	9.0%[3]	0.0%[10]	0.0%[12]	0.0%[10]
Saturday PM	0.0%[3]	9.0%[3]	0.0%[10]	0.0%[12]	0.0%[10]
Saturday Night	0.0%[3]	0.0%[8]	0.0%[10]	0.0%[12]	0.0%[10]
Delivery Trip Directional Split (In/Out) – 50%/50%					

Source:

[1] March 2019 door counts of Resorts World Casino New York City

[2] October 2022 traffic counts of Resorts World Casino New York City parking garage

[3] *2017 Resorts World Casino Expanded EA*: Modal splits for casino and hotel uses were derived from the proportions of non-walk internal trips and then adjusted to account to reflect an increase of up to five shuttle round-trips per hour to serve new patrons

[4] Assumes an average shuttle bus occupancy of 25 for a 30-seat capacity vehicle capacity along specific routes to serve the casino use

[5] *2021 City Environmental Quality Review Technical Manual*

[6] NYC DOT survey data

[7] *2001 LaGuardia Hampton Inn EAS*: modal split adjusted to reflect internal trips between casino and hotel uses

[8] Saturday night delivery temporal distribution assumed to be the same as Friday PM peak hour

[9] *2013 Willets Point Development FGEIS*: Conference center use person trip temporal and direction distributions based on 24-hour parking accumulation data; conference center use modal split were adjusted to reflect a lower walk-only share based on the local travel characteristics

[10] No delivery trips are expected during the analysis peak hours

[11] *2019 Belmont Park Redevelopment Civil and Land Use Improvement Project FEIS*: Factors were determined based on arena parking demand for a hockey game (from Appendix F) and modal and auto occupancy rates presented in the FEIS. Temporals were rounded up to be more conservative (70 to 75 percent of arrival or departure period trips concentrated in one peak hour). It is expected that the arena would host one evening event per day; for purpose of a conservative analysis a Saturday early afternoon event was assumed for the Saturday midday peak hour.

[12] Assumed to be similar as that of the conference center use; for the Arena use, it was assumed a portion of bus riders would utilize coach buses providing shuttle service

[13] Assumes an average charter bus occupancy of 40 passengers for a 55-seat capacity vehicle

[14] *2013 Hudson Square Rezoning FEIS*: Saturday PM rates assumed to be the same as that for Saturday midday; Saturday night assumed to capture late arrivals

Casino

For the casino use, trip generation rates and temporal distributions were based on recent site-specific information collected at the existing RWNYC casino which are reflective of current operations on the Project Site. The trip generation rates of 8.05 person trips per gaming position for Friday and 8.82 person trips per gaming position for Saturday were based on pre-COVID door counts conducted by RWNYC at its facilities during the month of November 2019, which was the most active month in the year 2019. The counts accounted for trips to and from the casino gaming spaces as well as to the accessory retail and dining components of the casino. The temporal distributions of 5.6 percent during the Friday PM peak hour, 5.1 percent during the Saturday midday peak hour, 6.0 percent during the Saturday PM peak hour, and 7.1 percent during the Saturday night peak hour were obtained from 24-hour traffic counts of the RWNYC's parking garage conducted in October 2022.

Modal splits were obtained from the *Resorts World Casino Expanded EAS (2017)* and conservatively adjusted to not reflect internal casino trips linked with other proposed uses or the reintroduction of shuttle service; modal splits used were 71 percent by auto, 2 percent by taxi, 3 percent by bus, 13 percent by subway, and 11 percent by shuttle for Friday and 68 percent by auto, 2 percent by taxi, 3 percent by bus, 19 percent by subway, and 8 percent by shuttle for Saturday. Although there may be some walk trips to the casino use, they are expected to be minimal, and therefore, conservatively, no walk trips were assumed. The proposed casino use is expected to provide new shuttle service to nearby transportation facilities (such as the Jamaica Long Island Rail Road station) and neighborhoods where there is expected demand. The anticipated shuttle capacities generally range from 25 to 30 seats per shuttle; a shuttle vehicle occupancy of 25 seats per shuttle was assumed. Vehicle occupancies assumed were obtained from the *Resorts World Casino Expanded EAS (2017)*, which were based on prior surveys of the existing casino use—2.06 persons per auto and 1.42 persons per taxi were used for Friday, and 2.13 persons per auto and 1.55 persons per taxi were used for Saturday. The directional distributions of 52 percent "in" for the Friday PM peak hour, 62 percent "in" for the Saturday midday peak hour, 50 percent "in" for the Saturday PM peak hour and 52 percent "in" for the Saturday night peak hour were based on the casino's parking garage counts. Temporal distribution assumptions were also based on the casino's parking garage counts.

No casino deliveries are anticipated during the peak hours analyzed.

Hotel

The trip generation rates of 10.9 person trips per room for Friday and 12.7 person trips per room for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 8 percent for the Friday PM peak hour, 4.6 percent for the Saturday midday peak hour, 8 percent for the Saturday PM peak hour, and 6.6 percent for the Saturday night peak hour were obtained from NYC DOT survey data. The modal split assumptions were based on information from the *LaGuardia Hampton Inn EAS (2001)*, which included surveys of hotels located close to an airport and which had shuttle service provided. The proposed hotel use is expected to provide shuttle service to JFK International Airport, with anticipated shuttle capacities ranging from 25 to 30 seats per shuttle; a shuttle vehicle occupancy of 25 seats per shuttle was assumed.

Due to the nature of the Project Site, it is expected that the vast majority of hotel trips would be internal within the Project Site, primarily between the casino and the hotel. It was assumed that each hotel room would be occupied by 2 people and that each hotel room would be turned over during the day (that is, 2 person trips leave each hotel room in the morning and 2 person trips arrive at each hotel room in the afternoon/evening, totaling 4 person trips that would be external to the Project Site) and the remaining trips would be internal site walk trips between the casino and hotel. The Friday modal splits used were 13 percent by auto, 2 percent by taxi, 22 percent by shuttle, and 63 percent by walk (walk trips were assumed to be internal site trips between the casino and hotel)—with vehicle occupancies of 2.06 persons per auto and 2.13 persons per taxi, similar to the casino use and consistent with the *Resorts World Casino Expanded EAS (2017)*. The Saturday modal splits used were 11 percent by auto, 2 percent by taxi, 18 percent by shuttle, and 69 percent by walk—with vehicle occupancies of 2.13 persons per auto and 1.55 persons per taxi, similar to the casino use and consistent with the *Resorts World Casino Expanded EAS (2017)*. The directional distributions used follow the same assumptions as the temporal distributions, and the directional distributions used were 54 percent "in," 53 percent "in," 53 percent "in," and 60 percent "in" for the Friday PM, Saturday midday, Saturday PM, and Saturday night peak hours, respectively.

For hotel delivery trips, daily trip generation rates of 0.24 trips per 1,000 sf for Friday and 0.08 trips per 1,000 sf for Saturday were assumed and obtained from the *Resorts World Casino Expanded EAS (2017)*. A temporal distribution of 0 percent for the Friday PM peak hour, 9 percent for the Saturday midday peak hour and 9 percent for the Saturday PM peak hour were also obtained from the *Resorts World Casino Expanded EAS (2017)*; the Saturday night peak hour temporal distribution was assumed to be the same as the Friday PM peak hour.

Conference Center

The travel demand assumptions used for the conference center space were obtained from the *Willets Point Development FSEIS (2013*), with the assumptions based on the 24-hour temporal and directional distribution information of that EIS's convention/expo facility. The trip generation rate used was 46.2 person trips per 1,000 sf for the Friday and Saturday analysis peak hours, and temporal distributions were assumed at 12.7 percent, 14.4 percent, 5 percent, and 0 percent during the Friday PM, Saturday midday, Saturday PM, and Saturday night peak hours, respectively. A 10-percent linked trip credit was assumed between the conference center space and the casino and hotel uses. The modal splits used were 71 percent by auto, 8 percent by taxi, 4 percent by bus, 15 percent by subway, and 2 percent by walk for Friday and Saturday peak hours, which include adjustments that reflect a lower walk-only share based on the local travel characteristics. The vehicle occupancies used were 2.30 persons per auto and 1.80 persons per taxi for the Friday peak hour and 2.60 persons per auto and 1.70 persons per taxi for Saturday peak hours. The directional distributions used were 3 percent "in" for the Friday peak hour, 50 percent "in" for the Saturday midday and Night peak hours, and 5 percent "in" for the Saturday PM peak hour. A 10-percent linked trip credit was assumed between the conference center and the casino and hotel uses.

For conference center space delivery trips, daily trip generation rates were assumed at 0.70 trips per 1,000 sf for Friday and 0.04 trips per 1,000 sf for Saturday. However, no delivery trips are expected during the peak hours analyzed.

Arena

Trip generation rates, directional distributions, and vehicle occupancy rates were obtained from the *Belmont Park Redevelopment Civic and Land Use Improvement Project FEIS (2019)*. The trip generation rate of 2.07 person trips per seat was used for the Friday and Saturday analysis peak hours. The directional distributions used were 3 percent "in" for the Friday peak hour, 50 percent "in" for the Saturday midday and Night peak hours, and 5 percent "in" for the Saturday PM peak hour, respectively. The vehicle occupancies used were 2.75 persons per auto and taxi for the Friday peak hour and 3.00 persons per auto and taxi for Saturday peak hours. Temporal distributions were also based on the *Belmont Park Redevelopment Civil and Land Use Improvement Project FEIS (2019)* and then rounded up to be more conservative. The temporal distributions used were 35 percent for Friday, Saturday midday, and Saturday PM peak hours and 37.5 percent for the Saturday night peak hour. It is expected that on event days the arena would host one event in the evening; for the purpose of a conservative analysis, a Saturday early afternoon event was assumed for the Saturday midday peak hour. The modal splits used were 71 percent by auto, 8 percent by taxi, 2 percent by bus, 15 percent by subway, and 4 percent by charter bus for Friday and Saturday peak hours, similar to the conference center use but with an adjustment to account for charter bus service. A 10-percent linked trip credit was assumed between the arena and the casino and hotel uses.

For arena delivery trips, daily trip generation rates were assumed at 0.70 trips per 1,000 sf for Friday and 0.04 trips per 1,000 sf for Saturday, similar to the conference center use. However, no delivery trips are expected during the peak hours analyzed.

Ballroom

For the ballroom use, a maximum occupancy rate of 1,287 people was used for the Friday and Saturday peak hours. Temporal and directional distributions as well as vehicle occupancy rates were obtained from the *Hudson Square Rezoning FEIS (2013)*. The temporal distribution was assumed at 80 percent, with a directional distribution of 90 percent "in," for Friday PM and Saturday midday peak hours. For the Saturday PM peak hour, temporal distribution was assumed at 80 percent, with a directional distribution of 90 percent "in," similar to the Saturday midday peak hour. For the Saturday night peak hour, a temporal distribution of 20 percent, with a directional distribution of 100 percent "in," was used to capture late patron arrivals. The modal splits used were 71 percent by auto, 8 percent by taxi, 4 percent by bus, 15 percent by subway, and 2 percent by walk for all peak hours, similar to the conference center use. The vehicle occupancies used were 2.20 persons per auto and 2.30 per taxi. A 10-percent linked trip credit was assumed between the ballroom and the casino and hotel uses.

No ballroom use delivery trips are expected during the peak hours analyzed.

Level 1 Screening Results

Transit and Pedestrians

The number of person trips generated by the Expansion Project is provided in **Table 11-3**. The number of bus and subway transit trips as well as external walk-only trips[3] are summarized below:

[3] The vast majority of pedestrian trips would be walk trips within the Aqueduct Racetrack property (between transit facilities and the Development Site or internal trips between proposed new onsite uses), and would not use the public street network. Pedestrian walk trip results shown are only for trips that would enter or exit the Project Site (external walk-only trips).

- During the Friday PM peak hour, the project would generate 167 bus trips, 1,144 subway trips, and 10 external walk-only trips.
- During the Saturday midday peak hour, the project would generate 165 bus trips, 1,114 subway trips, and 9 external walk-only trips.
- During the Saturday PM peak hour, the project would generate 191 bus trips, 1,234 subway trips, and 15 external walk-only trips.
- During the Saturday night peak hour, the project would generate 188 bus trips, 1,286 subway trips, and 5 external walk-only trips.

As the number of trips generated by the Expansion Project would be expected to exceed the *CEQR Technical Manual* Level 1 screening thresholds for subway transit trips, a Level 2 trip screening assessment is needed to determine the scope of detailed subway analyses. A Level 2 screening assessment (trip assignment) for buses and pedestrians is not needed, since the number of bus and pedestrian trips would not exceed Level 1 screening thresholds.

Table 11-3 Trip Generation Summary – Person Trips

	Friday PM Peak Hour			Saturday Midday Peak Hour			Saturday PM Peak Hour			Saturday Night Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	4,630	476	5,106	4,519	410	4,929	4,689	797	5,486	1,194	4,423	5,617
Taxi	464	0	464	443	7	450	469	29	498	59	428	487
Bus	154	13	167	150	15	165	159	32	191	51	137	188
Subway	1,012	132	1,144	1,001	113	1,114	1,028	206	1,234	304	982	1,286
Shuttle	181	167	348	182	122	304	223	217	440	223	206	429
Charter	183	0	183	183	0	183	183	0	183	0	196	196
Walk (External)	17	-7	10	12	-3	9	17	-2	15	5	0	5
Walk (Internal)	400	369	769	322	243	565	501	481	982	421	389	810
Total	**7,041**	**1,150**	**8,191**	**6,812**	**907**	**7,719**	**7,269**	**1,760**	**9,029**	**2,257**	**6,761**	**9,018**

Traffic and Parking

Table 11-4 summarizes the total peak-hour vehicular volumes ("ins" plus "outs") for the Proposed Actions. The Proposed Actions would result in 2,458, 2,239, 2,533, and 2,548 incremental vehicle trips during the Friday PM, Saturday midday, Saturday PM, and Saturday night peak hours, respectively. During the analysis peak hours, the Proposed Actions are expected to exceed the CEQR threshold of 50 vehicle trip ends, therefore a Level 2 trip assignment is needed to determine the scope of the detailed traffic analysis.

Table 11-4 Trip Generation Summary – Vehicle Trips

	Friday PM Peak Hour			Saturday Midday Peak Hour			Saturday PM Peak Hour			Saturday Night Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	1,835	246	2,081	1,688	208	1,896	1,752	384	2,136	558	1,603	2,161
Taxi[1]	178	178	356	158	158	316	183	183	366	181	181	362
Shuttle[1]	8	8	16	8	8	16	10	10	20	10	10	20
Charter Bus	5	0	5	5	0	5	5	0	5	0	5	5
Truck	0	0	0	3	3	6	3	3	6	0	0	0
Total	**2,026**	**432**	**2,458**	**1,862**	**377**	**2,239**	**1,953**	**580**	**2,533**	**749**	**1,799**	**2,548**

[1] As the Development Site is a high trip generator, a taxi overlap of 25 percent was assumed. For the casino and hotel shuttles an overlap of 100 percent was assumed as these vehicles would be conducting round trips.

Level 2 Screening Assessment

As shown above, the number of trips generated by the Proposed Actions would exceed the *CEQR Technical Manual* Level 1 screening threshold for vehicle and subway trips in one or more analysis peak hours. The following summarizes the Level 2 trip assignments and screening assessment that identified the locations selected for detailed level of service analysis, where warranted.

Traffic

Project-generated vehicle trips were assigned through the surrounding street and highway network based on expected routes to and from the Project Site and the configuration of the street and highway network within the vicinity of the Project Site. Intersection traffic volume increment maps for the Friday PM, Saturday PM, and Saturday night peak hours are shown in **Table 11-2** through **Figure 11-13**.[4] Highway traffic volume increment maps for the Friday PM, Saturday midday, and Saturday night peak hours are shown in **Figure 11-14** through **Figure 11-16**.[5]

Casino and Hotel

Casino- and hotel-use auto and taxi trip distributions were based upon pre-COVID zip code data of RWNYC visitors and existing traffic patterns in the vicinity of the Project Site. Approximately 38 percent of these trips are assumed to originate from Queens, 28 percent from Brooklyn, 23 percent from Long Island, five percent from the Manhattan, two percent from the Bronx, two percent from Staten Island, one percent from New York counties north of the city (Westchester, Yonkers, and the rest of Upstate New York), and one percent from New Jersey.

[4] Due to the size of the study area, the traffic volume figures of the area are shown in four sections.

[5] Although the Proposed Actions would generate higher traffic activities during the Saturday PM peak hour, the background highway traffic volumes during the Saturday midday peak hour were higher than during the Saturday PM peak hour, and the combined project-generated highway trips and background traffic volumes was determined to be higher during the Saturday midday peak hour than the Saturday PM peak hour analyzed for the local street network.

Auto and taxi trips were distributed to direct and logical routes between origin areas and the Project Site. The majority of trips were distributed to use the area's highway connectors. Approximately 26 percent of trips were assigned to the Van Wyck Expressway, 37 percent to the Belt Parkway, and two percent to the Nassau Expressway. The remaining 35 percent of trips were distributed along local major streets and arterials, including Cross Bay Boulevard (3 percent), Woodhaven Boulevard (9 percent), 111th Street (3 percent), Linden Boulevard (2 percent), 109th Avenue (3 percent), North and South Conduit Avenues (1 and 2 percent, respectively), and Rockaway Boulevard (12 percent).

Conference Center Space

The distribution of auto and taxi trips that would be generated by the conference center space were based on 2020 five-year American Community Survey population data of Public Use Microdata Areas (PUMAs) within an approximately 10-mile radius of the Project Site. According to these data, approximately 37 percent of the population within these PUMAs is located in Brooklyn, 33 percent in Queens, 14 percent in Manhattan, 9 percent on Long Island, and 7 percent in the Bronx.

Auto and taxi trips were distributed to direct and logical routes between origin areas and the Project Site. Approaching the Project Site, the majority of trips were distributed to use the area's highway connectors. Approximately 21 percent of inbound trips were assigned to the Van Wyck Expressway, 34 percent to the Belt Parkway, and 11 percent to Nassau Expressway. The remaining 34 percent of trips were distributed along local major streets, including Woodhaven Boulevard (9 percent), Rockaway Boulevard (6 percent), and Lefferts Boulevard (1 percent), and along the following local minor streets that serve as connections to arterials: 111th Street (3 percent), 109th Street (6 percent), 107th Street (4 percent), and 104th Street (5 percent).

Arena and Ballroom Space

The distribution of auto and taxi trips that would be generated by the arena and ballroom spaces were based on the PUMA data. Approaching the Project Site, the majority of trips were distributed to use the area's highway connectors based on the following distribution: approximately 31 percent of inbound trips were assigned to the Van Wyck Expressway, 34 percent to the Belt Parkway, and 11 percent to Nassau Expressway. The remaining 24 percent of trips were distributed along local major streets, including Woodhaven Boulevard (4 percent), Rockaway Boulevard (7 percent), and Lefferts Boulevard (1 percent), and along the following local minor streets that serve as connections to arterials: 111th Street (3 percent), 109th Street (1 percent), 107th Street (4 percent), and 104th Street (4 percent).

Shuttle, Charter Bus and Delivery Trips

Shuttle trips were assigned along anticipated pickup/drop-off routes for the casino and hotel uses, accessing the Project Site through the Rockaway Boulevard entrance. For casino shuttle trips, 45 percent of vehicles were assigned along Rockaway Boulevard, 45 percent along the Van Wyck Expressway, and 10 percent along Woodhaven Boulevard. All hotel shuttles were assigned along Rockaway Boulevard, to and from JFK Airport.

For arena charter bus trips, 75 percent of vehicles were assigned along the Van Wyck Expressway and 25 percent along Rockaway Boulevard. These trips were also assigned to the Rockaway Boulevard entrance.

Delivery trips were assigned along Rockaway Boulevard, which is a NYC DOT-designated truck route.

Subways

There are two subway stations located within the Aqueduct Racetrack property close to the Project Site—the Aqueduct Racetrack subway station and the Aqueduct – North Conduit Avenue subway station (both stations are served by the A subway line). All project-generated subway trips were assigned to these two stations. The Aqueduct Racetrack subway station provides service only in the northbound direction from a single platform. The Aqueduct – North Conduit Avenue station provides service in both directions with two platforms, one on either side of the tracks. The fare control area in the north end of the station, which is located within the Aqueduct Racetrack property and would be used by project-generated trips, provides service only in the southbound direction, while northbound and southbound service is provided at the south end of the station near North Conduit Avenue.

Pedestrians

Pedestrian trips would originate from the surrounding residential neighborhoods adjacent to the Aqueduct Racetrack property. Pedestrians can enter the property via the Rockaway Beach Boulevard and Aqueduct Road intersection to the north, the end of Pitkin Avenue to the west, and via a walkway that starts adjacent the entrance to the Aqueduct – North Conduit Avenue subway station located south of the Project Site.

Figure 11-2 Intersection Traffic Volume Increments – Friday PM Peak Hour – Section 1

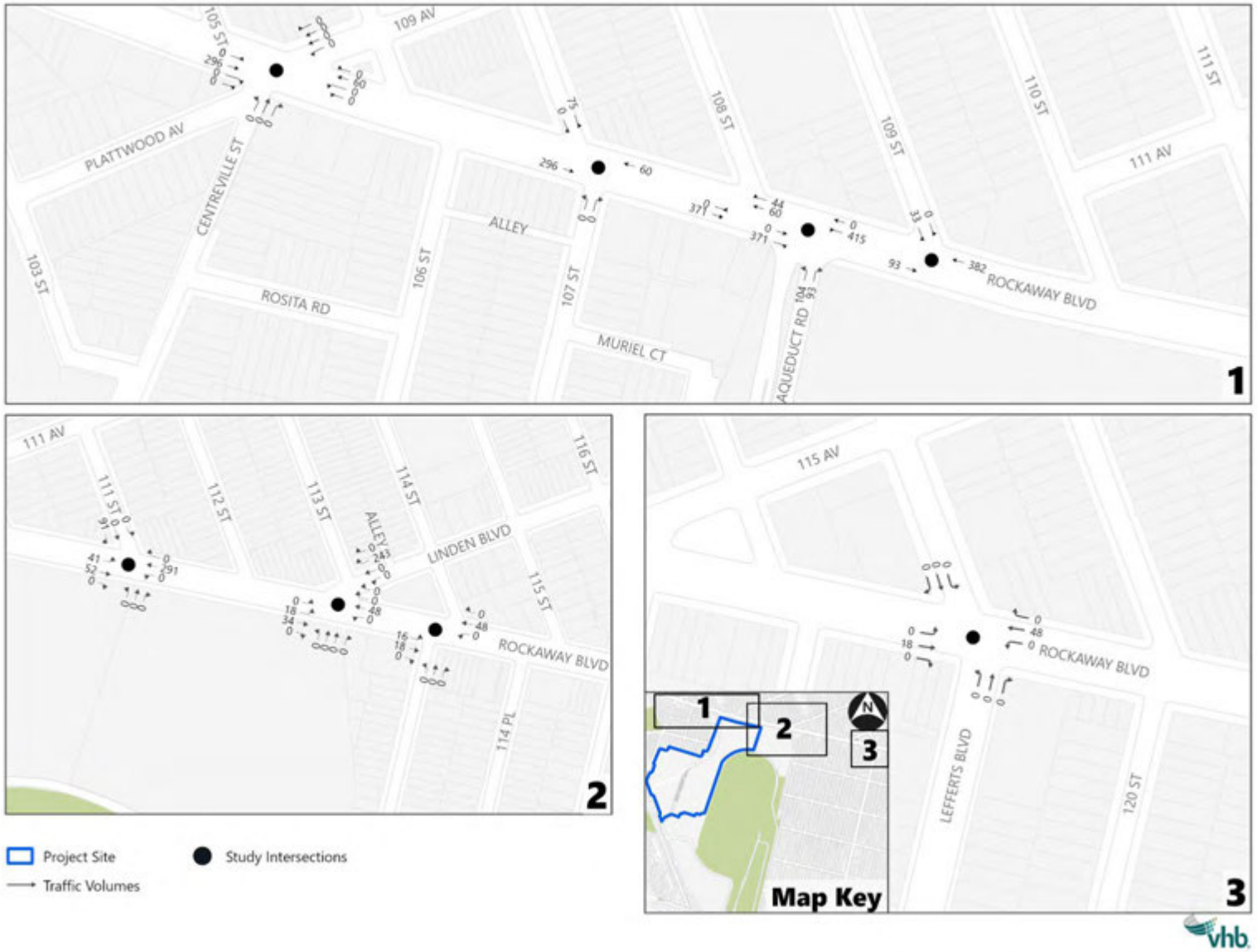


Figure 11-3 Intersection Traffic Volume Increments – Friday PM Peak Hour – Section 2

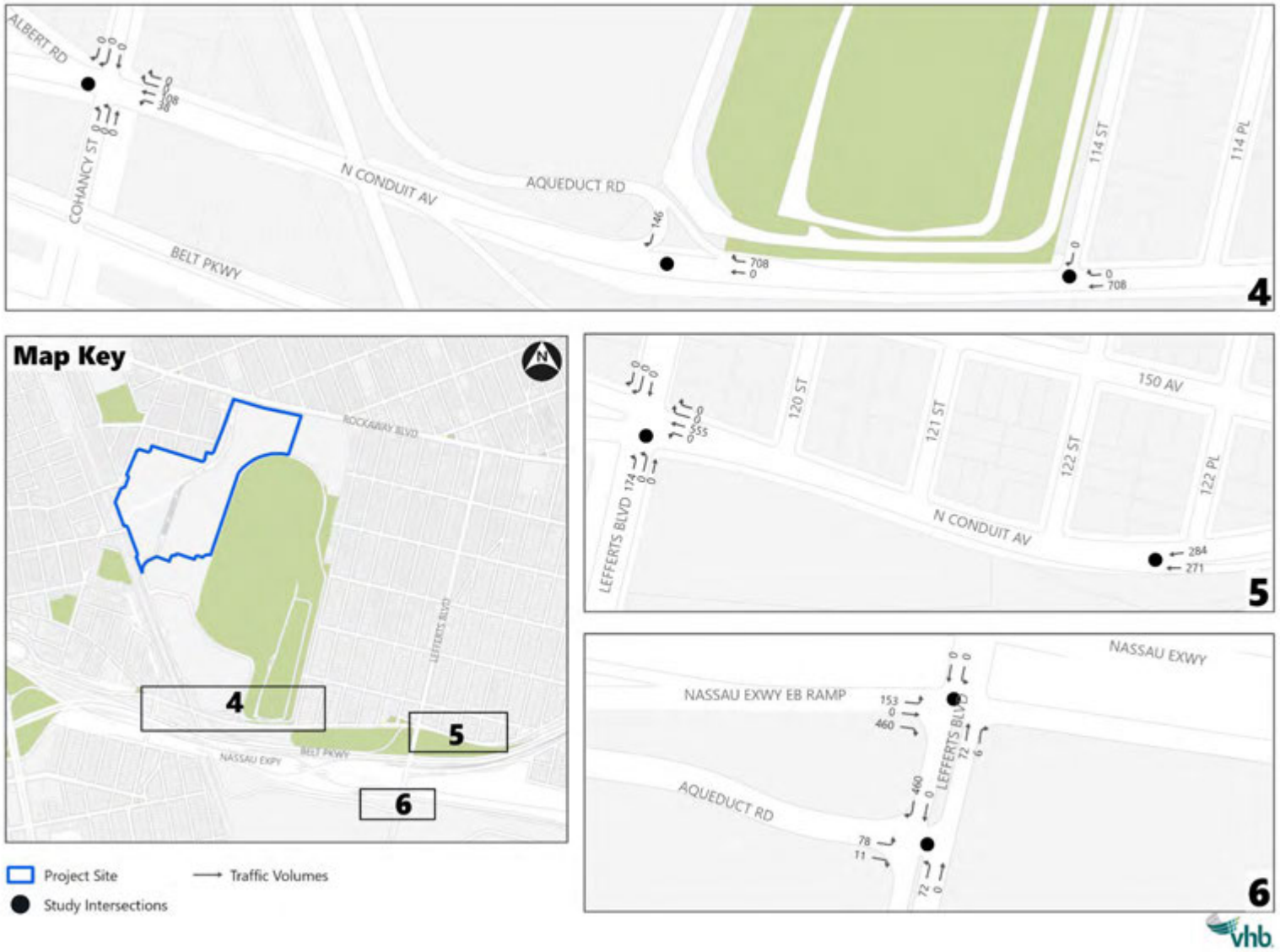


Figure 11-4 Intersection Traffic Volume Increments – Friday PM Peak Hour – Section 3

Figure 11-5 Intersection Traffic Volume Increments – Friday PM Peak Hour – Section 4

Figure 11-6 Intersection Traffic Volume Increments – Saturday PM Peak Hour – Section 1

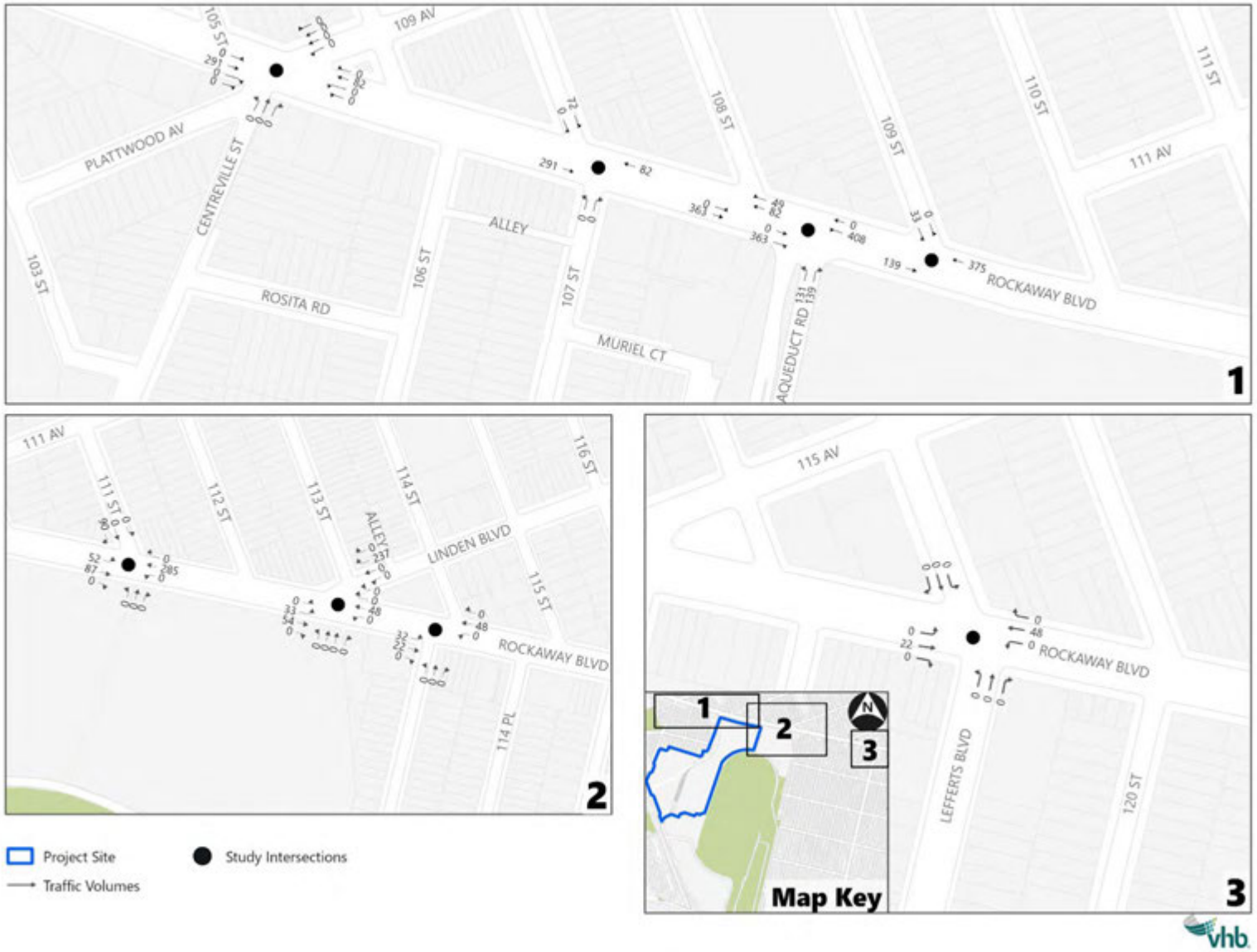


Figure 11-7 Intersection Traffic Volume Increments – Saturday PM Peak Hour – Section 2

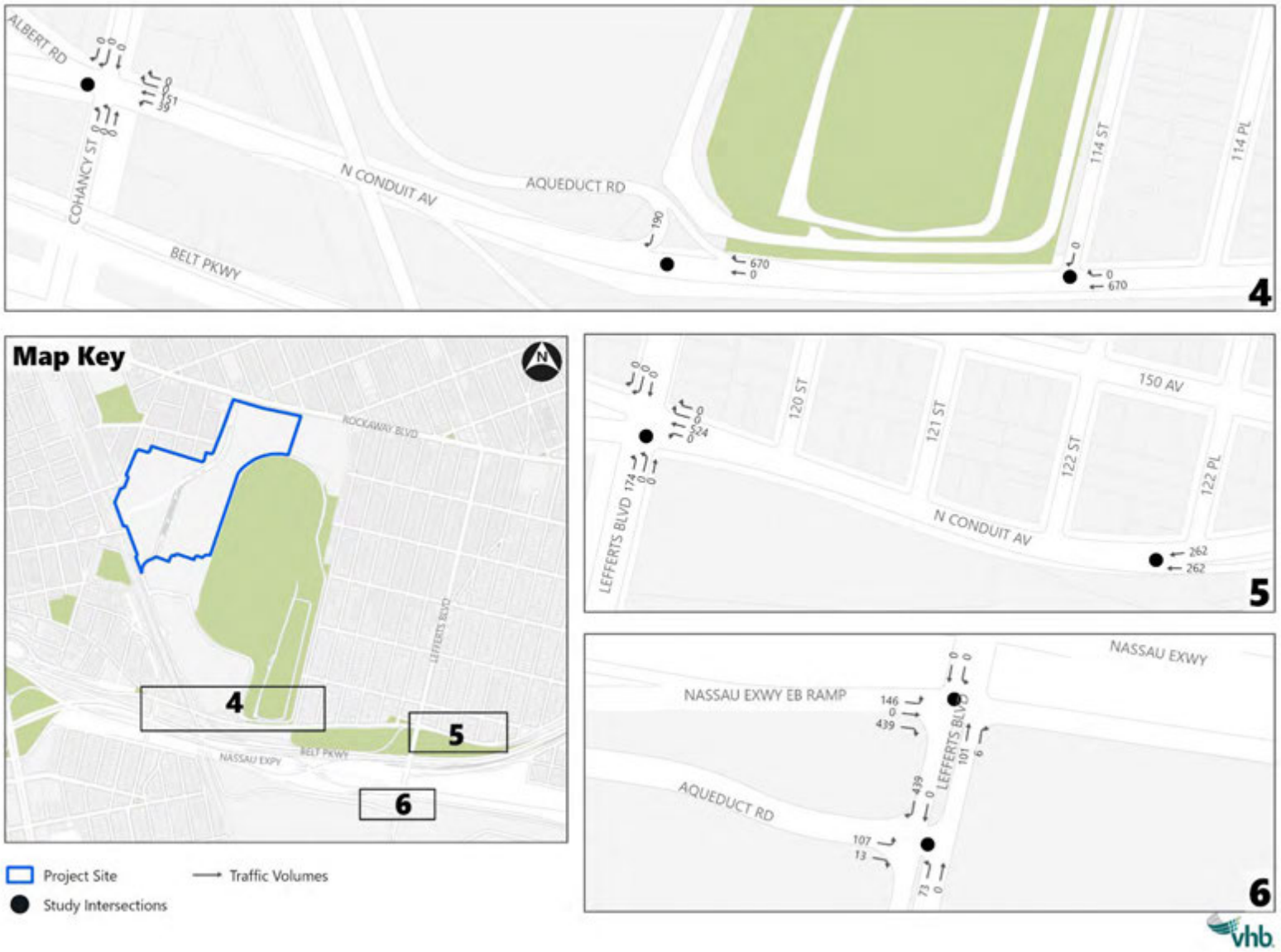


Figure 11-8 Intersection Traffic Volume Increments – Saturday PM Peak Hour – Section 3

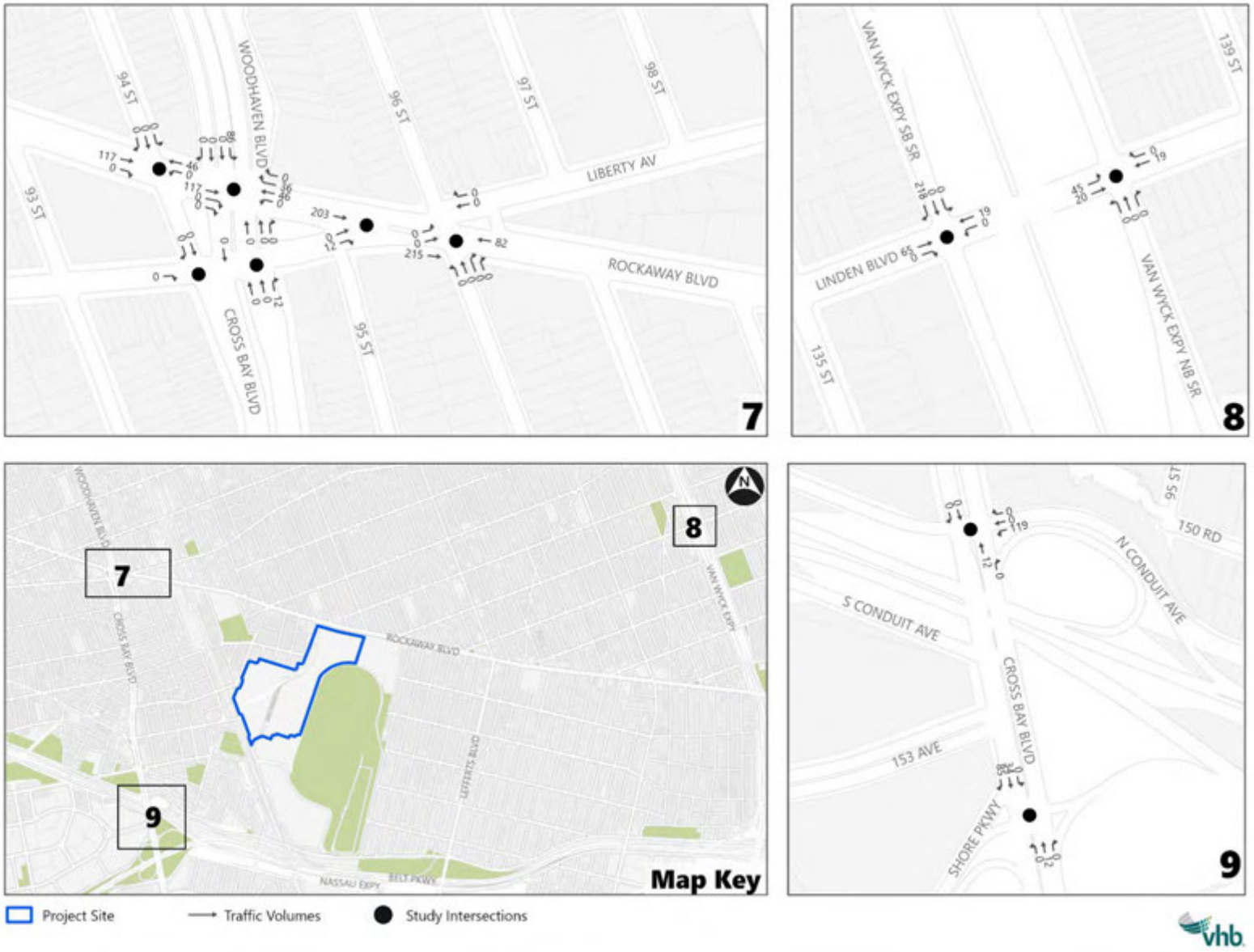


Figure 11-9 Intersection Traffic Volume Increments – Saturday PM Peak Hour – Section 4

Figure 11-10 Intersection Traffic Volume Increments – Saturday Night Peak Hour – Section 1

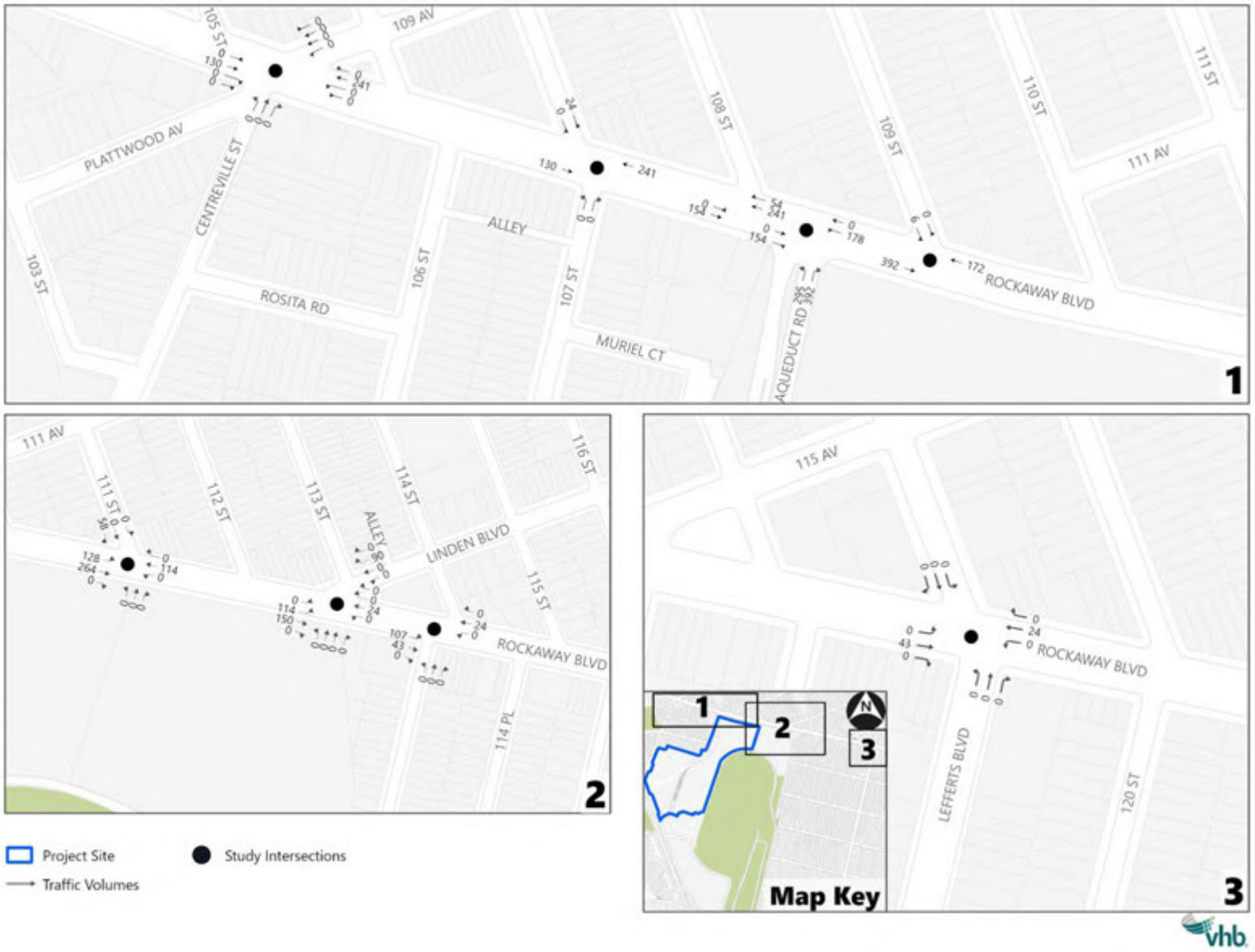


Figure 11-11 Intersection Traffic Volume Increments – Saturday Night Peak Hour – Section 2

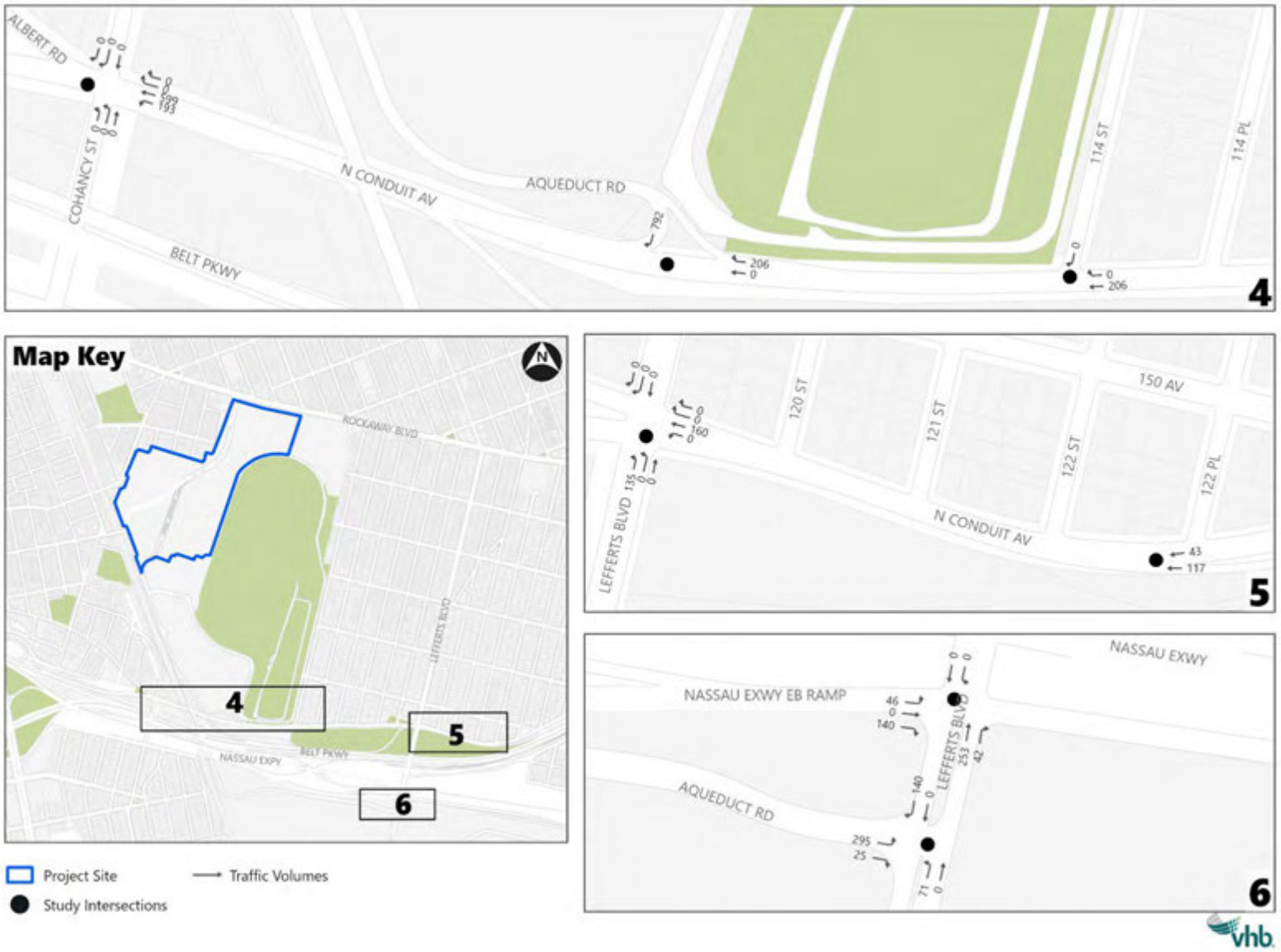


Figure 11-12 Intersection Traffic Volume Increments – Saturday Night Peak Hour – Section 3

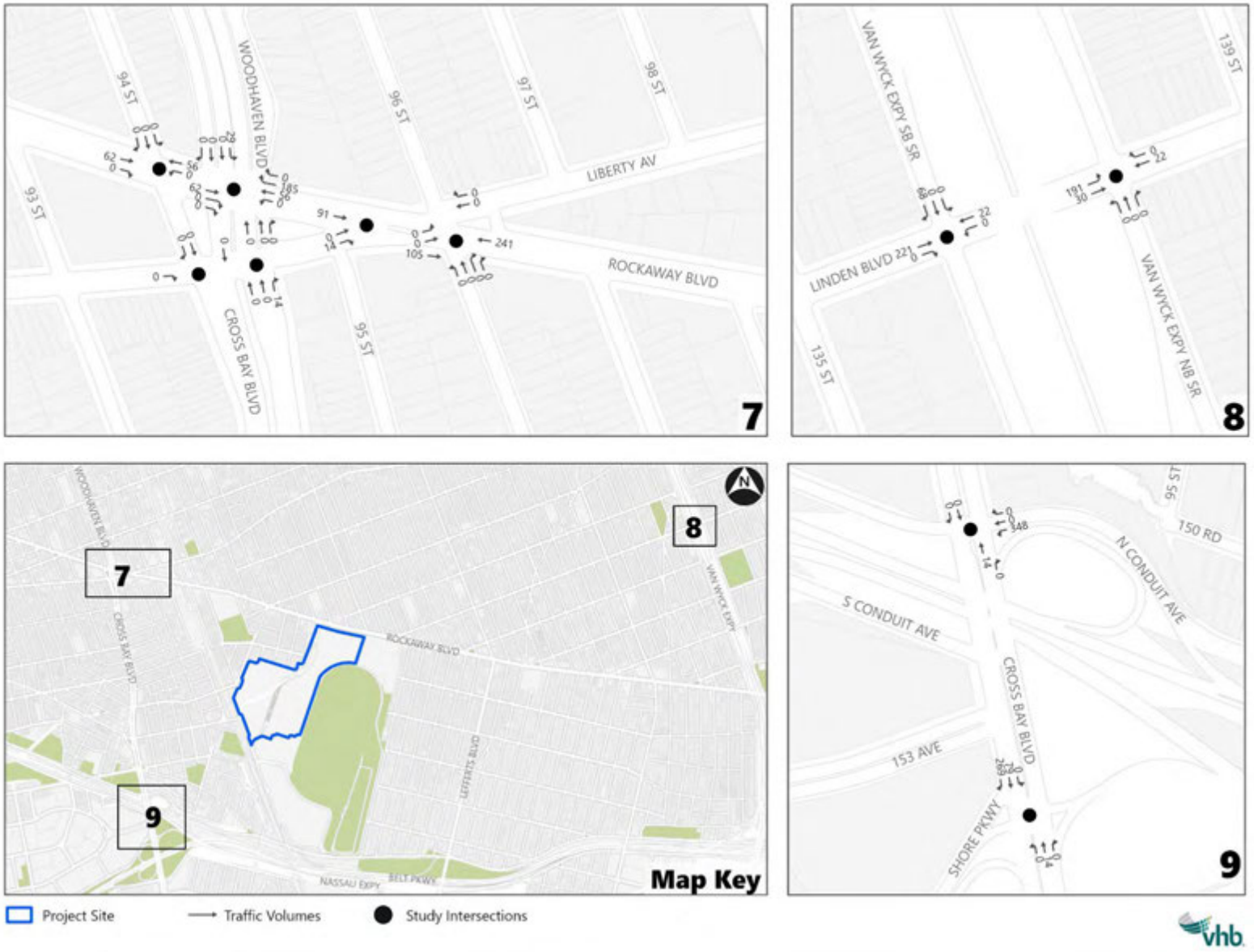


Figure 11-13 Intersection Traffic Volume Increments – Saturday Night Peak Hour – Section 4

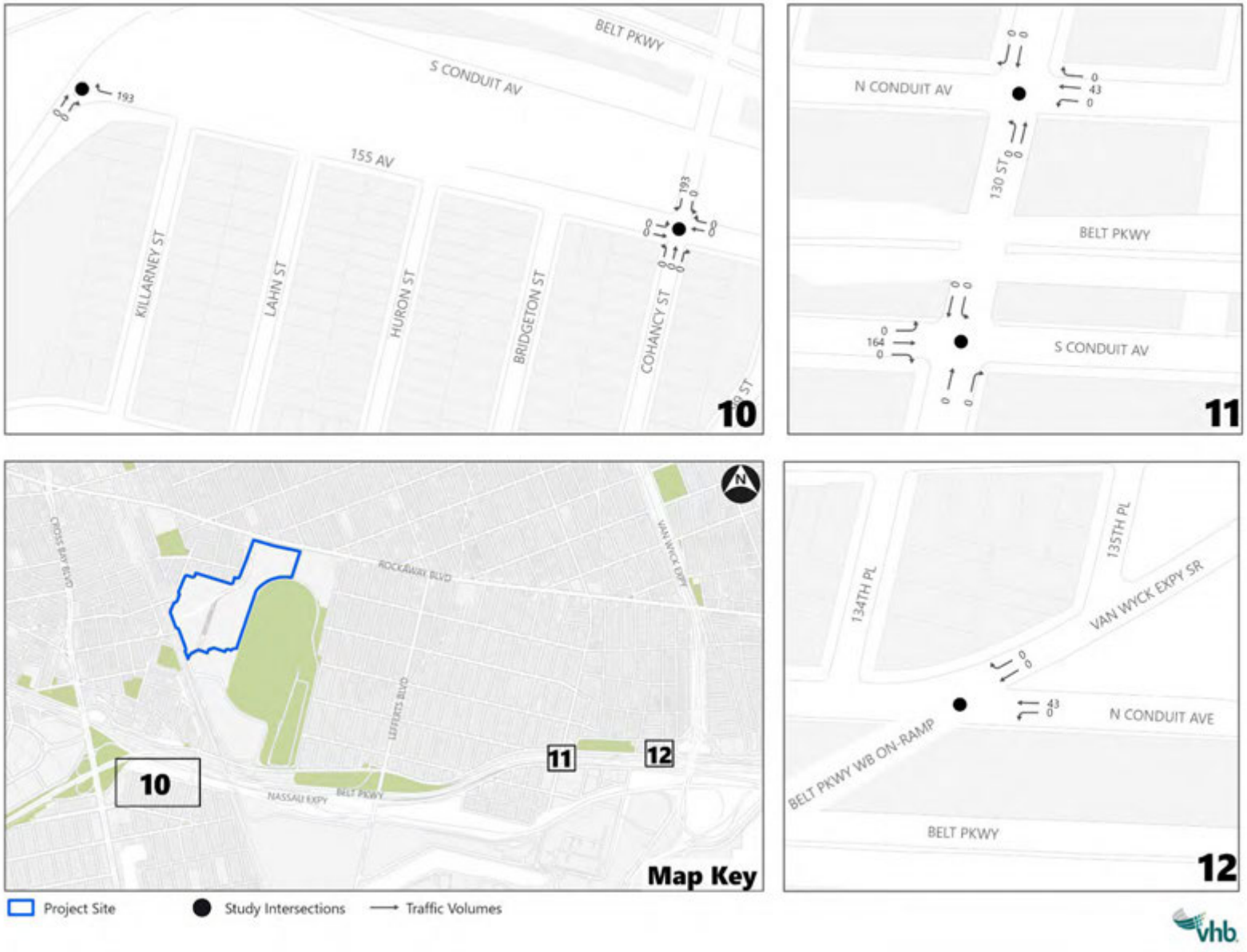


Figure 11-14 Highway Traffic Volume Increments – Friday PM Peak Hour

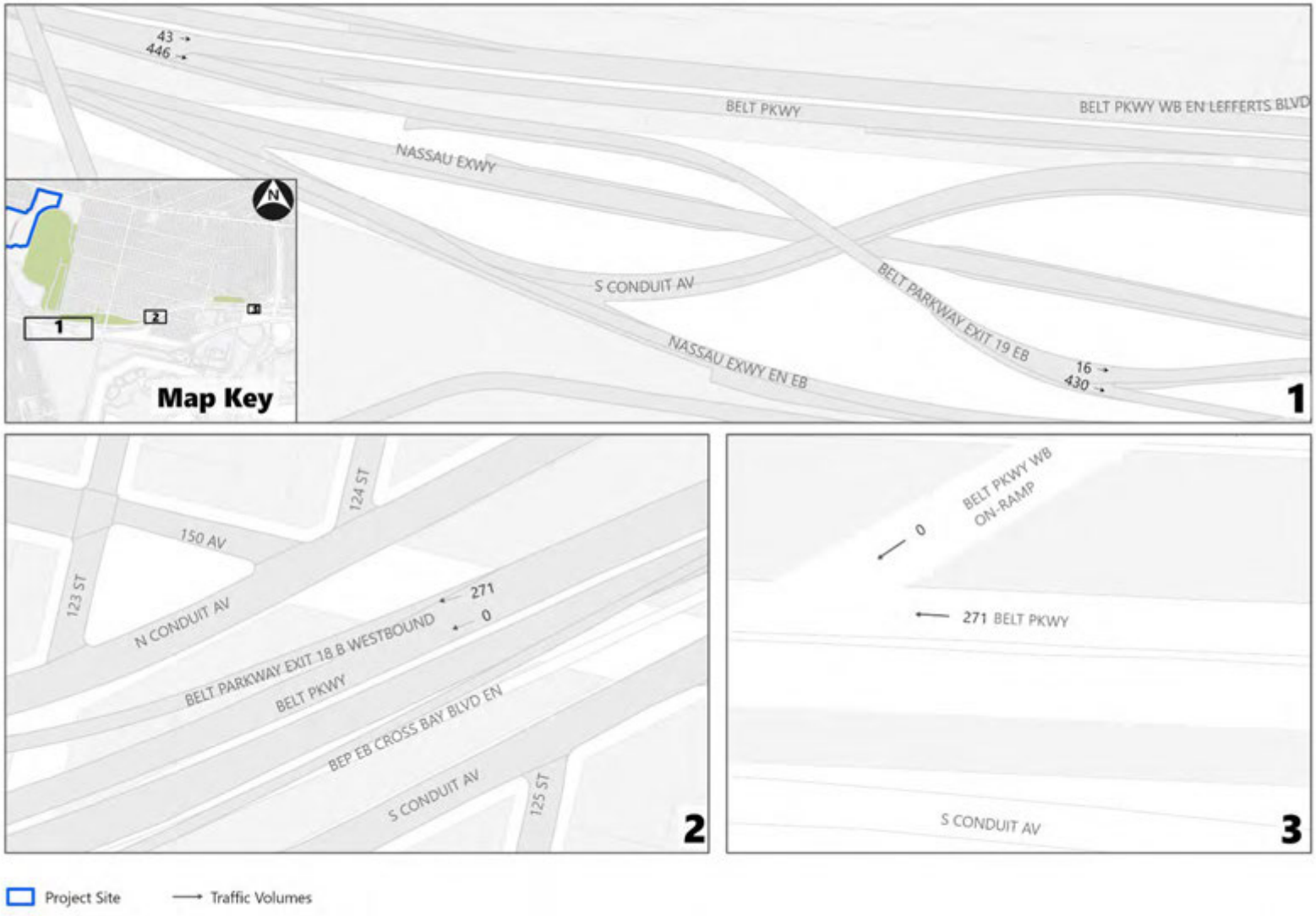


Figure 11-15 Highway Traffic Volume Increments – Saturday Midday Peak Hour

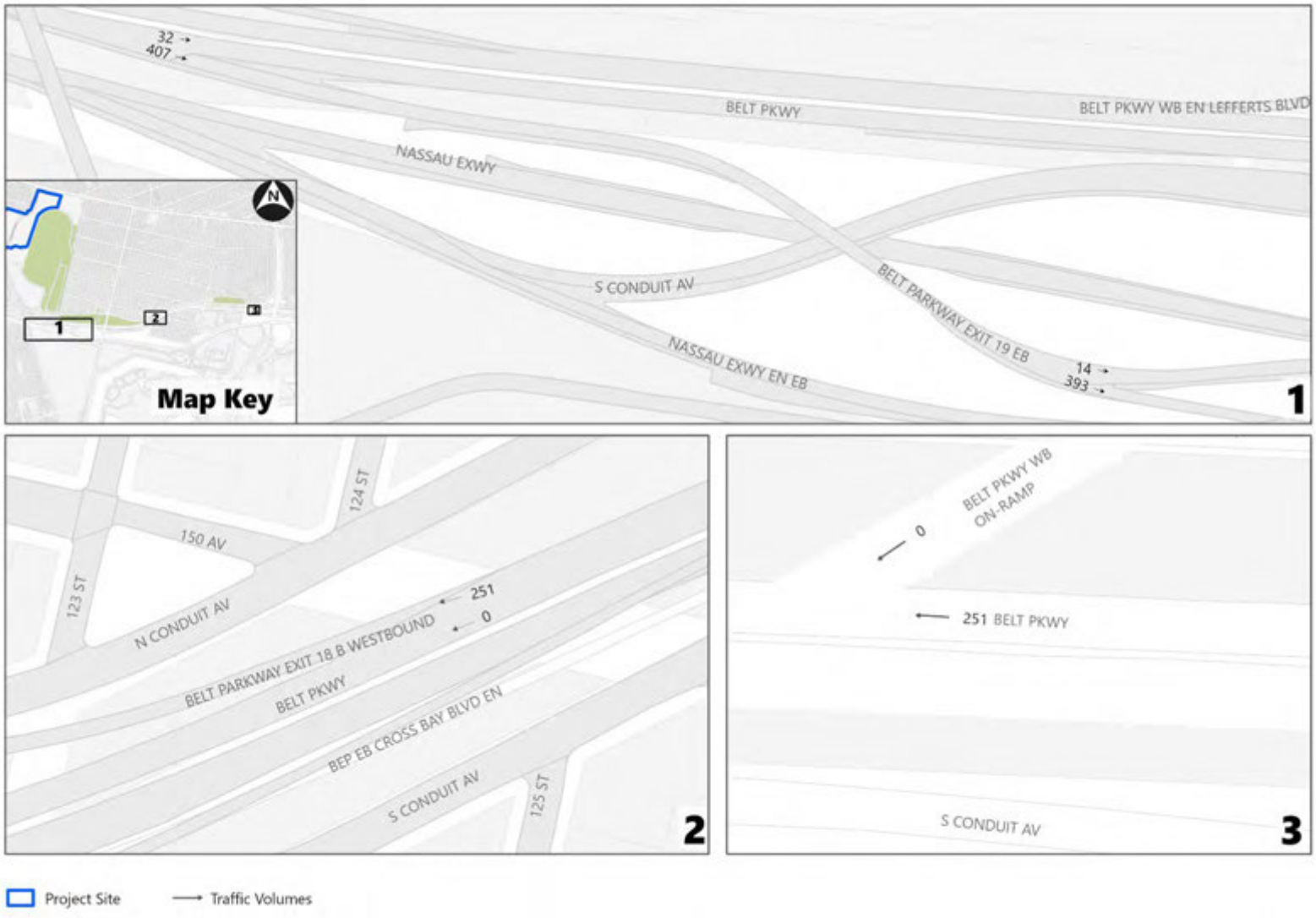
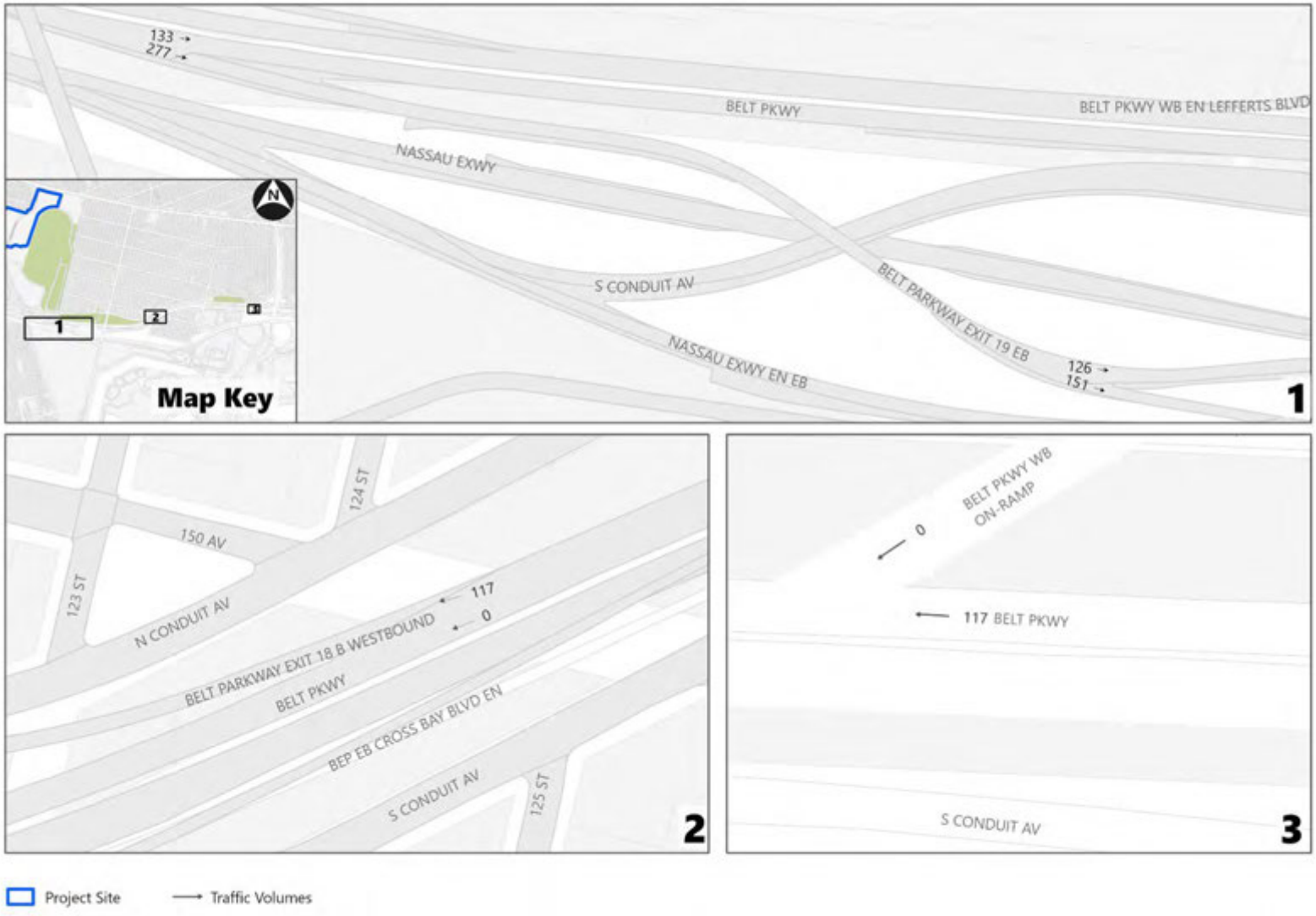


Figure 11-16 Highway Traffic Volume Increments – Saturday Night Peak Hour



Level 2 Screening Results

Intersection Traffic

Project-generated traffic volumes are expected to travel along the major local arterials, such as Rockaway Boulevard, North Conduit Avenue, Lefferts Boulevard, Cross Bay Boulevard, and Woodhaven Boulevard to and from the Project Site, and nearby highways and other neighborhoods. Key representative intersections along these routes and at the Project Site were selected for detailed analysis. These locations include intersections likely to be used by concentrations of project-generated traffic adjacent to the Project Site as well as critical intersections that serve as points of entry into the South Ozone neighborhood.

Based on the vehicular traffic assignments described above, the following 31 intersections listed below and shown in **Figure 11-17** were selected for detailed analysis during the Friday PM, Saturday PM and Saturday night peak hours:

- Rockaway Boulevard and 94th Street
- Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard
- Liberty Avenue and Rockaway Boulevard
- Rockaway Boulevard/Liberty Avenue and 96th Street
- Cross Bay Boulevard Northbound Service Road and Liberty Avenue
- Cross Bay Boulevard and Liberty Avenue
- Liberty Avenue and 94th Street
- Rockaway Boulevard and Centreville Street/109th Avenue/Plattwood Avenue
- Rockaway Boulevard and 107th Street
- Rockaway Boulevard and Aqueduct Road/108th Street
- Rockaway Boulevard and 109th Street
- Rockaway Boulevard and 111th Street/Home Deport Parking Lot
- Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot
- Rockaway Boulevard and 114th Street
- Rockaway Boulevard and Lefferts Boulevard
- Cross Bay Boulevard and North Conduit Avenue
- Cross Bay Boulevard and Shore Parkway/Nassau Expressway Eastbound On-Ramp
- North Conduit Avenue and Cohancy Street/Albert Road
- North Conduit Avenue and Aqueduct Road
- North Conduit Avenue and 114th Street
- North Conduit Avenue and Lefferts Boulevard/Old South Road
- Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp
- Lefferts Boulevard and Aqueduct Road
- Linden Boulevard and Southbound Van Wyck Service Road
- Linden Boulevard and Northbound Van Wyck Service Road
- North Conduit Avenue and Belt Parkway Westbound Off-Ramp

- 155th Avenue and Belt Parkway Eastbound On-Ramp
- 155th Avenue and Cohancy Street
- North Conduit Avenue and 130th Street
- South Conduit Avenue and 130th Street
- North Conduit Avenue and Belt Parkway Westbound On-Ramp/ Van Wyck Expressway Service Road

Highways

In order to assess the effects that project-generated trips would have on highways within the vicinity of the Project Site, in particular the Belt Parkway, the following eleven highway segments where project-generated trips would be most concentrated were also selected for detailed analysis during the Friday PM, Saturday midday, and Saturday night peak hours:

- Westbound Belt Parkway on-ramp from Van Wyck Expressway/North Conduit Avenue intersection to westbound North Conduit Avenue/Lefferts Boulevard (Exit 18B) off-ramp
  - Belt Parkway before on-ramp from Van Wyck Expressway/North Conduit Avenue intersection (Upstream Basic Freeway)
  - Belt Parkway merging segment with on-ramp from Van Wyck Expressway/North Conduit Avenue intersection (Merge Freeway)
  - Belt Parkway before Exit 18B off-ramp (Overlap Freeway)
  - Belt Parkway diverging segment with Exit 18B off-ramp (Diverge Freeway)
  - Belt Parkway after Exit 18B off-ramp (Downstream Basic Freeway)
- Eastbound Belt Parkway Exit 19 off-ramp to Nassau Expressway/Lefferts Boulevard
  - Belt Parkway before Exit 19 off-ramp (Upstream Basic Freeway)
  - Belt Parkway diverging segment with Exit 19 off-ramp (Diverge Freeway)
  - Belt Parkway after Exit 19 off-ramp (Downstream Basic Freeway)
- Eastbound Belt Parkway Exit 19 off-ramp split to Nassau Expressway and to Lefferts Boulevard
  - Belt Parkway Exit 19 off-ramp (Upstream Basic Freeway)
  - Belt Parkway Exit 19 off-ramp split to Nassau Expressway and Lefferts Boulevard (Diverge Freeway)
  - Belt Parkway Exit 19 off-ramp to Nassau Expressway after the split (Downstream Basic Freeway)

Subways

Figure 11-18 shows the subway options within the vicinity of the Project Site. Project-generated subway trips were assigned to the two stations near the Project Site. As the Aqueduct Racetrack station has only northbound service, and the Aqueduct – North Conduit Avenue station's north fare control area only has southbound service, these two stations work in tandem to provide service to the Project Site. A detailed subway station analysis was prepared for subway station elements at these two stations. A detailed subway line haul analysis was also prepared for the A subway line.

Figure 11-17 Traffic Intersection Study Area

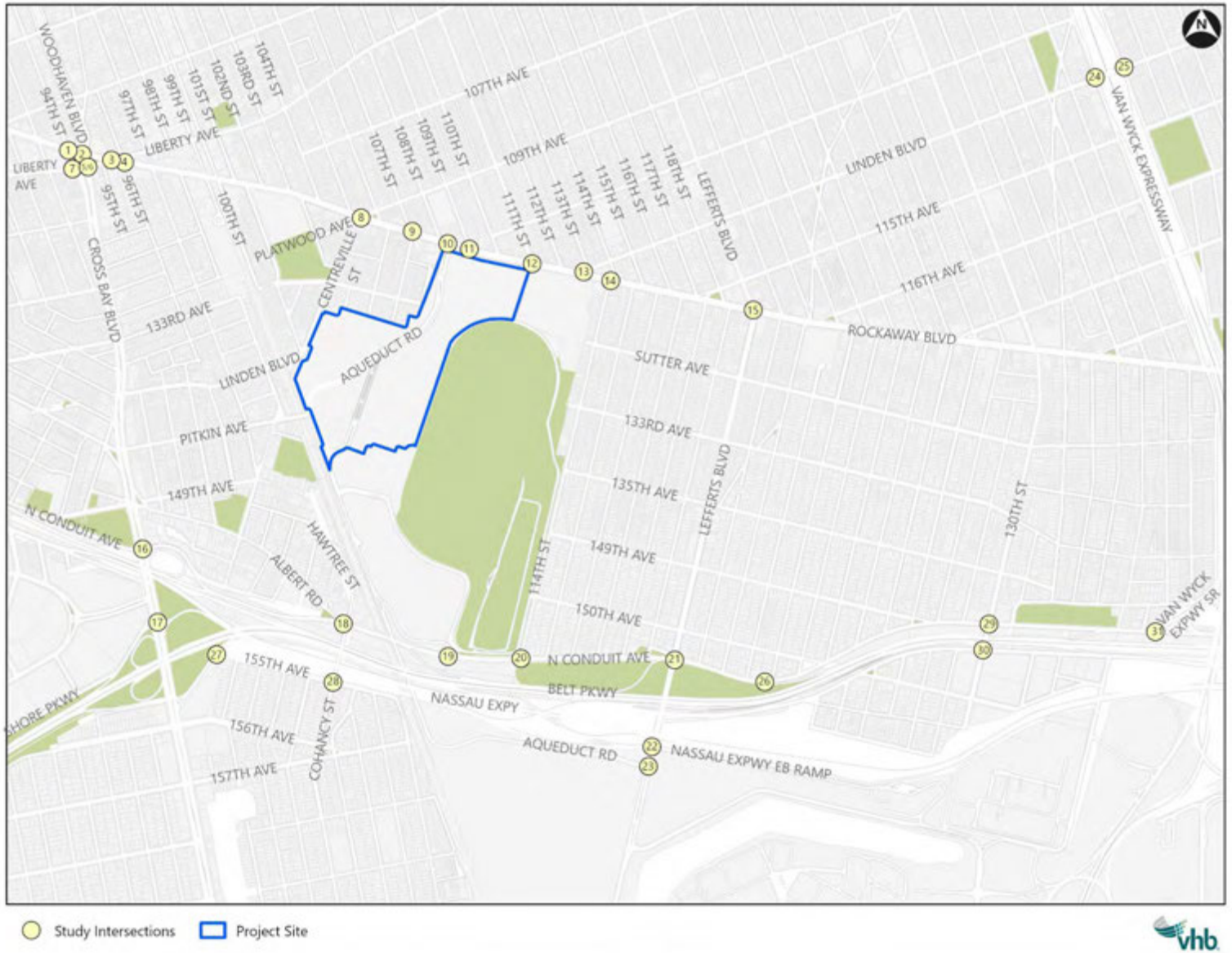
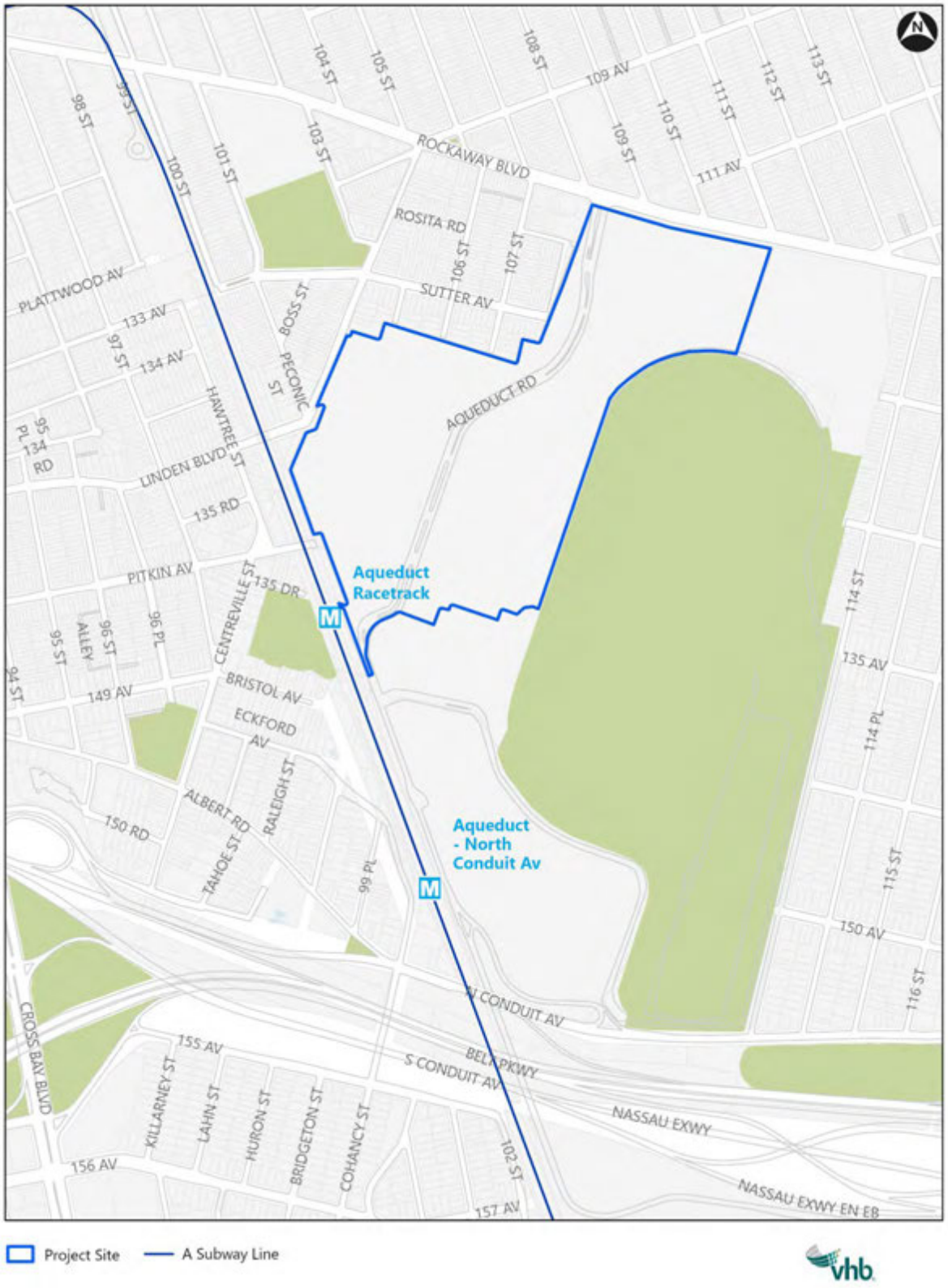


Figure 11-18 Subway Routes and Stations



Detailed Analysis Methodology

This section describes the methodology used for the detailed traffic, subway, and pedestrian analyses.

Intersection Traffic

The operation of all signalized and unsignalized intersection analysis locations were assessed using Synchro 11 software, which utilizes the 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 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 *CEQR Technical Manual* guidelines, LOS A, B, and C are considered acceptable, LOS D reflects the existence of delays within a generally tolerable range 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; and 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.

Highways

The operations of highway analysis segments were assessed using HCS 7 software which utilizes methodologies presented in the HCM. The HCM defines levels of service thresholds for merge/diverge segments using density, in terms of passenger cars per mile per lane (pc/mi/ln). The levels of service are described qualitatively below:

- LOS A describes operations with very low densities and high free flow speeds.
- LOS B describes operations with fairly low densities and moderate to high free flow speeds.
- LOS C describes operations with moderate densities and moderate free flow speeds.
- LOS D describes operations with moderate to high densities and moderate to low free flow speeds.
- LOS E describes operations with high densities and low free flow speeds. 45 pc/mi/ln is considered the maximum density for sustained flows at capacity on a typical freeway. Queuing can begin at densities higher than this.
- LOS F describes operations with very high densities and very low free flow speeds. Queuing is common within LOS F, which leads to failure conditions and congestion.

The basic freeway segment and weave/merge/diverge segment levels of service are determined based on the segment densities. Density threshold criteria for basic freeway segments and for weave/merge/diverge segments are expressed in terms of passenger cars per mile per lane, and are defined in **Table 11-5** and **Table 11-6**, respectively.

Table 11-5 Level of Service Criteria for Basic Freeway Segments

LOS	Density (pc/mi/ln)
A	≤11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	>45 (Demand exceeds capacity)

Source: *Highway Capacity Manual*

Table 11-6 Level of Service Criteria for Freeway Weave/Merge/Diverge Segments

LOS	Density (pc/mi/ln)
A	≤10
B	>10-20
C	>20-28
D	>28-35
E	>35
F	Demand exceeds capacity

Source: *Highway Capacity Manual*

Significant Impact Criteria

The assessment of potential significant impacts of a proposed project on highway segments is based on significant impact criteria defined in the *CEQR Technical Manual*.

The determination of significant impacts for basic freeway segments is summarized as follows:

- If the level of service under the No-Action condition is LOS D, an increase in the projected density of 5 or more passenger cars per mile per lane (pc/mi/ln) under the With-Action condition should be considered a significant impact.
- If the level of service under the No-Action condition is LOS E, an increase in the projected density of 4 or more pc/mi/ln under the With-Action condition should be considered a significant impact.
- If the level of service under the No-Action condition is LOS F, an increase in the projected density of 3 or more pc/mi/ln under the With-Action condition should be considered a significant impact.

For weaving, merge, and diverge segments the determination of significant impacts is as follows:

- If the level of service under the No-Action condition is LOS D, an increase in the projected density of 4 or more passenger cars per mile per lane (pc/mi/ln) under the With-Action condition should be considered a significant impact.
- If the level of service under the No-Action condition is LOS E, an increase in the projected density of 3 or more pc/mi/ln under the With-Action condition should be considered a significant impact.

› If the level of service under the No-Action condition is LOS F, an increase in the projected density of 2 or more pc/mi/ln under the With-Action condition should be considered a significant impact.

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 Project 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 Project 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 Project 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 radius of the Project 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 such as stairways, escalators, passageway, and fare controls (turnstiles, high entry/exit turnstiles [HEETs], and high exit turnstiles [HXTs]).

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 that are shown in **Table 11-7**. 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 11-7 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 11-8**, 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 11-8 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

Line-haul capacity analyses evaluate 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.

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, load levels under the With-Action condition that remain within the practical loading capacity limits are generally not considered significant. However, if the load capacity is exceeded, significant adverse subway line-haul impacts can occur if the Expansion Project is expected to generate an increment averaging five or more riders per subway car. 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.

Vehicle and Pedestrian Safety

An evaluation of vehicular and pedestrian safety is necessary for locations within the traffic and pedestrian study areas. Consistent with *CEQR Technical Manual* guidelines, this evaluation identifies high-crash locations as locations that are Vision Zero Priority Intersections or 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. Additionally, per NYC DOT's guidance, intersections located along a Vision Zero Priority Corridor are considered a high-crash location if three or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent three-year period for which data are available. 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 Project Site is located within the northern portion of the Aqueduct Racetrack property in the South Ozone section of Queens. The Project Site is located to the immediate north of the NYRA building and the surface parking lot owned by PANYNJ. Access to the Project Site from the north is provided along Rockaway Boulevard at its intersection with Aqueduct Road, which is a two-way north-south roadway within and traversing the Aqueduct Racetrack property. Access from the south is provided from the intersection of North Conduit Avenue with Aqueduct Road and from the Aqueduct Road Viaduct, which crosses over the Belt Parkway and Nassau Expressway to JFK International Airport. Access to the Aqueduct Racetrack property is also available from 114th Street,

within the southeast quadrant of the property where the horse stables are located; traffic at this access point is minimal and is primarily related to NYRA horse racing operations.

Rockaway Boulevard, which runs east-west through the study area, is a key roadway with generally two travel lanes in each direction. Eastbound Rockaway Boulevard reduces from two travel lanes to one travel lane between 114th Place and Lefferts Boulevard. Opposing travel lanes are generally separated by an approximately 10-foot-wide striped median, with dedicated turn bays for left-turning vehicles at selected intersections. Curbside parking is prevalent throughout the study area, with occasional restrictions for bus stops, right-turn bays, and other temporal restrictions. Uses along Rockaway Boulevard generally consist of low density residential and commercial land uses.

North Conduit Avenue is another key east-west roadway located south of the Project Site. The roadway is a one-way westbound arterial with generally three or four travel lanes and no curbside parking. North Conduit Avenue runs parallel and adjacent to the Belt Parkway for the majority of the study area, providing local access to neighborhoods north of the Belt Parkway.

There are two east-west highways to the south of the Project Site that provide regional access—the Belt Parkway and Nassau Expressway. The Belt Parkway generally consists of three travel lanes in each direction, providing access to Nassau County to the east and extending to the west through Brooklyn, transitioning to the Gowanus Expressway. The Nassau Expressway is located to the south of the Belt Parkway and, within the study area, is a one-way eastbound highway with generally two to three travel lanes. Access between the Project Site and the two highways is provided through ramps located at or in the vicinity of Lefferts Boulevard and Cross Bay Boulevard.

Woodhaven Boulevard is a key arterial roadway located approximately one-half mile west of the Project Site. Woodhaven Boulevard runs north-south through the study area and features a one-lane service road in each direction. The northbound Woodhaven Boulevard mainline generally consists of two travel lanes and a dedicated bus lane (in effect at all times). The southbound Woodhaven Boulevard mainline generally consist of two travel lanes and dedicated left-turn bays; the southbound dedicated bus lane is located along the service road and is generally in effect on weekdays from 7 AM to 7 PM. South of Rockaway Boulevard, Woodhaven Boulevard is known as Cross Bay Boulevard and generally consists of three travel lanes in each direction. Opposing travel lanes are generally separated by a raised median with dedicated turn bays for left-turning vehicles at selected intersections. The curbside lane is striped as a dedicated bus lane, and only buses and right turns are allowed to use this lane during the weekday AM and PM commuter periods.

Lefferts Boulevard is another key north-south roadway located approximately one-half mile east of the Project Site. Within the study area, Lefferts Boulevard generally consists of one travel lane in each direction, with a striped median or dedicated turn bay for left-turning vehicles north of 135th Avenue and two travel lanes in each direction south of 135th Avenue. Curbside parking is prevalent throughout the study area north of North Conduit Avenue, with occasional restrictions for bus stops, right-turn bays, and other temporal restrictions. At its southern end, Lefferts Boulevard provides access to the nearby regional highways, a connection with Aqueduct Road that provides access to the Project Site and culminates at JFK International Airport's off-airport and employee parking facilities.

Roadway Traffic Volumes

To establish the existing conditions traffic network, traffic data were assembled using manual intersection counts and 24-hour Automatic Traffic Recorder (ATR) machine counts conducted in October 2022 and March 2024 during NYRA race days. These traffic volumes were used along with

observations of traffic conditions to determine levels of service for the intersection study area peak hours of 5 PM to 6 PM for the Friday PM peak hour, which correlates with the commuting peak hour; 5:15 PM to 6:15 PM for the Saturday PM peak hour, representing the peak of background traffic on a Saturday early evening; and 7:30 PM to 8:30 PM for the Saturday night peak hour, which correlates with the peak of casino gaming.

It should be noted that these traffic volume data were collected on days when the existing conference center space was not hosting an event. As a result, the existing baseline condition does not reflect trips associated with this use. However, as described below in the **No-Action Condition** section, trips generated by this use were reflected in the 2030 No-Action condition traffic volume network.

Aqueduct Road traffic volumes entering the Project Site from Rockaway Boulevard range from approximately 365 vph to 475 vph during the Friday PM, Saturday PM, and Saturday night peak hours. Traffic volumes exiting the Project Site range from approximately 430 vph to 560 vph during the Friday and Saturday PM peak hours (coinciding with departure trips from a NYRA race day) and approximately 380 vph during the Saturday night peak hour. At its intersection with North Conduit Avenue, Aqueduct Road northbound traffic volumes (entering the Project Site) are lower, ranging from approximately 115 vph to 230 vph during the three analysis peak hours. Southbound traffic volumes (exiting the Project Site) range from approximately 245 vph to 350 vph during the Friday and Saturday PM peak hours and are approximately 170 vph during the Saturday night peak hour.

Travel volumes along eastbound Rockaway Boulevard are highest within the section between Centreville Street and 114th Street, ranging from approximately 820 vehicles per hour (vph) to 940 vph during the Friday PM peak hour, 610 vph to 800 vph during the Saturday PM peak hour, and 540 vph to 600 vph during the Saturday night peak hour. Within the vicinity of its intersection with Cross Bay Boulevard/Woodhaven Boulevard, eastbound Rockaway Boulevard carries approximately 515 vph to 640 vph during the Friday PM peak hour and 350 vph to 500 vph during the Saturday PM and Night peak hours. Eastbound Rockaway Boulevard traffic volumes approaching Lefferts Boulevard east of the Project Site are generally also lower than at the highest section; traffic volumes along this section are approximately 540 vph in the Friday PM peak hour, 485 vph during the Saturday PM peak hour, and 375 vph during the Saturday night peak hour.

Westbound Rockaway Boulevard traffic volumes between 114th Street and Centreville Street range from approximately 620 vph to 835 vph during the Friday PM and Saturday PM peak hours and 500 vph to 680 vph during the Saturday night peak hour. Within the vicinity of its intersection with Cross Bay Boulevard/Woodhaven Boulevard, westbound Rockaway Boulevard carries approximately 335 vph to 660 vph during the Friday PM and Saturday PM peak hours and approximately 285 vph to 580 vph during the Saturday night peak hour. Approaching Lefferts Boulevard, westbound Rockaway Boulevard carries approximately 600 vph to 615 vph during the Friday PM and Saturday PM peak hours and approximately 480 vph during the Saturday night peak hour.

North Conduit Avenue traffic volumes generally range from approximately 2,155 vph to 3,000 vph between Lefferts Boulevard and the Van Wyck Expressway Service Road/Belt Parkway On-ramp intersection during the Friday PM and Saturday PM peak hours—except for the section between Lefferts Boulevard and westbound Belt Parkway on-ramp, where traffic volumes range from approximately 3,400 vph to 3,625 vph during these peak hours. Traffic volumes during the Saturday night peak hour are lower, ranging from approximately 1,560 vph to 2,615 vph; traffic volumes within the section between Lefferts Boulevard and westbound Belt Parkway on-ramp are approximately 3,040 vph. During the traffic data collection period, the westbound North Conduit on-ramp to the

southbound Van Wyck Expressway was closed as part of the Van Wyck Expressway Capacity & Access Improvements to JFK Airport Project.

Northbound Cross Bay Boulevard traffic volumes between South Conduit Avenue and North Conduit Avenue are approximately 2,100 vph in the Friday PM peak hour, 1,815 vph in the Saturday PM peak hour, and 1,565 vph in the Saturday night peak hour. Southbound traffic volumes between North Conduit Avenue and South Conduit Avenue are approximately 3,025 vph for the Friday PM peak hour, 2,600 vph for the Saturday PM peak hour, and 1,970 vph for the Saturday night peak hour.

At its intersection with Rockaway Boulevard, northbound Cross Bay Boulevard/Woodhaven Boulevard traffic volumes are approximately 1,420 vph in the Friday PM peak hour, 1,200 vph in the Saturday PM peak hour, and 1,055 vph in the Saturday night peak hour. The southbound direction has approximately 1,970 vph during the Friday PM peak hour, 1,435 vph during the Saturday PM peak hour, and 1,260 vph during the Saturday night peak hour.

Northbound Lefferts Boulevard traffic volumes at its intersection with Rockaway Boulevard range from approximately 400 vph to 445 vph during the Friday PM peak hour and 315 vph to 370 vph in the Saturday PM and Saturday night peak hours. Northbound Lefferts Boulevard traffic volumes between Aqueduct Road and North Conduit Avenue range from 840 vph to 1,300 vph during the Friday PM and Saturday PM peak hours and from 565 vph to 825 vph during the Saturday night peak hour; traffic volumes within this section are highest when approaching North Conduit Avenue.

Southbound Lefferts Boulevard traffic volumes at its intersection with Rockaway Boulevard range from approximately 300 vph to 400 vph during the Friday PM and Saturday PM peak hours and 275 vph to 330 vph during the Saturday night peak hour. Southbound Lefferts Boulevard traffic volumes between North Conduit Avenue and Aqueduct Road range from approximately 135 vph to 340 vph during the Friday PM and Saturday PM peak hours and 85 vph to 265 vph during the Saturday night peak hour.

Existing traffic volumes at analysis intersections are shown in **Figure 11-19** through **Figure 11-30**.

Figure 11-19 Existing Conditions Intersection Traffic Volumes – Friday PM Peak Hour – Section 1

Figure 11-20 Existing Conditions Intersection Traffic Volumes – Friday PM Peak Hour – Section 2

Figure 11-21 Existing Conditions Intersection Traffic Volumes – Friday PM Peak Hour – Section 3

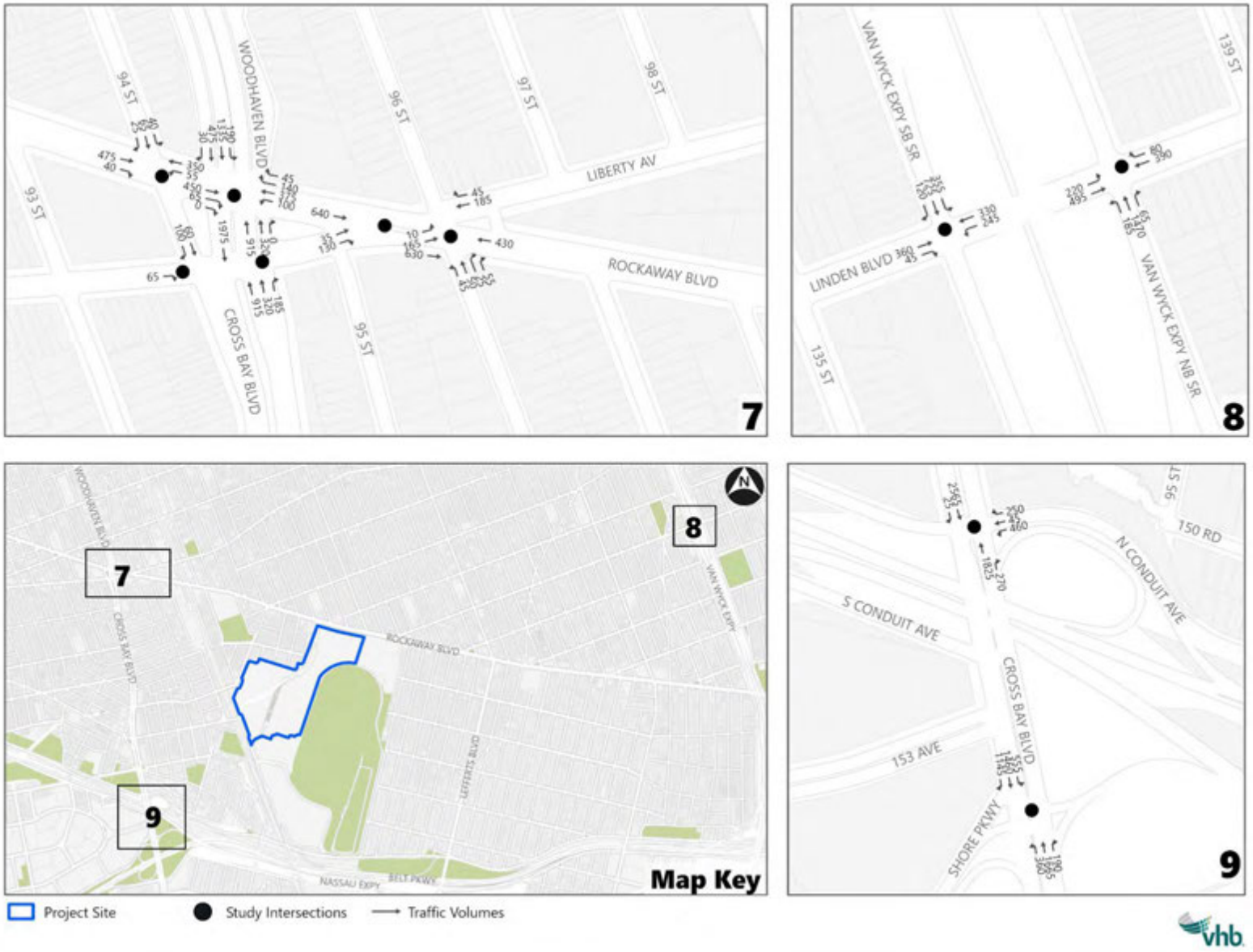


Figure 11-22 Existing Conditions Intersection Traffic Volumes – Friday PM Peak Hour – Section 4

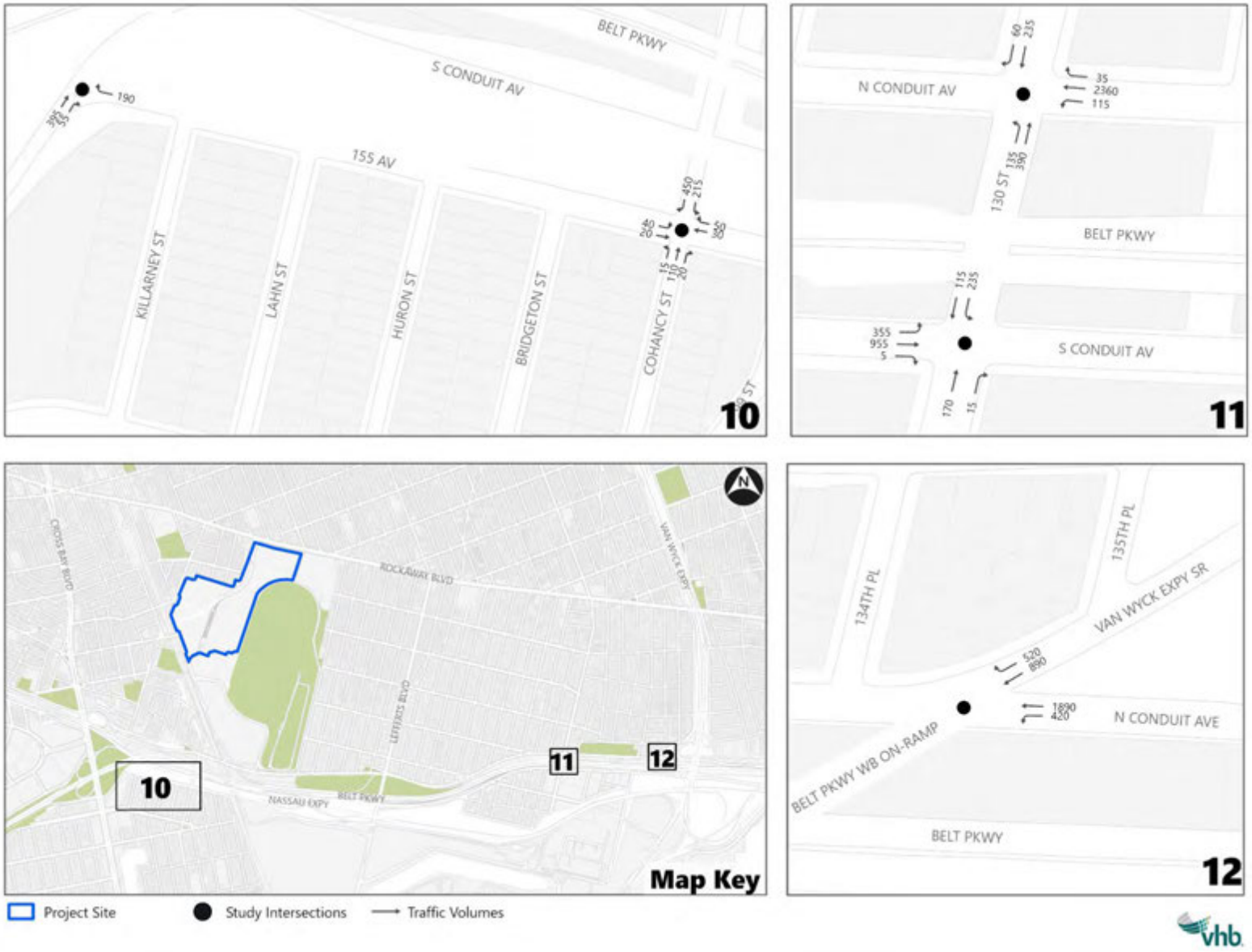


Figure 11-23 Existing Conditions Intersection Traffic Volumes – Saturday PM Peak Hour – Section 1

Figure 11-24 Existing Conditions Intersection Traffic Volumes – Saturday PM Peak Hour – Section 2

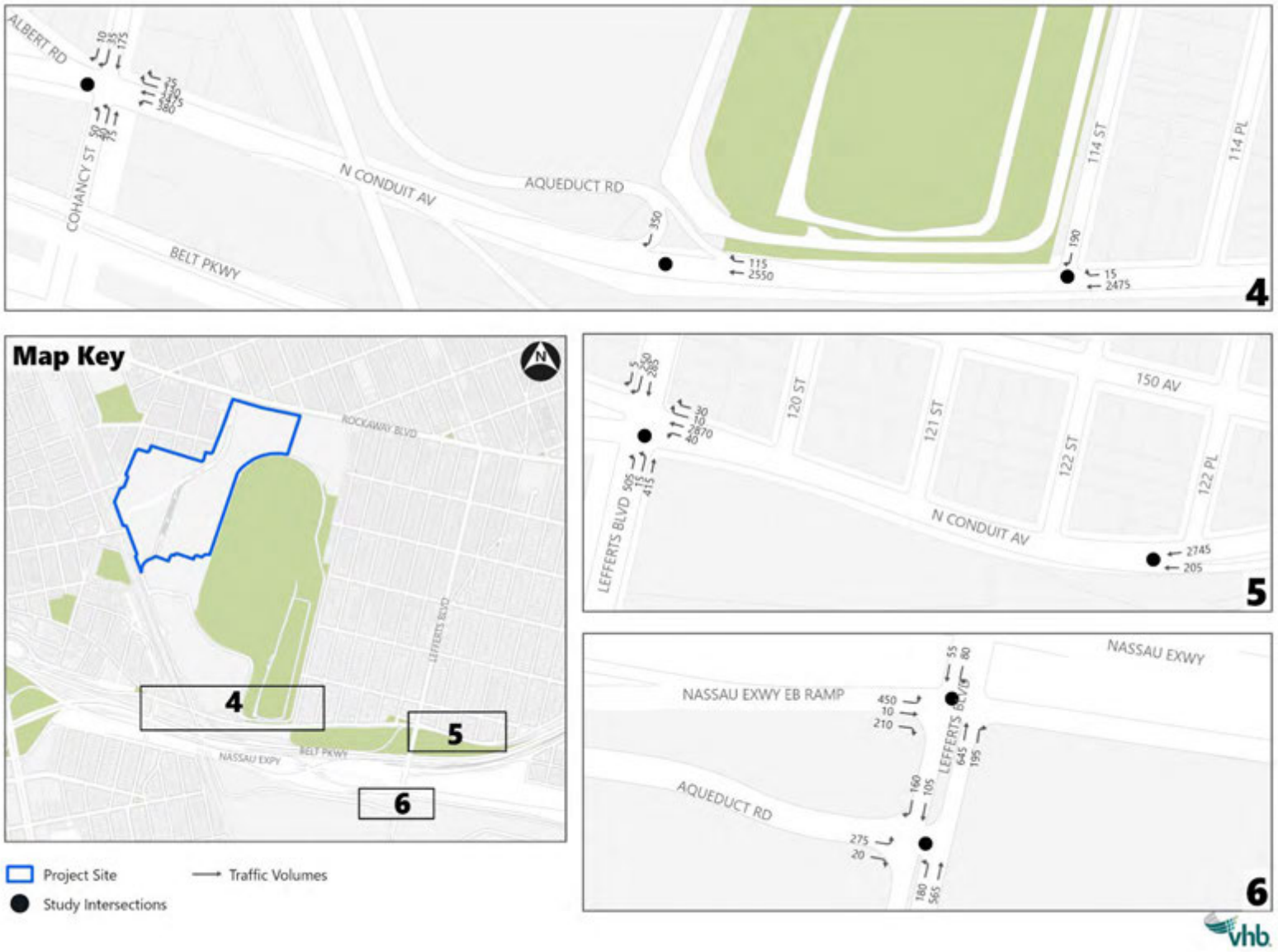


Figure 11-25 Existing Conditions Intersection Traffic Volumes – Saturday PM Peak Hour – Section 3

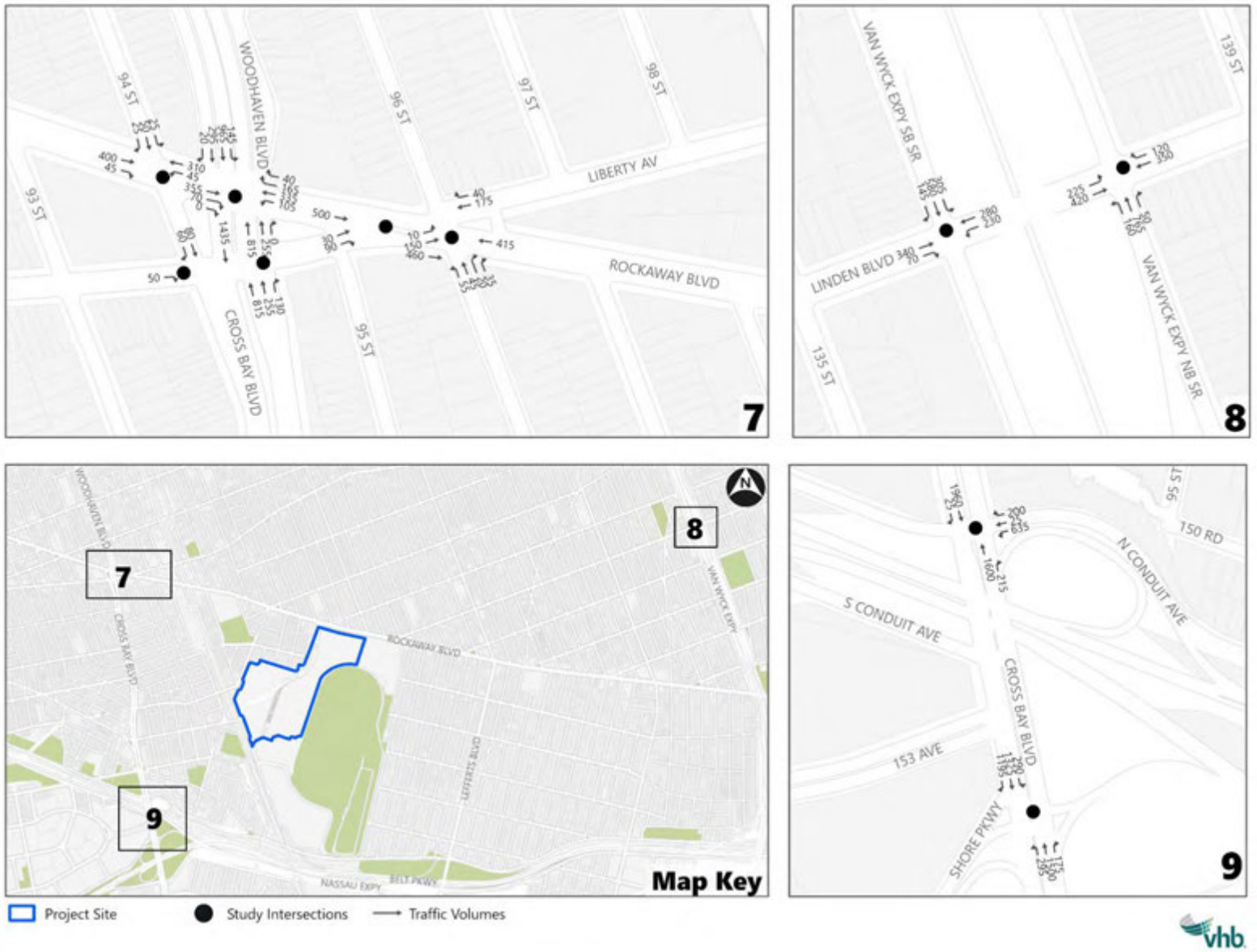


Figure 11-26 Existing Conditions Intersection Traffic Volumes – Saturday PM Peak Hour – Section 4

Figure 11-27 Existing Conditions Intersection Traffic Volumes – Saturday Night Peak Hour – Section 1

Figure 11-28 Existing Conditions Intersection Traffic Volumes – Saturday Night Peak Hour – Section 2

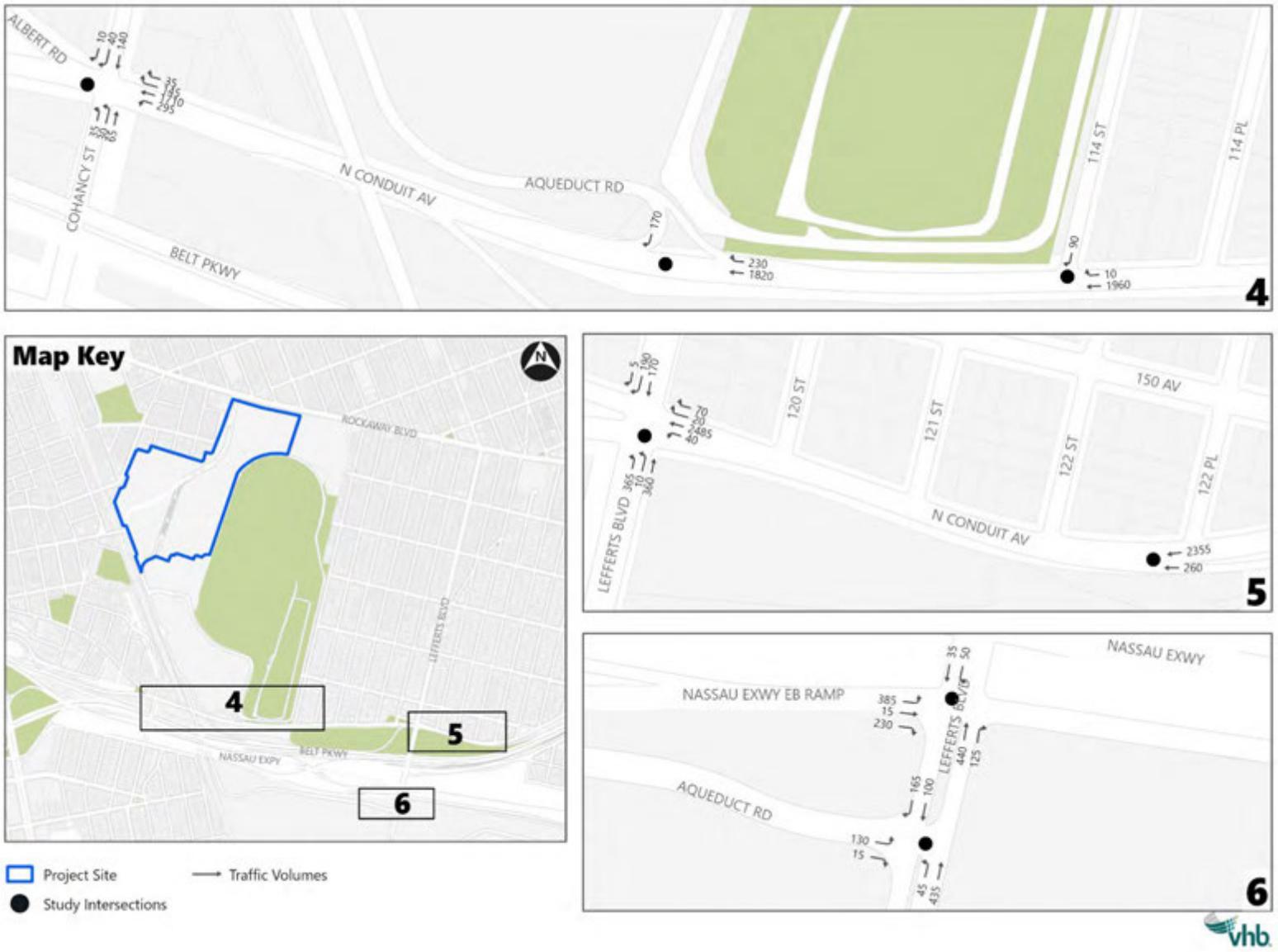


Figure 11-29 Existing Conditions Intersection Traffic Volumes – Saturday Night Peak Hour – Section 3

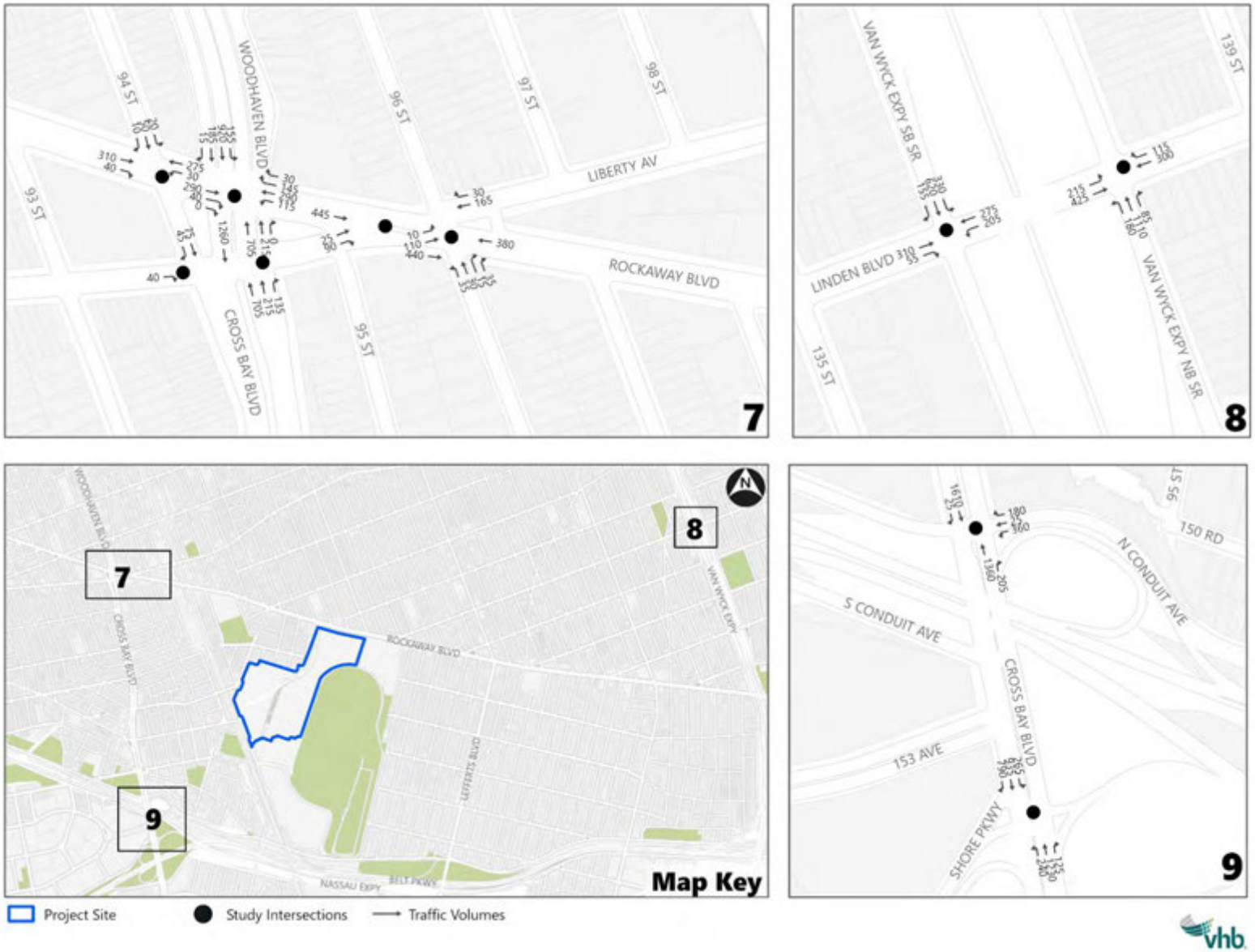


Figure 11-30 Existing Conditions Intersection Traffic Volumes – Saturday Night Peak Hour – Section 4

Levels of Service

Table 11-9 and **Table 11-10** provide an overview of the levels of service that characterize existing overall intersection conditions and individual traffic movements, respectively, during the Friday PM, Saturday PM, and Saturday night peak hours. Detailed existing intersection traffic levels of service for those peak hours are provided in **Table 11-11**.

Table 11-9 Existing Conditions Intersection Traffic Levels of Service Summary – Overall

	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
Intersections at Overall LOS A/B/C	26	28	29
Intersections at Overall LOS D	5	3	2
Intersections at Overall LOS E	0	0	0
Intersections at Overall LOS F	0	0	0

Note: Includes 31 intersections (28 signalized intersections and three unsignalized intersections)

Table 11-10 Existing Conditions Intersection Traffic Levels of Service Summary – Traffic Movements

	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
Traffic Movements at LOS A/B/C	93	109	116
Traffic Movements at LOS D	22	16	12
Traffic Movements at LOS E	11	3	1
Traffic Movements at LOS F	9	6	3
Number of Individual Traffic Movements	135	134	132

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left turn movements.

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
1. Rockaway Boulevard & 94th Street													
Rockaway Boulevard	EB	TR	0.54	43.9	D	TR	0.49	32.1	C	TR	0.36	29.9	C
	WB	LT	0.55	11.7	B	LT	0.39	5.4	A	LT	0.31	4.2	A
94th Street	SB	LTR	0.15	13.1	B	LTR	0.12	12.9	B	LTR	0.10	12.6	B
Overall Intersection[2]		-	-	**26.7**	**C**	-	-	**19.9**	**B**	-	-	**17.0**	**B**
2. Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard													
Rockaway Boulevard	EB	TR	0.46	10.8	B	TR	0.37	5.7	A	TR	0.26	5.7	A
	WB	L	0.64	51.5	D	L	0.49	26.9	C	L	0.40	25.4	C
		TR	0.93	62.2	E	TR	0.64	25.2	C	TR	0.56	25.1	C
Woodhaven Boulevard	SB	T	0.47	17.7	B	T	0.34	15.3	B	T	0.21	13.7	B
SB Service Road		R	0.04	11.9	B	R	0.03	12.0	B	R	0.02	11.9	B
Woodhaven Boulevard	NB	T	0.65	6.3	A	T	0.63	4.6	A	T	0.54	4.2	A
Mainline	SB	L	1.03	140.3	F	L	0.90	94.3	F	L	0.89	91.4	F
		T	0.73	23.2	C	T	0.57	18.4	B	T	0.53	17.8	B
Cross Bay Boulevard NB Service Road	NB	TR	0.39	5.4	A	TR	0.33	3.6	A	TR	0.32	4.0	A
Overall Intersection[2]		-	-	**27.0**	**C**	-	-	**17.3**	**B**	-	-	**17.6**	**B**
3. Liberty Avenue & Rockaway Boulevard													
Rockaway Boulevard	EB	LT	0.54	7.3	A	LT	0.48	9.0	A	LT	0.42	8.5	A
Liberty Avenue	NB	T	0.08	41.4	D	T	0.06	18.3	B	T	0.06	16.6	B
		R	0.34	40.7	D	R	0.20	17.8	B	R	0.19	16.3	B
Overall Intersection[2]		-	-	**14.2**	**B**	-	-	**10.7**	**B**	-	-	**10.1**	**B**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
4. Rockaway Boulevard/Liberty Avenue & 96th Street													
Liberty Avenue	EB	LT	0.41	37.2	D	LT	0.35	28.5	C	LT	0.27	28.1	C
	WB	TR	0.53	50.0	D	TR	0.40	34.7	C	TR	0.37	34.1	C
96th Street	NB	LTR	0.41	48.4	D	LTR	0.36	40.0	D	LTR	0.30	38.8	D
Rockaway Boulevard	NW	T	0.42	36.6	D	T	0.46	33.7	C	T	0.40	32.6	C
	SE	T	0.29	0.8	A	T	0.21	0.6	A	T	0.19	0.6	A
Overall Intersection[2]		-	-	**26.9**	**C**	-	-	**23.5**	**C**	-	-	**22.5**	**C**
5. Cross Bay Boulevard Northbound Service Road & Liberty Avenue													
Cross Bay Blvd Northbound Service Road	NB	TR	0.70	35.6	D	TR	0.64	34.2	C	TR	0.61	33.2	C
Overall Intersection[2]		-	-	**35.6**	**D**	-	-	**34.2**	**C**	-	-	**33.2**	**C**
6. Cross Bay Boulevard & Liberty Avenue													
Cross Bay Boulevard	NB	T	0.63	31.1	C	T	0.65	32.3	C	T	0.56	30.2	C
	SB	T	0.68	6.2	A	T	0.59	9.1	A	T	0.50	8.0	A
Overall Intersection[2]		-	-	**14.4**	**B**	-	-	**17.4**	**B**	-	-	**15.9**	**B**
7. Liberty Avenue & 94th Street													
Liberty Avenue	EB	R	0.82	101.3	F	R	0.38	35.0	C	R	0.19	28.3	C
94th Street	SB	TR	0.20	20.9	C	TR	0.20	21.5	C	TR	0.16	18.7	B
Overall Intersection[2]		-	-	**45.4**	**D**	-	-	**25.1**	**C**	-	-	**21.0**	**C**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
8. Rockaway Boulevard & Centreville Street/109th Avenue/Plattwood Avenue													
Rockaway Boulevard	EB	L	0.36	22.3	C	L	0.24	17.9	B	L	0.15	15.3	B
		TR	0.73	26.5	C	TR	0.50	21.6	C	TR	0.43	20.6	C
	WB	L	0.51	34.4	C	L	0.43	23.2	C	L	0.29	14.1	B
		TR	0.51	25.1	C	TR	0.41	21.7	C	TR	0.35	12.1	B
Centreville Street	NB	LTR	0.95	61.9	E	LTR	0.74	36.1	D	LTR	0.58	29.2	C
109th Avenue	SB	LTR	0.68	31.6	C	LTR	0.52	27.0	C	LTR	0.41	24.7	C
Overall Intersection[2]		-	-	**32.7**	**C**	-	-	**24.8**	**C**	-	-	**19.7**	**B**
9. Rockaway Boulevard & 107th Street													
Rockaway Boulevard	EB	T	0.57	5.1	A	T	0.38	5.0	A	T	0.37	5.6	A
	WB	T	0.49	10.7	B	T	0.43	8.0	A	T	0.41	18.7	B
107th Street	NB	LTR	0.25	24.6	C	LTR	0.24	24.5	C	LTR	0.13	24.3	C
	SB	LTR	0.31	25.7	C	LTR	0.32	26.0	C	LTR	0.24	25.9	C
Overall Intersection[2]		-	-	**9.7**	**A**	-	-	**9.2**	**A**	-	-	**13.8**	**B**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
10. Rockaway Boulevard & Aqueduct Road/108th Street													
Rockaway Boulevard	EB	L	-	10.0	A	L	-	9.7	A	L	-	9.0	A
		T	0.52	9.0	A	T	0.37	9.5	A	T	0.28	9.4	A
		R	0.31	8.6	A	R	0.31	9.6	A	R	0.41	10.9	B
	WB	L	0.57	19.6	B	L	0.46	14.5	B	L	0.53	5.8	A
		T	0.40	7.3	A	T	0.30	7.5	A	T	0.27	1.5	A
Aqueduct Road	NB	LR	0.35	25.0	C	LR	0.46	26.5	C	LR	0.27	24.0	C
		R	0.40	27.3	C	R	0.52	30.3	C	R	0.32	25.7	C
Overall Intersection[2]		-	-	**13.0**	**B**	-	-	**15.1**	**B**	-	-	**10.1**	**B**
11. Rockaway Boulevard & 109th Street													
Rockaway Boulevard	EB	T	0.41	8.9	A	T	0.36	12.0	B	T	0.26	7.5	A
	WB	T	0.38	21.5	C	T	0.30	17.7	B	T	0.33	11.9	B
109th Street	SB	LR	0.25	24.3	C	LR	0.19	23.6	C	LR	0.15	24.4	C
Overall Intersection[2]		-	-	**15.4**	**B**	-	-	**15.0**	**B**	-	-	**10.7**	**B**
12. Rockaway Boulevard & 111th Street/Home Depot Parking Lot													
Rockaway Boulevard	EB	L	0.19	3.8	A	L	0.16	2.8	A	L	0.10	11.5	B
		TR	0.67	6.7	A	TR	0.57	6.1	A	TR	0.41	14.8	B
	WB	L	0.05	23.0	C	L	0.07	19.5	B	L	0.03	4.2	A
		TR	0.73	29.2	C	TR	0.60	24.3	C	TR	0.62	8.2	A
Home Depot Parking Lot	NB	LTR	0.24	22.2	C	LTR	0.24	22.0	C	LTR	0.11	20.5	C
111th Street	SB	LTR	0.61	31.3	C	LTR	0.43	25.9	C	LTR	0.39	24.9	C
Overall Intersection[2]		-	-	**19.2**	**B**	-	-	**16.2**	**B**	-	-	**12.8**	**B**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
13. Rockaway Boulevard & 113th Street/Linden Boulevard/Home Depot Parking Lot													
Rockaway Boulevard	EB	L	1.05	87.0	F	L	1.01	77.3	E	L	0.66	50.0	D
		TR	0.73	11.8	B	TR	0.60	9.9	A	TR	0.43	34.9	C
	WB	L	0.52	28.7	C	L	0.45	21.6	C	L	0.12	12.4	B
		TR	0.68	17.8	B	TR	0.58	16.6	B	TR	0.52	14.4	B
Home Depot Parking Lot	NB	LTR	0.92	83.3	F	LTR	1.05	117.1	F	LTR	0.35	31.9	C
Linden Boulevard	SB	LTR	0.50	36.7	D	LTR	0.42	34.4	C	LTR	0.42	34.4	C
		R	0.45	35.2	D	R	0.41	34.0	C	R	0.39	33.7	C
Overall Intersection[2]		-	-	**27.8**	**C**	-	-	**30.8**	**C**	-	-	**27.7**	**C**
14. Rockaway Boulevard & 114th Street													
Rockaway Boulevard	EB	LT	0.80	13.6	B	LT	0.68	12.5	B	LT	0.48	7.1	A
		R	0.49	5.4	A	R	0.43	6.8	A	R	0.27	4.9	A
	WB	L	0.08	13.8	B	L	0.06	13.1	B	L	0.05	13.4	B
		TR	0.36	15.5	B	TR	0.35	15.4	B	TR	0.31	15.5	B
114th Street	NB	LTR	0.50	27.6	C	LTR	0.36	24.7	C	LTR	0.42	27.3	C
Overall Intersection[2]		-	-	**14.8**	**B**	-	-	**14.0**	**B**	-	-	**13.3**	**B**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
15. Rockaway Boulevard & Lefferts Boulevard													
Rockaway Boulevard	EB	L	0.13	18.9	B	L	0.07	17.8	B	L	0.07	18.4	B
		T	0.72	30.2	C	T	0.64	27.4	C	T	0.45	23.4	C
		R	0.18	18.8	B	R	0.20	19.0	B	R	0.18	19.4	B
	WB	L	0.42	26.7	C	L	0.31	22.5	C	L	0.22	20.6	C
		T	0.50	22.3	C	T	0.44	21.5	C	T	0.41	21.7	C
Lefferts Boulevard	NB	L	0.28	26.0	C	L	0.27	25.8	C	L	0.21	26.1	C
		TR	0.98	68.9	E	TR	0.77	40.8	D	TR	0.80	44.1	D
	SB	LTR	0.55	29.2	C	LTR	0.52	28.4	C	LTR	0.53	30.2	C
Overall Intersection[2]		-	-	**34.6**	**C**	-	-	**27.4**	**C**	-	-	**27.9**	**C**
16. Cross Bay Boulevard & North Conduit Avenue													
North Conduit Avenue	WB	L	0.64	56.0	E	L	0.55	32.7	C	L	0.31	27.7	C
		LT	0.65	56.7	E	LT	0.56	33.3	C	LT	0.32	27.9	C
		R	0.69	59.9	E	R	0.38	29.4	C	R	0.36	28.9	C
Cross Bay Boulevard	NB	T	0.45	12.7	B	T	0.49	18.7	B	T	0.43	17.8	B
	SB	TR	0.64	15.8	B	TR	0.61	20.7	C	TR	0.52	19.2	B
Overall Intersection[2]		-	-	**21.2**	**C**	-	-	**22.3**	**C**	-	-	**20.1**	**C**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
17. Cross Bay Boulevard & Shore Parkway/Nassau Expressway Eastbound On-Ramp													
Cross Bay Boulevard	NB	L	0.95	87.6	F	L	0.96	87.7	F	L	0.87	71.4	E
		T	0.64	23.9	C	T	0.45	8.3	A	T	0.36	7.6	A
		R	0.15	0.2	A	R	0.13	0.2	A	R	0.09	0.1	A
	SB	L	1.05	98.4	F	L	0.93	81.1	F	L	0.98	92.2	F
		T	0.47	12.6	B	T	0.40	7.8	A	T	0.28	6.9	A
		R	0.76	3.5	A	R	0.82	5.1	A	R	0.53	1.3	A
Overall Intersection[2]		-	-	**28.3**	**C**	-	-	**16.6**	**B**	-	-	**17.7**	**B**
18. North Conduit Avenue & Cohancy Street/Albert Road													
North Conduit Avenue	WB	L	0.55	9.8	A	L	0.57	11.7	B	L	0.47	33.7	C
		T	0.86	16.7	B	T	1.05	49.8	D	T	0.87	41.9	D
		R	0.32	7.4	A	R	0.26	8.4	A	R	0.33	31.0	C
Cohancy Street	NB	L	0.53	39.7	D	L	0.31	21.3	C	L	0.18	24.4	C
		T	0.23	28.0	C	T	0.12	18.0	B	T	0.09	22.8	C
	SB	TR	0.94	81.1	F	TR	0.48	38.2	D	TR	0.37	32.1	C
Overall Intersection[2]		-	-	**22.4**	**C**	-	-	**40.6**	**D**	-	-	**38.2**	**D**
19. North Conduit Avenue & Aqueduct Road (unsignalized)													
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A
Aqueduct Road	SB	R	-	11.7	B	R	-	13.9	B	R	-	10.4	B
Overall Intersection[2]		-	-	**1.2**	**A**	-	-	**1.8**	**A**	-	-	**0.8**	**A**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
20. North Conduit Avenue & 114th Street													
North Conduit Avenue	WB	TR	0.64	5.7	A	TR	0.65	5.2	A	TR	0.64	21.8	C
114th Street	SB	R	0.52	43.8	D	R	0.52	43.8	D	R	0.17	26.9	C
Overall Intersection[2]		-	-	**8.6**	**A**	-	-	**8.0**	**A**	-	-	**22.0**	**C**
21. North Conduit Avenue & Lefferts Boulevard/Old South Road													
North Conduit Avenue	WB	T	0.95	16.5	B	T	1.01	27.4	C	T	0.95	48.0	D
		R	0.08	4.8	A	R	0.05	4.9	A	R	0.14	21.6	C
Lefferts Boulevard	NB	L	1.05	96.1	F	L	1.05	98.0	F	L	0.76	40.1	D
		LT	1.03	76.1	E	LT	0.89	47.6	D	LT	0.61	29.2	C
	SB	TR	0.84	54.7	D	TR	0.82	53.1	D	TR	0.52	38.4	D
Overall Intersection[2]		-	-	**37.6**	**D**	-	-	**38.1**	**D**	-	-	**43.0**	**D**
22. Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp													
Nassau Expressway Eastbound Off-Ramp	EB	defL	0.99	58.4	E	LTR	0.57	23.4	C	LTR	0.56	23.2	C
		TR	0.41	22.0	C	-	-	-	-	-	-	-	-
Lefferts Boulevard	NB	TR	0.59	12.6	B	TR	0.59	12.5	B	TR	0.37	9.9	A
	SB	LT	0.20	13.0	B	LT	0.19	12.9	B	LT	0.08	11.9	B
Overall Intersection[2]		-	-	**28.6**	**C**	-	-	**16.8**	**B**	-	-	**16.7**	**B**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
23. Lefferts Boulevard & Aqueduct Road													
Aqueduct Road	EB	L	0.59	32.1	C	L	0.65	34.6	C	L	0.22	22.4	C
		R	0.02	6.8	A	R	0.02	7.0	A	R	0.01	5.9	A
Lefferts Boulevard	NB	L	0.25	28.8	C	L	0.52	34.0	C	L	0.14	28.6	C
		T	0.62	14.1	B	T	0.64	14.1	B	T	0.50	14.1	B
	SB	TR	0.23	55.8	E	TR	0.24	60.1	E	TR	0.25	87.5	F
Overall Intersection[2]		-	-	**25.4**	**C**	-	-	**27.7**	**C**	-	-	**30.5**	**C**
24. Linden Boulevard & Southbound Van Wyck Service Road													
Linden Boulevard	EB	TR	0.75	36.6	D	TR	0.77	37.5	D	TR	0.67	33.0	C
	WB	defL	0.91	31.5	C	defL	0.98	56.9	E	LT	0.56	26.5	C
		T	0.49	7.9	A	T	0.41	10.2	B	-	-	-	-
Southbound Van Wyck Service Road	SB	LTR	0.90	32.2	C	LTR	0.78	24.8	C	LTR	0.80	25.5	C
Overall Intersection[2]		-	-	**29.1**	**C**	-	-	**29.4**	**C**	-	-	**27.1**	**C**
25. Linden Boulevard & Northbound Van Wyck Service Road													
Linden Boulevard	EB	defL	1.05	88.7	F	defL	1.05	90.2	F	LT	0.73	24.5	C
		T	0.74	19.0	B	T	0.61	16.1	B	-	-	-	-
	WB	TR	0.96	58.8	E	TR	0.93	53.6	D	TR	0.80	39.9	D
Northbound Van Wyck Service Road	NB	LTR	0.84	25.8	C	LTR	0.49	18.0	B	LTR	0.67	20.9	C
Overall Intersection[2]		-	-	**35.1**	**D**	-	-	**33.6**	**C**	-	-	**25.2**	**C**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
26. North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)													
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A
Belt Parkway Westbound Off-Ramp	WB	T	-	33.7	D	T	-	31.9	D	T	-	33.4	D
Overall Intersection[2]		-	-	**3.4**	**A**	-	-	**2.6**	**A**	-	-	**3.9**	**A**
27. 155th Avenue & Belt Parkway Eastbound On-Ramp (unsignalized)													
155th Avenue	WB	R	-	13.6	B	R	-	14.1	B	R	-	12.0	B
Belt Parkway Eastbound On-Ramp	NB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A
		R	-	0.0	A	R	-	0.0	A	R	-	0.0	A
Overall Intersection[2]		-	-	**4.5**	**A**	-	-	**3.9**	**A**	-	-	**3.7**	**A**
28. Cohancy Street & 155th Avenue													
155th Avenue	EB	LT	0.22	20.0	B	LT	0.14	19.0	B	LT	0.15	19.4	B
	WB	TR	0.25	20.2	C	TR	0.27	20.5	C	TR	0.21	19.7	B
Cohancy Street	NB	LTR	0.18	5.8	A	LTR	0.13	5.5	A	LTR	0.11	5.3	A
	SB	LTR	0.97	43.4	D	LTR	0.78	19.4	B	LTR	0.62	9.1	A
Overall Intersection[2]		-	-	**33.9**	**C**	-	-	**17.6**	**B**	-	-	**10.4**	**B**
29. North Conduit Avenue & 130th Street													
North Conduit Avenue	WB	LTR	0.88	16.9	B	LTR	0.85	38.9	D	LTR	0.59	13.3	B
130th Street	NB	L	0.43	30.9	C	L	0.37	34.7	C	L	0.30	33.3	C
		T	0.62	37.1	D	T	0.27	32.5	C	T	0.23	32.1	C
	SB	T	0.69	50.6	D	T	0.66	48.8	D	T	0.58	45.7	D
		R	0.24	38.5	D	R	0.29	39.3	D	R	0.15	36.7	D
Overall Intersection[2]		-	-	**23.3**	**C**	-	-	**39.2**	**D**	-	-	**19.5**	**B**

Table 11-11 Existing Conditions Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
30. South Conduit Avenue & 130th Street													
South Conduit Avenue	EB	LTR	0.58	22.7	C	LTR	0.37	19.3	B	LTR	0.24	17.8	B
130th Street	NB	TR	0.59	50.0	D	TR	0.35	44.0	D	TR	0.28	42.5	D
	SB	L	0.76	37.0	D	L	0.61	26.0	C	L	0.58	30.2	C
		T	0.20	23.2	C	T	0.12	20.9	C	T	0.11	24.5	C
Overall Intersection[2]		-	-	**27.6**	**C**	-	-	**22.8**	**C**	-	-	**24.0**	**C**
31. North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road													
North Conduit Avenue	WB	L	0.59	27.9	C	L	0.55	26.7	C	L	0.48	25.0	C
		LT	1.02	57.8	E	LT	0.95	42.7	D	LT	0.68	27.5	C
Van Wyck Expressway Service Road	SB	T	0.60	26.5	C	T	0.58	26.2	C	T	0.62	27.0	C
		R	0.47	24.4	C	R	0.46	24.2	C	R	0.33	22.1	C
Overall Intersection[2]		-	-	**42.7**	**D**	-	-	**34.5**	**C**	-	-	**26.4**	**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 existing conditions at analysis intersections indicates that:

- In the Friday PM peak hour, no 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). Twenty out of 135 individual traffic movements operate 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 Saturday PM peak hour, no intersection operates at overall LOS E or F, and nine out of 134 individual traffic movements operate at LOS E or F.
- In the Saturday night peak hour, no intersections operate at overall LOS E or F, and four out of 132 individual traffic movements operate at LOS E or F.

Intersection traffic movements operating at unacceptable levels of service are listed below.

- Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard
  - Westbound Rockaway Boulevard shared through-right movement (Friday PM)
  - Southbound Woodhaven Boulevard Mainline left turn movement (Friday PM, Saturday PM, and Saturday night)
- Liberty Avenue and 94th Street
  - Eastbound Liberty Avenue right turn movement (Friday PM)
- Rockaway Boulevard and Centreville Street/109th Avenue/Plattwood Avenue
  - Northbound Centreville Street approach (Friday PM)
- Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot
  - Eastbound Rockaway Boulevard left turn movement (Friday PM and Saturday PM)
  - Northbound Home Depot Parking Lot approach (Friday PM and Saturday PM)
- Rockaway Boulevard and Lefferts Boulevard
  - Northbound Lefferts Boulevard shared through-right movement (Friday PM)
- Cross Bay Boulevard and North Conduit Avenue
  - Westbound North Conduit Avenue left turn movement (Friday PM)
  - Westbound North Conduit Avenue shared left-through-right movement (Friday PM)
  - Westbound North Conduit Avenue right turn movement (Friday PM)
- Cross Bay Boulevard and Shore Parkway/Nassau Expressway Eastbound On-Ramp
  - Northbound Cross Bay Boulevard left turn movement (Friday PM, Saturday PM, and Saturday night)
  - Southbound Cross Bay Boulevard left turn movement (Friday PM, Saturday PM, and Saturday night)
- North Conduit Avenue and Cohancy Street/Albert Road
  - Southbound Cohancy Street approach (Friday PM)
- North Conduit Avenue and Lefferts Boulevard/Old South Road
  - Northbound Lefferts Boulevard left turn movement (Friday PM and Saturday PM)

- Northbound Lefferts Boulevard shared left-through movement (Friday PM)

› Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp
- Eastbound Nassau Expressway Off-Ramp de facto left turn movement (Friday PM)

› Lefferts Boulevard and Aqueduct Road
- Southbound Lefferts Boulevard approach (Friday PM, Saturday PM, and Saturday night)

› Linden Boulevard and Southbound Van Wyck Service Road
- Westbound Linden Boulevard de facto left turn movement (Saturday PM)

› Linden Boulevard and Northbound Van Wyck Service Road
- Eastbound Linden Boulevard de facto left turn movement (Friday PM and Saturday PM)
- Westbound Linden Boulevard shared right-through movement (Friday PM)

› North Conduit Avenue and Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road
- Westbound North Conduit Avenue shared left-through movement (Friday PM)

Highways

Traffic Volumes

Based on ATR data, the same Friday PM and Saturday night peak hours (5 PM to 6 PM on Friday and 7:30 PM to 8:30 PM on Saturday) analyzed for the local street network were selected for the highway analysis. The Saturday midday 12 PM to 1 PM peak hour, which represents the peak of background highway traffic on a Saturday afternoon, was also selected for analysis.

Eastbound traffic volumes on the Belt Parkway west of the Nassau Expressway/Lefferts Boulevard off-ramp (Exit 19) are approximately 4,550 to 4,850 vph during the Friday PM, Saturday midday, and Saturday night peak hours; east of the off-ramp they are approximately 2,600 to 2,900 vph in all three analysis peak hours. Traffic volumes on the Nassau Expressway/Lefferts Boulevard off-ramp (Exit 19) west of the off-ramp split to Nassau Expressway and to Lefferts Boulevard are approximately 1,830 to 2,000 vph during the three analysis peak hours. East of the off-ramp split, traffic volumes on the ramp to the Nassau Expressway are approximately 1,590 to 1,700 vph in all three analysis peak hours, while traffic volumes on the ramp to Lefferts Boulevard are approximately 240 to 330 vph in all three analysis peak hours.

Westbound traffic volumes on the Belt Parkway east of the off-ramp to North Conduit Avenue/ Lefferts Boulevard (Exit 18B) are approximately 4,300 to 4,750 vph during the Friday PM and Saturday night peak hours and approximately 5,150 vph during the Saturday midday peak hour. Traffic volumes west of the off-ramp are approximately 4,050 to 4,500 vph during the Friday PM and Saturday night peak hours and approximately 4,900 vph during the Saturday midday peak hour. The off-ramp to North Conduit Avenue/Lefferts Boulevard (Exit 18B) carries approximately 240 to 260 vph in all three analysis peak hours. The Belt Parkway westbound on-ramp from the Van Wyck Expressway Service Road and North Conduit Avenue intersection carries approximately 1,300 to 1,450 in all three analysis peak hours. East of this on-ramp connection westbound Belt Parkway traffic volumes are approximately 3,000 to 3,700 vph during all three analysis peak hours. Existing volumes on analysis freeway segments are shown in **Figure 11-31** through **Figure 11-33**.

Figure 11-31 Existing Conditions Highway Traffic Volumes – Friday PM Peak Hour

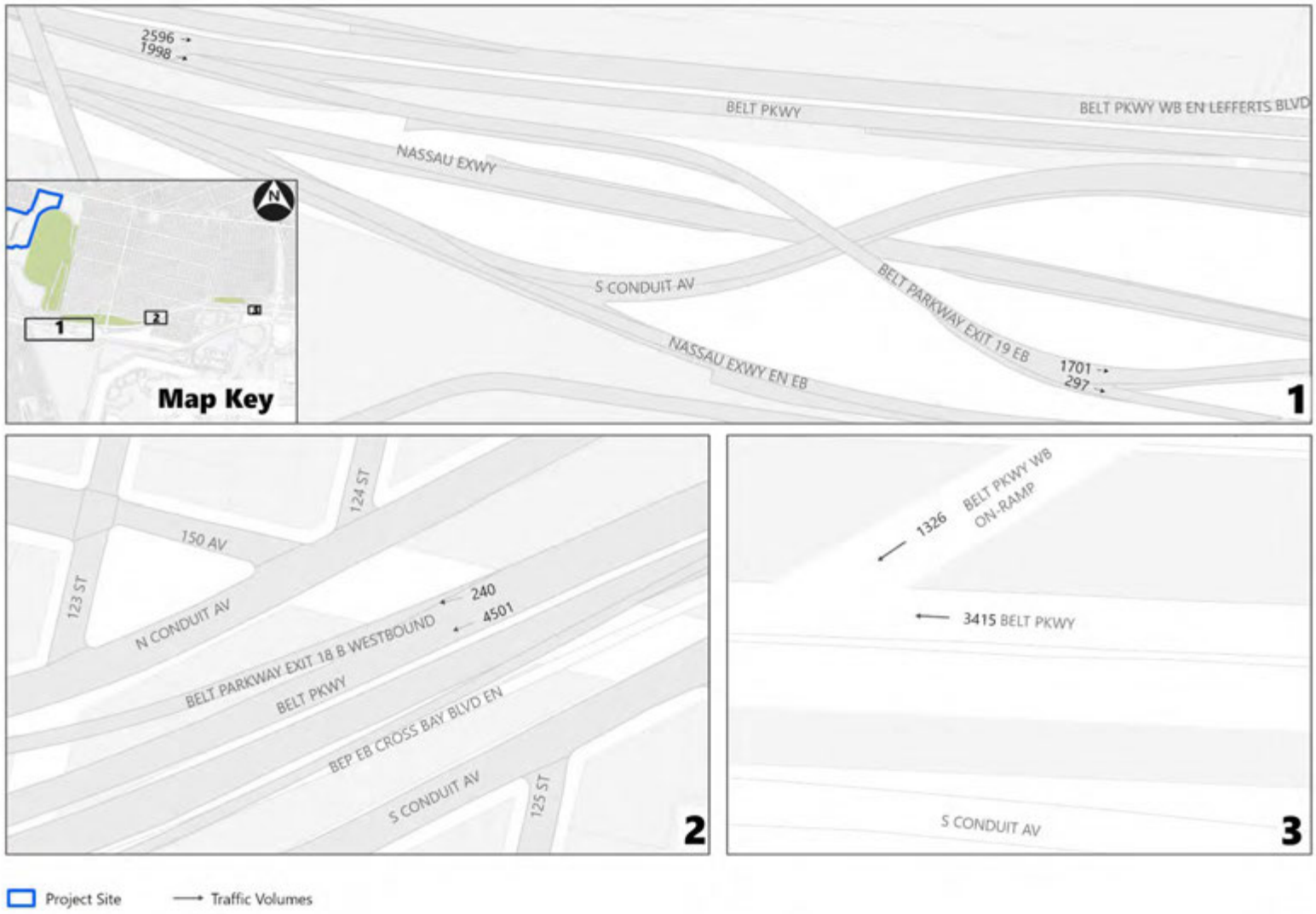


Figure 11-32 Existing Conditions Highway Traffic Volumes – Saturday Midday Peak Hour

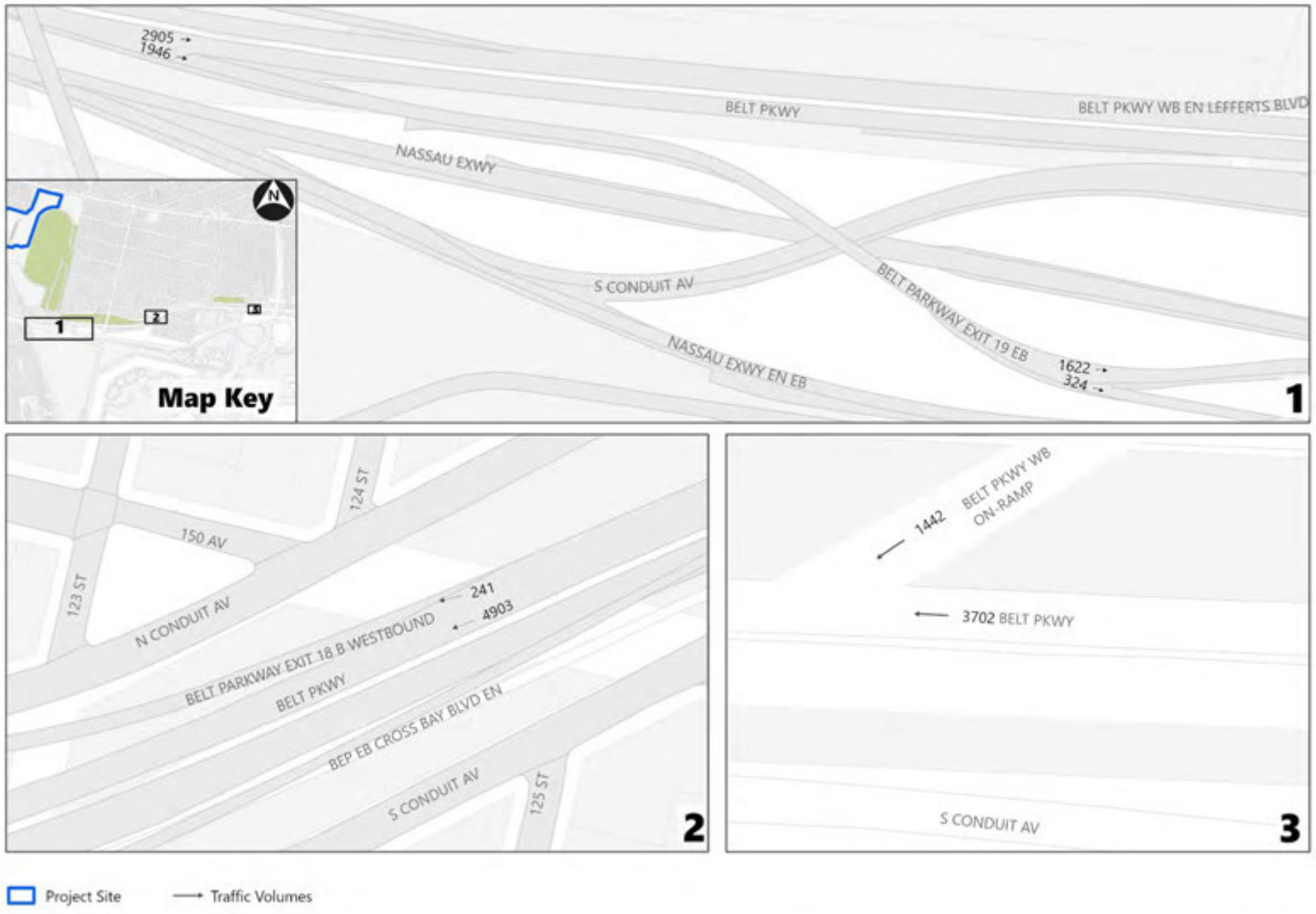
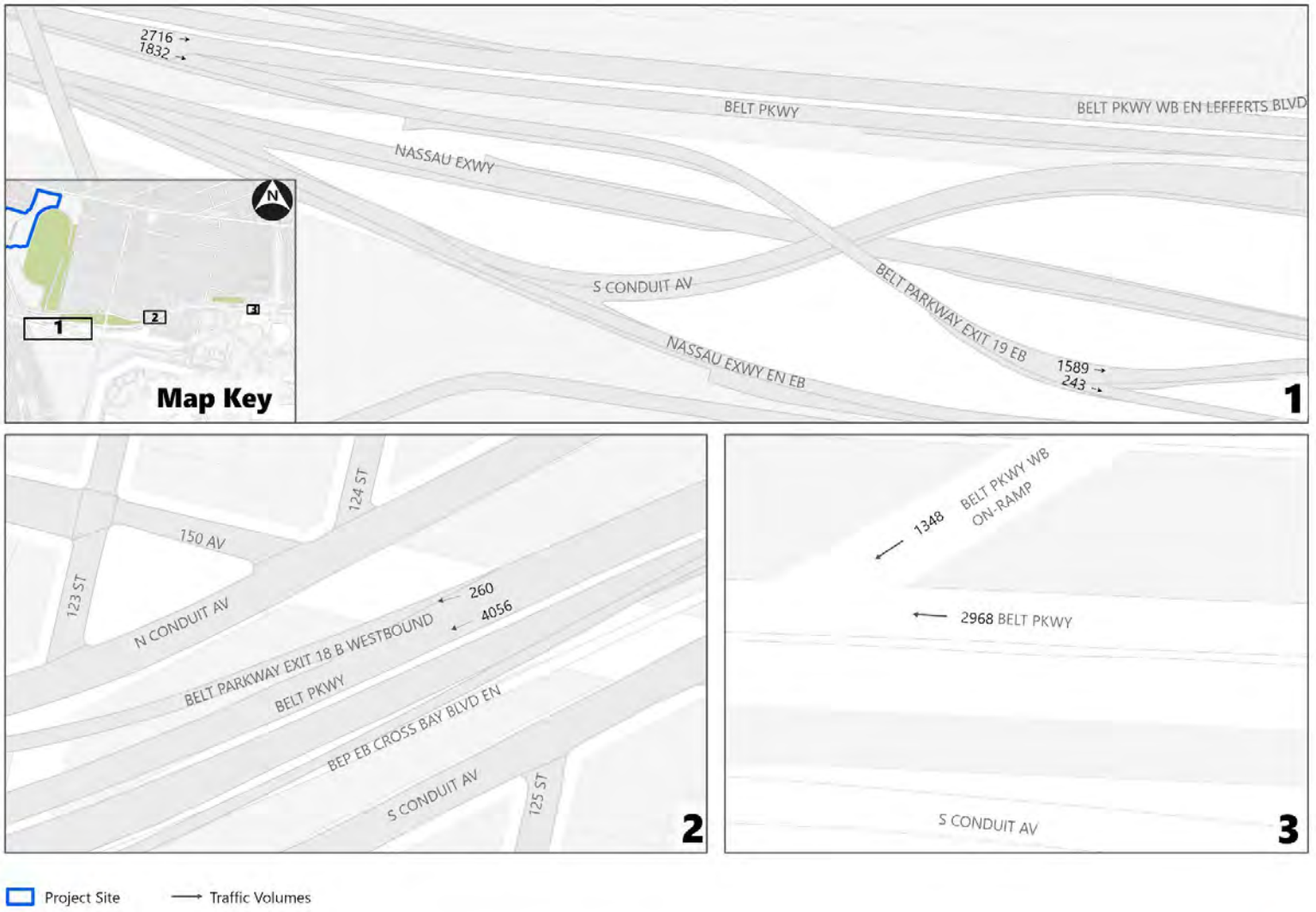


Figure 11-33 Existing Conditions Highway Traffic Volumes – Saturday Night Peak Hour



Levels of Service

Detailed existing conditions highway traffic level of service for the Friday PM, Saturday midday, and Saturday night peak hours are provided in **Table 11-12**.

Table 11-12 Existing Conditions Highway Level of Service

			Friday PM Peak Hour		Saturday Midday Peak Hour		Saturday Night Peak Hour	
Description	**Type**	**# Lanes**	**Density (pc/ln/mi)**	**LOS**	**Density (pc/ln/mi)**	**LOS**	**Density (pc/ln/mi)**	**LOS**
Westbound Belt Parkway on-ramp from Van Wyck Expressway/North Conduit Avenue intersection to westbound North Conduit Avenue/ Lefferts Boulevard (Exit 18B) off-ramp	Basic Upstream	3	28.0	D	28.2	D	22.5	C
	Merge	3 (freeway)	40.0	C	41.3	D	34.1	C
		1 (ramp)	28.0		29.2		24.7	
	Overlap	3	44.4	E	41.3	E	34.1	D
	Diverge	3 (freeway)	44.4	D	39.8	D	32.9	C
		1 (ramp)	31.5		29.2		25.5	
	Basic Downstream	3	41.5	E	37.3	E	30.7	D
Eastbound Belt Parkway off-ramp to Nassau Expressway/ Lefferts Boulevard (Exit 19)	Basic Upstream	3	33.7	D	35.7	E	33.5	D
	Diverge	3 (freeway)	27.7	C	29.3	D	27.5	C
		2 (ramp)	27.7		29.3		27.5	
	Basic Downstream	3	19.7	C	21.4	C	20.0	C
Eastbound Belt Parkway off-ramp split to Nassau Expressway and to Lefferts Boulevard (downstream of the Exit 19 off-ramp)	Basic Upstream	2	24.9	C	24.3	C	22.9	C
	Diverge	2 (freeway)	25.6	C	25.0	B	23.6	B
		1 (right)	20.4		20.0		19.0	
	Basic Downstream	2	24.2	C	23.1	C	22.4	C

pc/ln/mi=Passenger cars per lane per mile

As shown in **Table 11-12**, LOS E or F conditions occur at the following segments:

- Westbound Belt Parkway before Exit 18B off-ramp (Overlap Freeway) [Friday PM and Saturday midday]
- Westbound Belt Parkway after Exit 18B off-ramp (Downstream Basic Freeway) [Friday PM and Saturday midday]
- Eastbound Belt Parkway before Exit 19 off-ramp (Upstream Basic Freeway) [Saturday midday]

Parking

Within the Project Site there are three surface parking lots and a six-level parking garage that are used by the RWNYC casino and hotel. The total RWNYC parking supply is 4,779 parking spaces. The

RWNYC parking garage is connected to the north end of the casino and has 2,365 parking spaces; employee parking is provided on the ground floor level and casino/hotel guest parking on the five other levels. To the north and west of the casino there are three surface lots containing a total of 2,414 parking spaces. Lot A is located to the west of the casino and contains 436 spaces, Lot B is located to the northwest of the casino and contains 869 spaces, and Lot C is located to the north of the casino, adjacent to Rockaway Boulevard, and contains 1,109 spaces. Parking throughout the RWNYC parking facilities is free for casino and hotel guests.

There are two other surface parking lots, which are located in the southern portions of the Aqueduct Racetrack property and are owned and used by NYRA and PANYNJ. The NYRA lot is used by horse jockeys, owners, and other racing officials, while NYRA visitors primarily park in the PANYNJ lot. A small portion of NYRA visitors were also observed to park in RWNYC's Lot A. The PANYNJ lot is also used for construction worker parking in conjunction with the JFK Airport Redevelopment program. **Figure 11-34** shows the parking facilities within the Aqueduct Racetrack property.

An existing conditions parking utilization study was conducted in October 2022 on a Friday and a Saturday during race days. The parking utilization was developed using a mix of ATRs, camera counts, and manual parking counts. **Table 11-13** and **Table 11-14** below show the existing parking demand for the Friday and Saturday race days. The peak RWNYC Friday parking occupancy of 2,151 spaces (approximately 45 percent utilization of all 4,779 existing spaces) occurs from 9 PM to 10 PM. The peak RWNYC Saturday parking occupancy of 2,423 spaces (approximately 51 percent utilization) also occurs from 9 PM to 10 PM.

Figure 11-34 RWNYC Parking Facilities

Table 11-13 RWNYC Existing Conditions Parking Utilization – Friday

	RWNYC Parking Garage				RWNYC Surface Parking Lots				RWNYC Parking Total				
Hour	In	Out	Total	Utilization	In	Out	Total	Utilization	In	Out	Total	Utilization	Utilization %
12 AM - 1 AM	141	193	334	646	169	219	388	453	310	412	722	1,099	23%
1 AM - 2 AM	89	193	282	542	129	181	310	401	218	374	592	943	20%
2 AM - 3 AM	79	160	239	461	89	134	223	356	168	294	462	817	17%
3 AM - 4 AM	44	160	204	345	68	113	181	311	112	273	385	656	14%
4 AM - 5 AM	60	151	211	254	77	121	198	267	137	272	409	521	11%
5 AM - 6 AM	41	136	177	159	64	152	216	179	105	288	393	338	7%
6 AM - 7 AM	50	32	82	177	207	198	405	188	257	230	487	365	8%
7 AM - 8 AM	52	35	87	194	371	371	742	188	423	406	829	382	8%
8 AM - 9 AM	88	24	112	258	233	202	435	219	321	226	547	477	10%
9 AM - 10 AM	171	36	207	393	191	126	317	284	362	162	524	677	14%
10 AM - 11 AM	190	81	271	502	217	126	343	375	407	207	614	877	18%
11 AM - 12 PM	214	114	328	602	314	178	492	511	528	292	820	1,113	23%
12 PM - 1 PM	249	138	387	713	320	235	555	596	569	373	942	1,309	27%
1 PM - 2 PM	236	193	429	756	336	300	636	632	572	493	1,065	1,388	29%
2 PM - 3 PM	291	197	488	850	465	387	852	710	756	584	1,340	1,560	33%
3 PM - 4 PM	276	246	522	880	324	345	669	689	600	591	1,191	1,569	33%
4 PM - 5 PM	282	263	545	899	368	329	697	728	650	592	1,242	1,627	34%
5 PM - 6 PM	270	253	523	916	395	435	830	688	665	688	1,353	1,604	34%
6 PM - 7 PM	393	216	609	1,093	407	391	798	704	800	607	1,407	1,797	38%
7 PM - 8 PM	436	255	691	1,274	463	359	822	808	899	614	1,513	2,082	44%
8 PM - 9 PM	372	380	752	1,266	427	352	779	883	799	732	1,531	2,149	45%
9 PM - 10 PM	327	356	683	1,237	375	344	719	914	702	700	1,402	2,151	45%
10 PM - 11 PM	275	347	622	1,165	357	374	731	897	632	721	1,353	2,062	43%
11 PM - 12 AM	223	345	568	1,043	306	366	672	837	529	711	1,240	1,880	39%

Table 11-14 RWNYC Existing Conditions Parking Utilization – Saturday

	RWNYC Parking Garage				RWNYC Surface Parking Lots				RWNYC Parking Total				
Hour	In	Out	Total	Utilization	In	Out	Total	Utilization	In	Out	Total	Utilization	Utilization %
12 AM - 1 AM	204	318	522	929	241	327	568	751	445	645	1,090	1,680	35%
1 AM - 2 AM	115	276	391	768	218	309	527	660	333	585	918	1,428	30%
2 AM - 3 AM	88	243	331	613	130	198	328	592	218	441	659	1,205	25%
3 AM - 4 AM	73	221	294	465	138	201	339	529	211	422	633	994	21%
4 AM - 5 AM	62	235	297	292	123	207	330	445	185	442	627	737	15%
5 AM - 6 AM	33	216	249	109	97	277	374	265	130	493	623	374	8%
6 AM - 7 AM	40	30	70	119	51	61	112	255	91	91	182	374	8%
7 AM - 8 AM	83	40	123	162	70	82	152	243	153	122	275	405	8%
8 AM - 9 AM	82	31	113	213	123	75	198	291	205	106	311	504	11%
9 AM - 10 AM	147	35	182	325	196	109	305	378	343	144	487	703	15%
10 AM - 11 AM	192	105	297	412	240	127	367	491	432	232	664	903	19%
11 AM - 12 PM	232	119	351	525	332	209	541	614	564	328	892	1,139	24%
12 PM - 1 PM	253	156	409	622	416	243	659	787	669	399	1,068	1,409	29%
1 PM - 2 PM	334	169	503	787	381	277	658	891	715	446	1,161	1,678	35%
2 PM - 3 PM	335	202	537	920	401	322	723	970	736	524	1,260	1,890	40%
3 PM - 4 PM	313	254	567	979	413	380	793	1,003	726	634	1,360	1,982	41%
4 PM - 5 PM	294	300	594	973	395	379	774	1,019	689	679	1,368	1,992	42%
5 PM - 6 PM	316	316	632	973	437	543	980	913	753	859	1,612	1,886	39%
6 PM - 7 PM	358	278	636	1,053	413	516	929	810	771	794	1,565	1,863	39%
7 PM - 8 PM	441	258	699	1,236	534	373	907	971	975	631	1,606	2,207	46%
8 PM - 9 PM	385	361	746	1,260	479	386	865	1,064	864	747	1,611	2,324	49%
9 PM - 10 PM	370	325	695	1,305	450	396	846	1,118	820	721	1,541	2,423	51%
10 PM - 11 PM	316	360	676	1,261	395	427	822	1,086	711	787	1,498	2,347	49%
11 PM - 12 AM	283	365	648	1,179	335	426	761	995	618	791	1,409	2,174	45%

Subways

The Aqueduct Racetrack subway station and Aqueduct – North Conduit Avenue subway station (both of which are serviced by the A subway line) provide direct subway connection to the Project Site. A skybridge connects the Project Site with the Aqueduct Racetrack subway station, and RWNYC provides shuttle service between the Project Site and the Aqueduct – North Conduit Avenue subway station's north fare entry area, which is available between 8 AM and 2 AM. Analyses of the station elements at these two subway stations were performed for the weekday PM commuter peak hour, specifically for a Friday, from 4 PM to 5 PM, when weekday station activities are highest.

Subway Station Elements

The A subway line operates between 207th Street Station/Inwood in Manhattan and three terminal stations—Rockaway Park – Beach 116th Street; Far Rockaway – Mott Avenue; and Lefferts Boulevard, all of which are in Queens. Subway cars en route to the Rockaway Park – Beach 116th Street and Far Rockaway – Mott Avenue branches of the A subway line pass by the Project Site. The Aqueduct Racetrack subway station provides service only in the northbound direction from a single platform. The Aqueduct – North Conduit Avenue station provides service in both directions with two platforms, one on either side of the tracks. The fare control area at the north end of the station provides service only in the southbound direction, while northbound and southbound service is provided at the south end of the station near North Conduit Avenue.

The Aqueduct Racetrack station fare control consists of four high entry-exit turnstiles (HEETs). The station is accessed by two surface stairways, one on the north side of the station and the other on the south side, and by the skybridge connecting it to the Project Site.

The Aqueduct – North Conduit Avenue station north fare control area, which would be used by project-generated trips and was identified for analysis, consists of two HEETs. This fare control area is accessed by one set of platform stairs connected to the underpass under the A subway line tracks. Access to the surface from the underpass is provided through two stairways connecting to Aqueduct Road and the Project Site vicinity to the east and to Hawtree Street to the west.

Pedestrian counts were conducted at the subway station elements identified in October 2022 during a NYRA race day, and the peak hour of 4 PM to 5 PM was identified for analysis. Due to the substantial systemwide reduction in subway ridership resulting from the COVID-19 pandemic, the subway count data were compared with the pre-COVID turnstile entry data during a month when there were NYRA racing activities (March 2019) and adjusted to reflect pre-pandemic levels of activity. **Table 11-15** shows the results of the level of service analyses at the analyzed fare control areas, and **Table 11-16** shows the results of the level of service analyses at the analyzed stairways. The fare control areas and stairways all operate at LOS A during the Friday PM peak hour.

Table 11-15 Existing Conditions Fare Control Levels of Service – Friday PM Peak Hour

Control Element	Pedestrian Volume (15-min)		Surging Factor	Friction Factor	v/c Ratio	LOS
	In	Out				
Aqueduct Racetrack Station						
4 HEETs	66	17	0.75	0.90	0.08	A
Aqueduct - North Conduit Avenue Station – North Fare Control						
2 HEETs	8	60	0.75	0.90	0.10	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.

Table 11-16 Existing Conditions Stairway Levels of Service – Friday PM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	v/c Ratio	LOS
		Up	Down	Up	Down			
Aqueduct Racetrack Station								
O4A/B/C (North Stairs)	13.5	7	4	1.00	0.75	0.90	0.01	A
O1A/B/C (South Stairs)	13.3	12	2	1.00	0.75	0.90	0.01	A
Aqueduct - North Conduit Avenue Station								
U1A/B (Underpass to Aqueduct Road)	14.9	50	5	0.80	1.00	0.90	0.03	A
S1A/B (Underpass to Hawtree Street)	9.3	11	2	0.80	1.00	0.90	0.01	A
P2A/B (Underpass to Platform)	8.6	7	61	1.00	0.75	0.90	0.08	A

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines

Subway Line-Haul

Existing subway line-haul conditions for the A subway line serving the Aqueduct Racetrack and Aqueduct – North Conduit Avenue stations are summarized in **Table 11-17**. The analysis examines the peak-hour load passing through the maximum load point of the subway line in the peak direction; this analysis was conducted for the Friday PM peak hour using the existing subway line-haul data for the weekday PM commuter peak hour. The peak direction of travel during this time period is southbound (Queens-bound), and the maximum load point is at the Jay Street-MetroTech station. The A subway line operates below capacity in the peak direction during this peak hour.

Table 11-17 Existing Conditions Subway Line-Haul

Peak Hour	Route	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]
PM	A	SB	Jay Street-MetroTech	14,750	15.0	10	98	145	0.68

Source: MTA-NYCT, 2024
Notes:
[1] Based on 2019 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

No-Action Condition

Traffic Network

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 2030. No-Action condition traffic, pedestrian, and transit volumes were established by applying a background growth rate of 0.5 percent per year for the first five years (years 2022 to 2027) and a growth rate of 0.25 percent per year for the subsequent three years (year 2027 to 2030), in accordance with *CEQR Technical Manual* guidelines for Queens projects. This background growth is applied to existing traffic volumes and accounts for smaller projects and general increases in travel demand. Aside from the JFK Airport Redevelopment, no significant background developments are expected to be developed within the study area by the year 2030. According to the *JFK Airport Redevelopment DSEA (2022)*, an increase in vehicle traffic would be expected due to construction activities, while operational traffic volumes would be expected to be similar to conditions prior to the redevelopment. As the JFK International Airport Redevelopment project is expected to be completed by the end of 2027, construction activities would be expected to have been completed by the Proposed Actions' 2030 completion year. Several other infrastructure improvement projects were identified to be implemented by the year 2030 within the study area, however none of these projects would be expected to affect traffic operations or generate additional trips within the study area peak hours. These projects, as well as the JFK Airport Redevelopment project, are described below:

› **JFK Airport Redevelopment**: According to the *JFK Airport Redevelopment DEAS (2022)*, no change in traffic operations is expected within the transportation study area. To facilitate construction, however, some improvements are proposed to several intersections, the majority of which are signal timing improvements. These signal timing improvements are focused on construction peak hours, which are earlier than the Proposed Actions' peak hours, and may no longer be needed by the year 2030, the Expansion Project's year of completion. These mitigation measures were, therefore, conservatively not assumed in the No-Action condition analysis. However, the proposed lane reconfiguration and associated restriping and signal phasing changes at the intersection of Aqueduct Road and Lefferts Boulevard were reflected in the No-Action condition analysis, as these improvements would introduce physical changes to the intersection and would accommodate anticipated future traffic demand.

- **Construction of Green Infrastructure in Area of South Ozone Park**: This project would construct green infrastructure in the residential neighborhoods to the immediate east of the Project Site, loosely bounded by Rockaway Boulevard to the north, the Van Wyck Expressway to the east, North Conduit Avenue to the south, and 114th Street to the west, in order to promote the natural movement of water by collecting and managing stormwater runoff from streets and sidewalks. The project is sponsored by the New York City Department of Environmental Protection (NYC DEP) and managed by New York City Department of Design and Construction (NYC DDC), and it does not affect traffic operations at the traffic analysis locations.
- **Albert Road Project**: This project focuses on an upgrade of the water delivery and drainage systems, reconstruction of streets and pedestrian ramps, and realignment of some unpaved streets in the Centreville section of Ozone Park in Queens, to the immediate west of the Aqueduct Racetrack property. The project is managed by NYC DDC for NYC DOT and NYC DEP. This project does not affect traffic operations at the traffic analysis locations.
- **Woodhaven/Cross Bay Boulevard Select Bus Service**: NYC DOT and MTA introduced improvements to the Woodhaven/Cross Bay Boulevard corridor in 2017, including introducing Select Bus Service for the Q52 and Q53 bus lines, dedicating bus-only lanes, and improving pedestrian safety with restriping and refuge islands. Ongoing hardening of these measures are proposed and expected to be implemented by 2030, the Expansion Project's year of completion. Traffic operations are not expected to be affected.
- **Van Wyck Expressway Capacity & Access Improvements to JFK Airport Project:** In the existing conditions, the westbound North Conduit on-ramp to the southbound Van Wyck Expressway was closed due to work related to this project. The ramp would be expected to be reconstructed by the year 2030. Vehicle trips that were diverted due to this project are assumed to be destined to the JFK Airport and were assumed to use alternative routes, including through intersections within the traffic study area. However, as there are multiple detour routes, the increase in vehicle traffic at traffic analysis intersections were assumed to be modest and diversions of vehicle traffic was not assumed subsequent to the reconstruction of the ramp.
- **Rockaway Boulevard Subway Station Accessibility Project**: This project would improve accessibility at the Rockaway Boulevard Subway Station along the A subway line in accordance with the Americans with Disabilities Act (ADA). The project includes the construction of two new elevators, raised ADA boarding areas, ADA compliant sidewalk curbs and stairs, agent booth modifications, and installation of braille signage.

The Project Site also has planned changes that are reflected as part of the 2030 year No-Action condition. Based on the *Resorts World Casino Expanded EAS (2017)*, the number of casino gaming positions would increase from 6,500 to 6,650 gaming positions, and onsite hotel capacity would increase from 400 rooms to 600 rooms. In addition, as the existing conditions baseline does not reflect trips generated by the existing onsite conference center space (the volume data were collected on non-event/conference days), the No-Action condition conservatively reflects projected trips for the full allotment of this space. This space is typically used for trade shows and conferences and would expand to approximately 91,722 sf. These No-Action developments can be expected to generate a modest volume of trips, which have been applied to the background growth and existing traffic volumes for each of the three peak periods. Lastly, the No-Action condition traffic network reflects the displacement of vehicle trips associated with the Aqueduct Racetrack resulting from the consolidation of horse racing activities to the planned new thoroughbred racing facilities at Belmont Park in Nassau County. The Aqueduct Racetrack and associated facilities would be closed, allowing

for future development on the property. The modernization project at Belmont Park is expected to be completed in 2026.

In April 2023, RWNYC began operating shuttle service between the Project Site and the Jamaica Long Island Rail Road station (approximately one shuttle per hour between 10 AM and midnight). The No-Action traffic analysis also assumes that existing construction activity along the Van Wyck Expressway Southbound Service Road at its intersection with Linden Boulevard will be completed by the year 2030. Under existing conditions, temporary "No Standing Anytime" curbside parking regulations were installed at the intersection's southbound approach, and the curbside parking lane was closed to facilitate construction activity. Under the No-Action condition, it is assumed that the regulations will revert to their pre-construction state and that during the Friday PM peak hour the curbside parking lane will function as an additional travel lane. Lastly, the No-Action condition traffic analyses reflect signal timing changes implemented in 2025 at the intersection of Cross Bay Boulevard and North Conduit Avenue and at the intersection of Cross Bay Boulevard and Shore Parkway/Nassau Expressway Eastbound On-Ramp.

Intersection Traffic

No-Action condition intersection traffic volume maps for the Friday PM, Saturday PM, and Saturday night peak hours are shown in **Figure 11-35** through **Figure 11-46**.

Figure 11-35 No-Action Condition Intersection Traffic Volumes – Friday PM Peak Hour – Section 1

Figure 11-36 No-Action Condition Intersection Traffic Volumes – Friday PM Peak Hour – Section 2

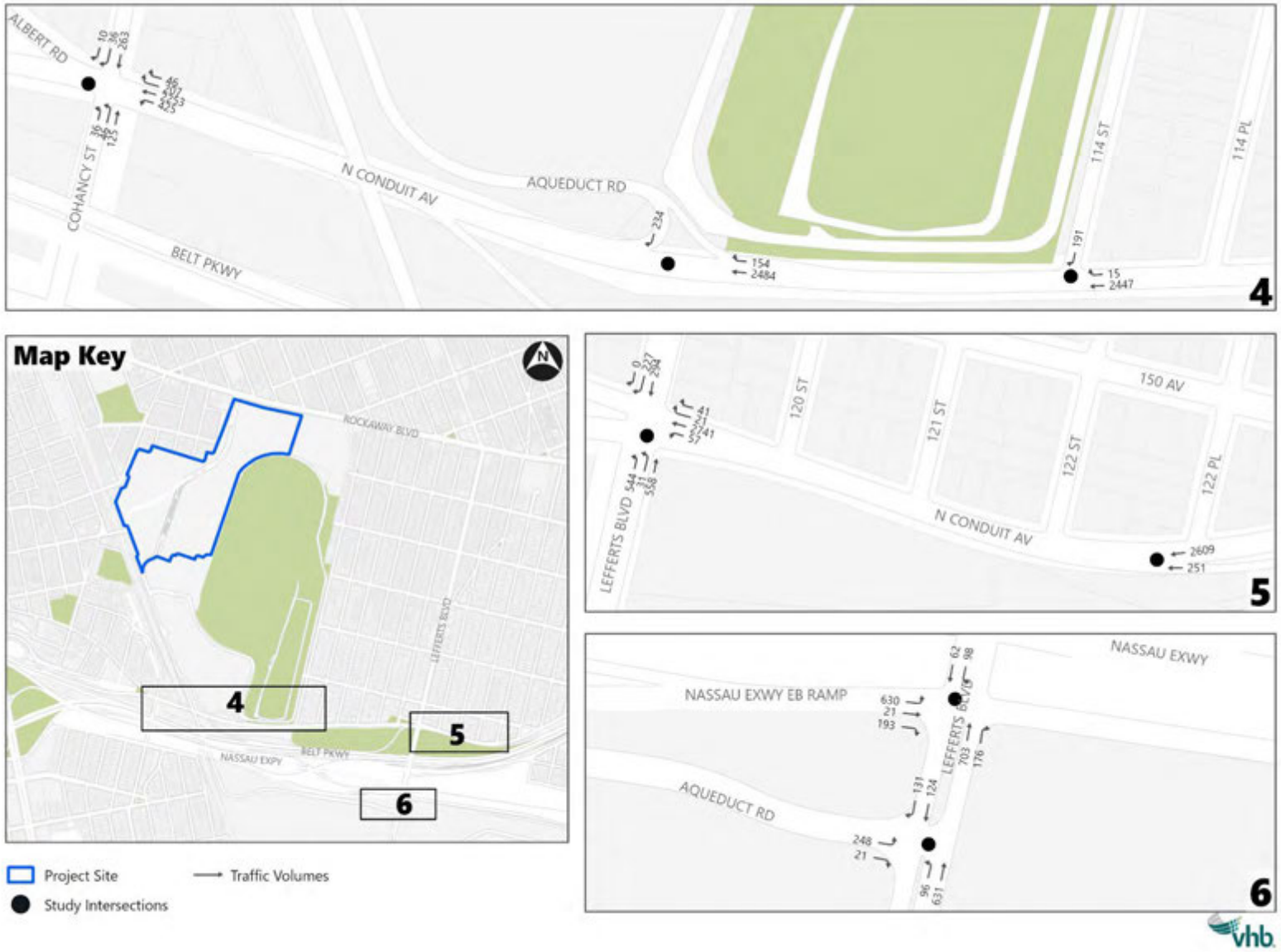


Figure 11-37 No-Action Condition Intersection Traffic Volumes – Friday PM Peak Hour – Section 3

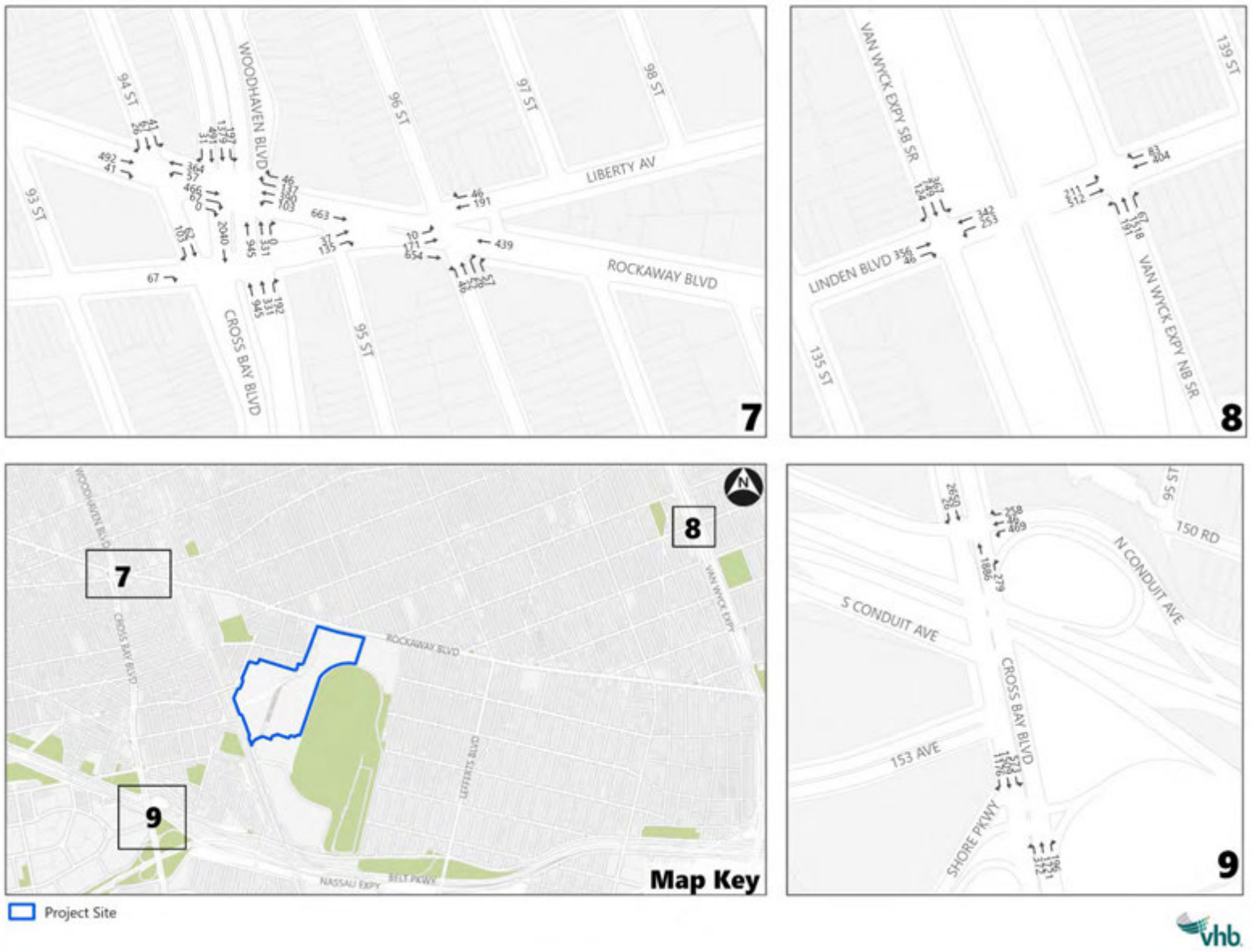


Figure 11-38 No-Action Condition Intersection Traffic Volumes – Friday PM Peak Hour – Section 4

Figure 11-39 No-Action Condition Intersection Traffic Volumes – Saturday PM Peak Hour – Section 1

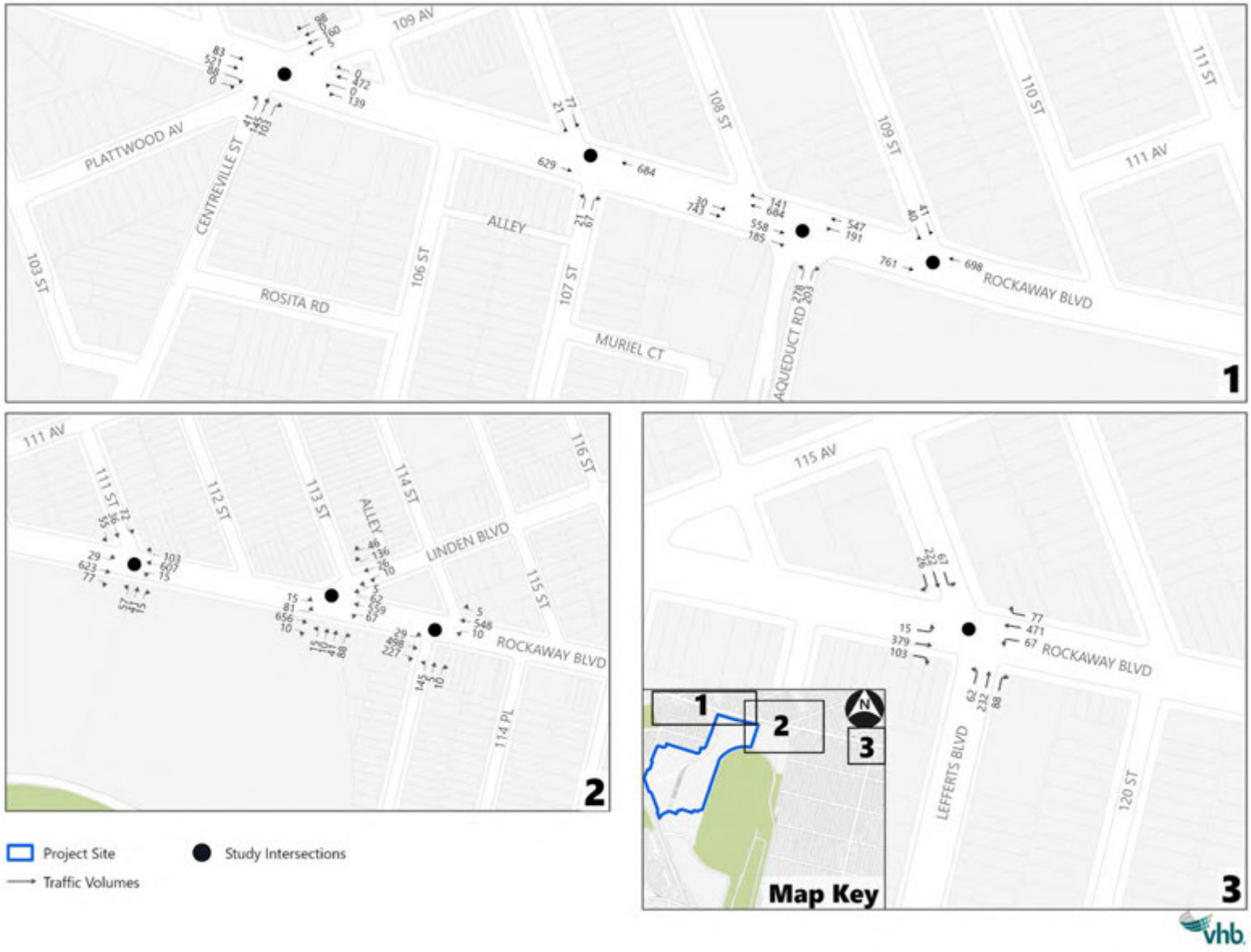


Figure 11-40 No-Action Condition Intersection Traffic Volumes – Saturday PM Peak Hour – Section 2

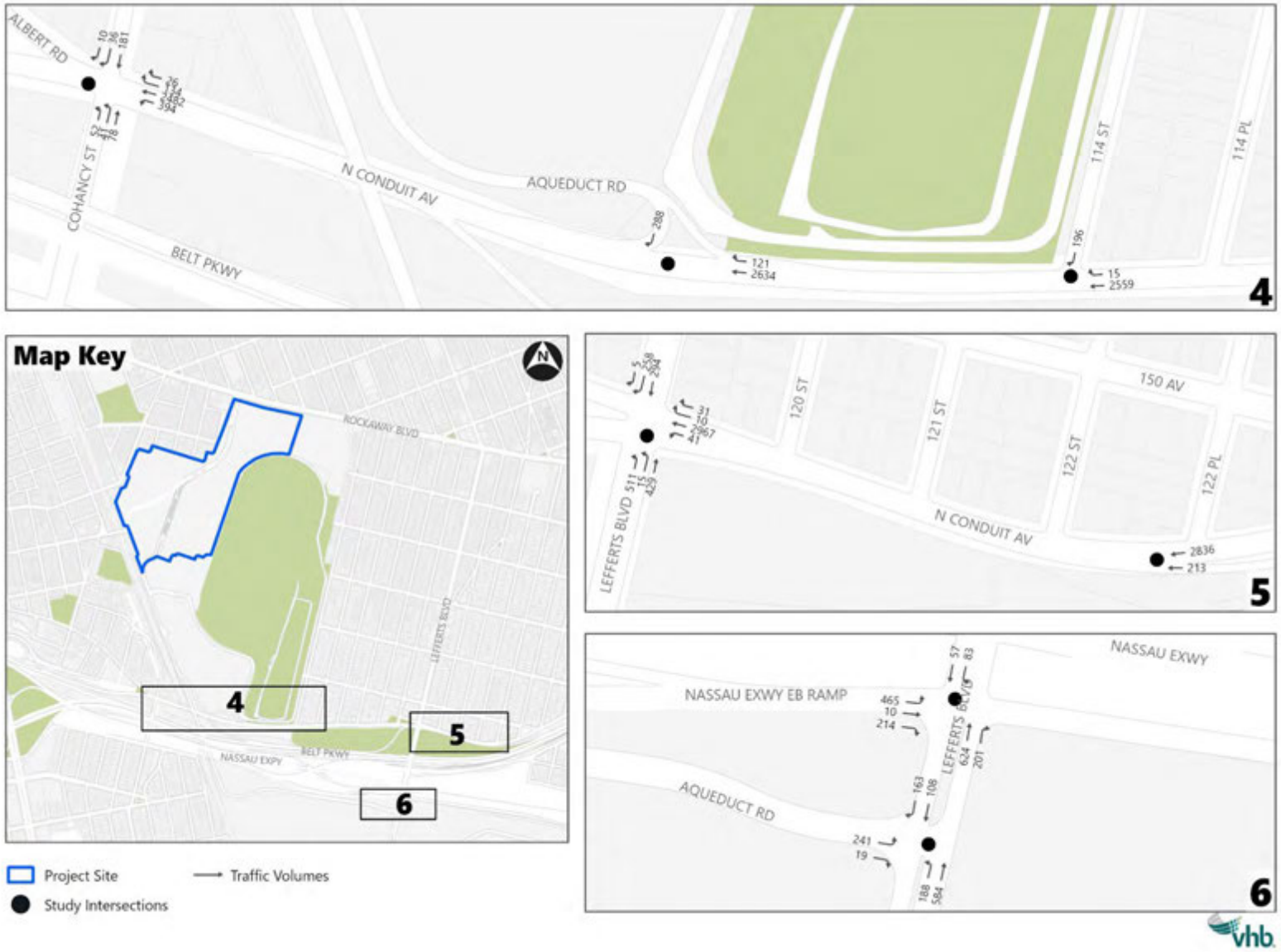


Figure 11-41 No-Action Condition Intersection Traffic Volumes – Saturday PM Peak Hour – Section 3

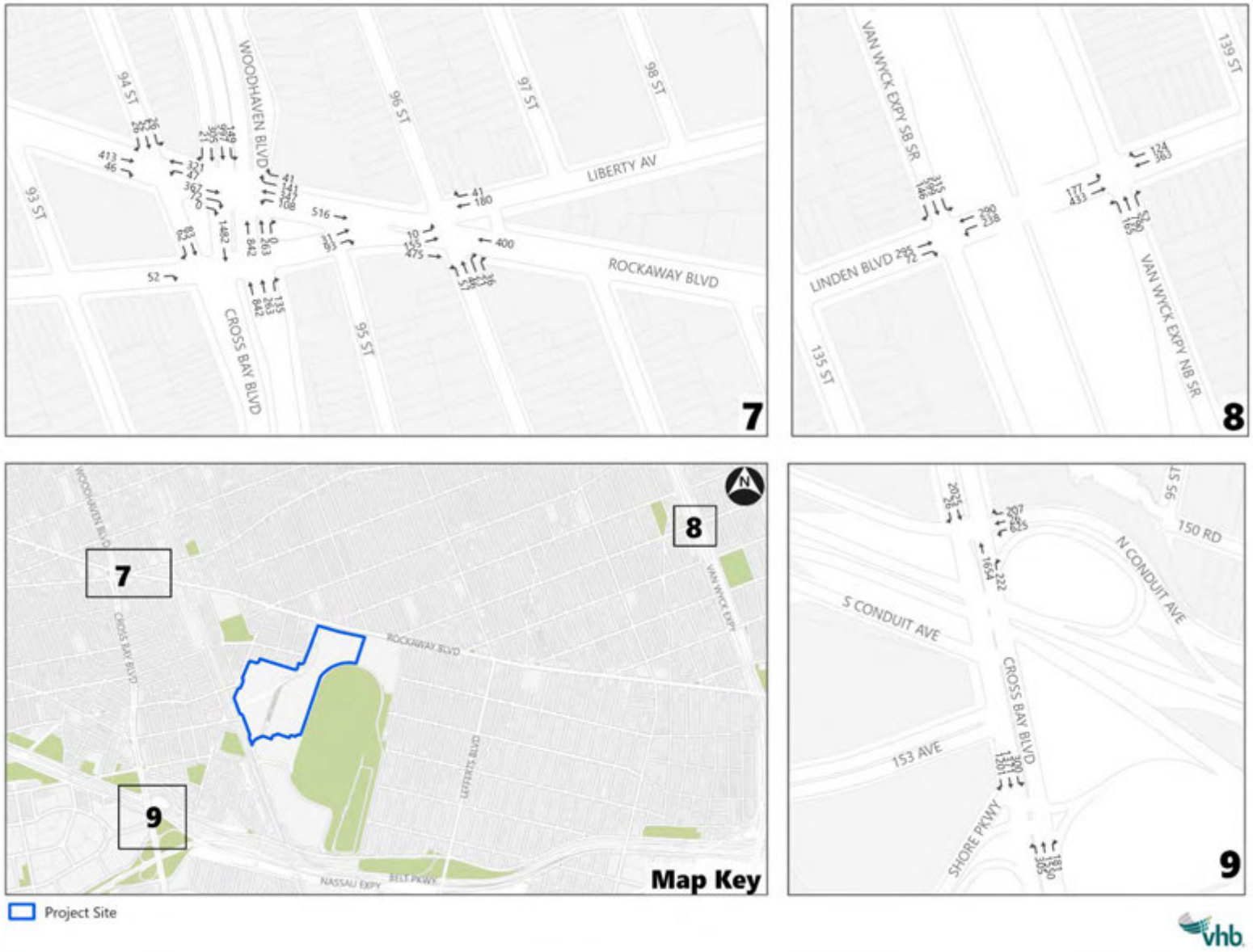


Figure 11-42 No-Action Condition Intersection Traffic Volumes – Saturday PM Peak Hour – Section 4

Figure 11-43 No-Action Condition Intersection Traffic Volumes – Saturday Night Peak Hour – Section 1

Figure 11-44 No-Action Condition Intersection Traffic Volumes – Saturday Night Peak Hour – Section 2

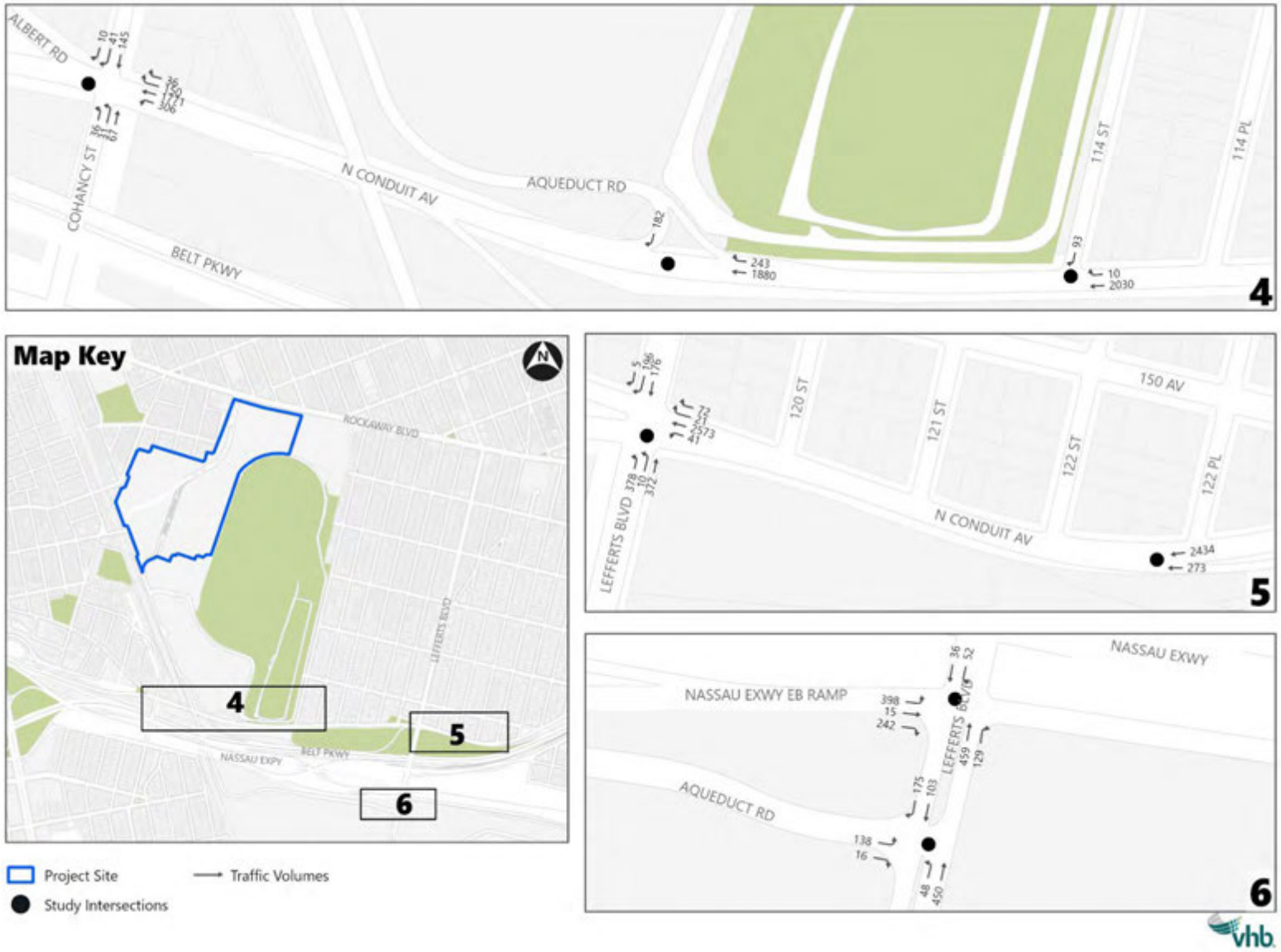


Figure 11-45 No-Action Condition Intersection Traffic Volumes – Saturday Night Peak Hour – Section 3

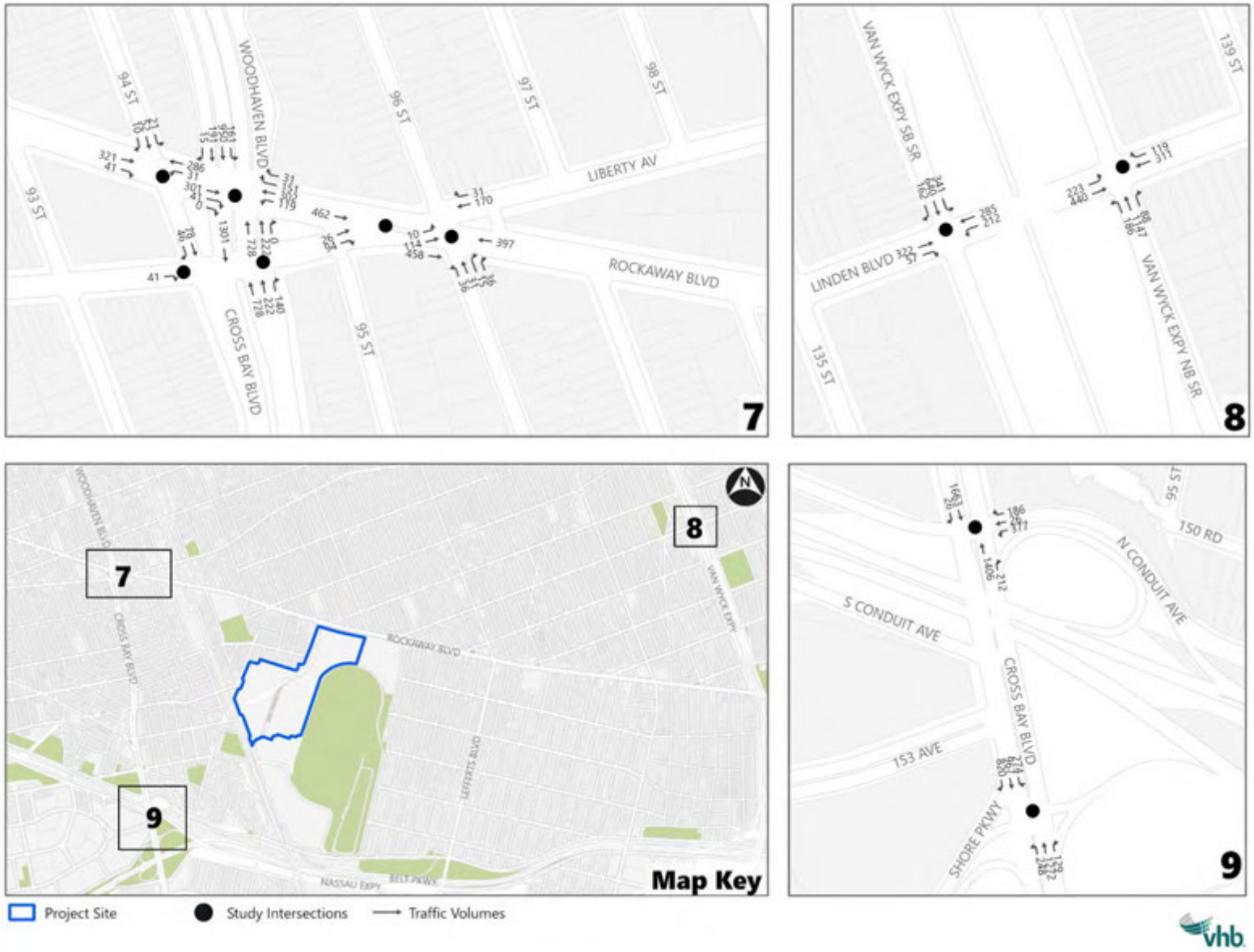


Figure 11-46 No-Action Condition Intersection Traffic Volumes – Saturday Night Peak Hour – Section 4

Levels of Service

Based on the traffic volume increases and traffic operations changes described above, the 2030 No-Action condition traffic levels of service were determined for the 31 intersection analysis locations. **Table 11-18** and **Table 11-19** provide an overview of the levels of service that are projected to characterize the No-Action condition "overall" intersection conditions and associated individual traffic movements, respectively, during the Friday PM, Saturday PM, and Saturday night peak hours. Detailed traffic levels of service are provided in **Table 11-20**.

Table 11-18 No-Action Condition Intersection Traffic Levels of Service Summary – Overall

	Existing			No-Action		
	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
Intersections at Overall LOS A/B/C	26	28	29	24	27	29
Intersections at Overall LOS D	5	3	2	7	4	2
Intersections at Overall LOS E	0	0	0	0	0	0
Intersections at Overall LOS F	0	0	0	0	0	0

Note: Includes 28 signalized intersections and 3 unsignalized intersections

Table 11-19 No-Action Condition Intersection Traffic Levels of Service Summary – Traffic Movements

	Existing			No-Action		
	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
Traffic Movements at LOS A/B/C	93	109	116	92	109	116
Traffic Movements at LOS D	22	16	12	23	16	12
Traffic Movements at LOS E	11	3	1	12	5	2
Traffic Movements at LOS F	9	6	3	9	5	3
Number of Individual Traffic Movements	135	134	132	136	135	133

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left turn and right turn movements.

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
1. Rockaway Boulevard & 94th Street													
Rockaway Boulevard	EB	TR	0.56	44.4	D	TR	0.50	32.4	C	TR	0.37	30.1	C
	WB	LT	0.58	12.5	B	LT	0.41	5.5	A	LT	0.33	4.2	A
94th Street	SB	LTR	0.16	13.2	B	LTR	0.13	12.9	B	LTR	0.10	12.6	B
Overall Intersection[2]		-	-	**27.2**	**C**	-	-	**20.1**	**C**	-	-	**17.0**	**B**
2. Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard													
Rockaway Boulevard	EB	TR	0.48	10.9	B	TR	0.38	5.8	A	TR	0.27	5.7	A
	WB	L	0.69	55.7	E	L	0.51	28.5	C	L	0.42	25.6	C
		TR	0.95	65.8	E	TR	0.62	25.5	C	TR	0.58	25.1	C
Woodhaven Boulevard SB Service Road	SB	T	0.49	18.1	B	T	0.35	15.5	B	T	0.21	13.8	B
		R	0.04	12.0	B	R	0.03	12.0	B	R	0.02	11.9	B
Woodhaven Boulevard Mainline	NB	T	0.67	6.4	A	T	0.65	4.7	A	T	0.56	4.3	A
	SB	L	1.07	151.1	F	L	0.92	99.2	F	L	0.92	97.9	F
		T	0.75	24.1	C	T	0.58	18.8	B	T	0.55	18.1	B
Cross Bay Boulevard NB Service Road	NB	TR	0.40	5.4	A	TR	0.34	3.6	A	TR	0.33	4.1	A
Overall Intersection[2]		-	-	**28.3**	**C**	-	-	**17.7**	**B**	-	-	**18.1**	**B**
3. Liberty Avenue & Rockaway Boulevard													
Rockaway Boulevard	EB	LT	0.56	7.4	A	LT	0.50	9.0	A	LT	0.43	8.5	A
Liberty Avenue	NB	T	0.09	42.7	D	T	0.06	19.7	B	T	0.06	17.8	B
		R	0.35	42.4	D	R	0.21	18.8	B	R	0.20	17.3	B
Overall Intersection[2]		-	-	**14.6**	**B**	-	-	**10.9**	**B**	-	-	**10.3**	**B**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
4. Rockaway Boulevard/Liberty Avenue & 96th Street													
Liberty Avenue	EB	LT	0.42	35.9	D	LT	0.36	28.7	C	LT	0.28	28.1	C
	WB	TR	0.54	50.5	D	TR	0.41	35.0	C	TR	0.38	34.3	C
96th Street	NB	LTR	0.42	48.7	D	LTR	0.37	40.2	D	LTR	0.30	38.9	D
Rockaway Boulevard	NW	T	0.42	36.8	D	T	0.45	33.4	C	T	0.42	33.0	C
	SE	T	0.31	0.8	A	T	0.22	0.6	A	T	0.20	0.6	A
Overall Intersection[2]		-	-	**26.8**	**C**	-	-	**23.3**	**C**	-	-	**22.6**	**C**
5. Cross Bay Boulevard Northbound Service Road & Liberty Avenue													
Cross Bay Blvd NB Service Road	NB	TR	0.73	36.8	D	TR	0.66	35.0	C	TR	0.63	33.9	C
Overall Intersection[2]		-	-	**36.8**	**D**	-	-	**35.0**	**C**	-	-	**33.9**	**C**
6. Cross Bay Boulevard & Liberty Avenue													
Cross Bay Boulevard	NB	T	0.65	31.7	C	T	0.67	32.9	C	T	0.58	30.6	C
	SB	T	0.71	6.3	A	T	0.53	7.6	A	T	0.51	8.2	A
Overall Intersection[2]		-	-	**14.7**	**B**	-	-	**17.4**	**B**	-	-	**16.2**	**B**
7. Liberty Avenue & 94th Street													
Liberty Avenue	EB	R	0.86	109.8	F	R	0.40	36.1	D	R	0.20	28.5	C
94th Street	SB	TR	0.20	21.0	C	TR	0.20	21.6	C	TR	0.17	18.6	B
Overall Intersection[2]		-	-	**48.2**	**D**	-	-	**25.5**	**C**	-	-	**20.9**	**C**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
8. Rockaway Boulevard & Centreville Street/109th Avenue/Plattwood Avenue													
Rockaway Boulevard	EB	L	0.38	23.1	C	L	0.25	17.8	B	L	0.16	15.7	B
		TR	0.75	27.4	C	TR	0.51	21.9	C	TR	0.45	20.8	C
	WB	L	0.54	35.6	D	L	0.46	25.0	C	L	0.30	14.2	B
		TR	0.52	24.7	C	TR	0.40	22.2	C	TR	0.36	11.6	B
Centreville Street	NB	LTR	1.00	71.6	E	LTR	0.77	37.8	D	LTR	0.60	29.7	C
109th Avenue	SB	LTR	0.70	32.4	C	LTR	0.54	27.3	C	LTR	0.42	24.9	C
Overall Intersection[2]		-	-	**34.7**	**C**	-	-	**25.5**	**C**	-	-	**19.8**	**B**
9. Rockaway Boulevard & 107th Street													
Rockaway Boulevard	EB	T	0.59	5.4	A	T	0.39	4.9	A	T	0.38	5.6	A
	WB	T	0.50	11.4	B	T	0.42	8.2	A	T	0.42	18.4	B
107th Street	NB	LTR	0.25	24.7	C	LTR	0.25	24.6	C	LTR	0.14	24.4	C
	SB	LTR	0.33	26.0	C	LTR	0.33	26.1	C	LTR	0.25	26.1	C
Overall Intersection[2]		-	-	**10.1**	**B**	-	-	**9.3**	**A**	-	-	**13.7**	**B**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
10. Rockaway Boulevard & Aqueduct Road/108th Street													
Rockaway Boulevard	EB	L	-	10.1	B	L	-	9.7	A	L	-	9.1	A
		T	0.54	9.4	A	T	0.38	9.5	A	T	0.29	9.6	A
		R	0.33	8.9	A	R	0.32	9.7	A	R	0.43	11.3	B
	WB	L	0.62	21.6	C	L	0.48	15.1	B	L	0.57	6.9	A
		T	0.41	7.1	A	T	0.31	7.4	A	T	0.28	1.5	A
Aqueduct Road	NB	LR	0.35	24.9	C	LR	0.39	25.5	C	LR	0.29	24.2	C
		R	0.40	27.2	C	R	0.45	28.5	C	R	0.33	26.0	C
Overall Intersection[2]		-	-	**13.1**	**B**	-	-	**14.1**	**B**	-	-	**10.5**	**B**
11. Rockaway Boulevard & 109th Street													
Rockaway Boulevard	EB	T	0.42	8.5	A	T	0.34	9.9	A	T	0.27	7.7	A
	WB	T	0.40	22.1	C	T	0.31	18.1	B	T	0.34	12.3	B
109th Street	SB	LR	0.26	24.4	C	LR	0.20	23.6	C	LR	0.15	24.5	C
Overall Intersection[2]		-	-	**15.6**	**B**	-	-	**14.3**	**B**	-	-	**10.9**	**B**
12. Rockaway Boulevard & 111th Street/Home Depot Parking Lot													
Rockaway Boulevard	EB	L	0.19	4.1	A	L	0.12	2.5	A	L	0.11	11.5	B
		TR	0.68	7.0	A	TR	0.55	5.8	A	TR	0.42	14.6	B
	WB	L	0.05	23.5	C	L	0.06	19.5	B	L	0.03	4.1	A
		TR	0.76	30.2	C	TR	0.62	25.2	C	TR	0.64	8.4	A
Home Depot Parking Lot	NB	LTR	0.25	22.3	C	LTR	0.24	22.1	C	LTR	0.12	20.6	C
111th Street	SB	LTR	0.64	32.6	C	LTR	0.45	26.4	C	LTR	0.41	25.4	C
Overall Intersection[2]		-	-	**20.0**	**B**	-	-	**16.9**	**B**	-	-	**12.9**	**B**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
13. Rockaway Boulevard & 113th Street/Linden Boulevard/Home Depot Parking Lot													
Rockaway Boulevard	EB	L	0.88	47.0	D	L	0.66	26.8	C	L	0.71	54.3	D
		TR	0.78	12.9	B	TR	0.63	11.2	B	TR	0.44	34.9	C
	WB	L	0.62	37.4	D	L	0.50	24.9	C	L	0.14	12.5	B
		TR	0.70	18.2	B	TR	0.60	16.8	B	TR	0.54	14.5	B
Home Depot Parking Lot	NB	LTR	0.93	87.2	F	LTR	1.09	127.8	F	LTR	0.36	32.1	C
Linden Boulevard	SB	LTR	0.51	37.3	D	LTR	0.43	34.5	C	LTR	0.43	34.7	C
		R	0.47	35.7	D	R	0.41	34.1	C	R	0.41	34.0	C
Overall Intersection[2]		-	-	**25.2**	**C**	-	-	**27.9**	**C**	-	-	**28.2**	**C**
14. Rockaway Boulevard & 114th Street													
Rockaway Boulevard	EB	LT	0.90	19.3	B	LT	0.73	13.9	B	LT	0.50	7.3	A
		R	0.51	5.2	A	R	0.44	6.9	A	R	0.28	4.9	A
	WB	L	0.10	14.5	B	L	0.06	13.2	B	L	0.06	13.5	B
		TR	0.38	15.6	B	TR	0.36	15.5	B	TR	0.32	15.6	B
114th Street	NB	LTR	0.52	28.0	C	LTR	0.37	24.9	C	LTR	0.43	27.5	C
Overall Intersection[2]		-	-	**17.0**	**B**	-	-	**14.6**	**B**	-	-	**13.4**	**B**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
15. Rockaway Boulevard & Lefferts Boulevard													
Rockaway Boulevard	EB	L	0.14	19.1	B	L	0.07	17.9	B	L	0.07	18.4	B
		T	0.74	31.4	C	T	0.66	27.8	C	T	0.47	23.7	C
		R	0.19	18.9	B	R	0.21	19.1	B	R	0.19	19.5	B
	WB	L	0.46	28.8	C	L	0.32	23.0	C	L	0.23	20.8	C
		T	0.51	22.6	C	T	0.46	21.7	C	T	0.43	21.9	C
Lefferts Boulevard	NB	L	0.30	26.4	C	L	0.29	26.2	C	L	0.22	26.3	C
		TR	1.02	78.1	E	TR	0.80	42.9	D	TR	0.82	46.4	D
	SB	LTR	0.58	30.1	C	LTR	0.55	29.1	C	LTR	0.56	31.0	C
Overall Intersection[2]		-	-	**37.1**	**D**	-	-	**28.1**	**C**	-	-	**28.7**	**C**
16. Cross Bay Boulevard & North Conduit Avenue													
North Conduit Avenue	WB	L	0.65	56.5	E	L	0.54	32.5	C	L	0.32	28.0	C
		LT	0.67	57.4	E	LT	0.56	33.1	C	LT	0.33	28.2	C
		R	0.71	61.1	E	R	0.40	29.7	C	R	0.37	29.1	C
Cross Bay Boulevard	NB	T	0.47	12.9	B	T	0.51	19.0	B	T	0.44	18.0	B
	SB	TR	0.66	16.3	B	TR	0.63	21.1	C	TR	0.54	19.5	B
Overall Intersection[2]		-	-	**21.6**	**C**	-	-	**22.5**	**C**	-	-	**20.4**	**C**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
17. Cross Bay Boulevard & Shore Parkway/Nassau Expressway Eastbound On-Ramp													
Cross Bay Boulevard	NB	L	0.98	94.6	F	L	0.99	95.5	F	L	0.90	75.4	E
		T	0.66	24.4	C	T	0.46	8.5	A	T	0.38	7.7	A
		R	0.15	0.2	A	R	0.13	0.2	A	R	0.10	0.1	A
	SB	L	1.08	109.3	F	L	0.96	87.2	F	L	1.01	100.6	F
		T	0.48	12.8	B	T	0.41	7.9	A	T	0.29	7.0	A
		R	0.78	3.9	A	R	0.83	5.2	A	R	0.55	1.4	A
Overall Intersection[2]		-	-	**30.3**	**C**	-	-	**17.6**	**B**	-	-	**18.8**	**B**
18. North Conduit Avenue & Cohancy Street/Albert Road													
North Conduit Avenue	WB	L	0.57	10.0	A	L	0.59	11.6	B	L	0.49	34.7	C
		T	0.88	17.4	B	T	1.06	49.8	D	T	0.90	44.6	D
		R	0.33	7.3	A	R	0.26	8.2	A	R	0.34	31.7	C
Cohancy Street	NB	L	0.54	40.4	D	L	0.33	21.6	C	L	0.19	24.5	C
		T	0.24	28.2	C	T	0.12	18.1	B	T	0.09	22.9	C
	SB	TR	0.97	86.2	F	TR	0.50	38.5	D	TR	0.38	32.3	C
Overall Intersection[2]		-	-	**23.3**	**C**	-	-	**40.4**	**D**	-	-	**40.2**	**D**
19. North Conduit Avenue & Aqueduct Road (unsignalized)													
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A
Aqueduct Road	SB	R	-	11.7	B	R	-	12.9	B	R	-	10.7	B
Overall Intersection[2]		-	-	**1.1**	**A**	-	-	**1.4**	**A**	-	-	**0.9**	**A**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
20. North Conduit Avenue & 114th Street													
North Conduit Avenue	WB	TR	0.66	5.8	A	TR	0.68	5.2	A	TR	0.66	22.3	C
114th Street	SB	R	0.54	44.4	D	R	0.54	44.4	D	R	0.17	27.0	C
Overall Intersection[2]		-	-	**8.7**	**A**	-	-	**8.1**	**A**	-	-	**22.5**	**C**
21. North Conduit Avenue & Lefferts Boulevard/Old South Road													
North Conduit Avenue	WB	T	0.99	20.8	C	T	1.04	37.4	D	T	0.99	54.1	D
		R	0.08	5.0	A	R	0.06	4.9	A	R	0.14	21.7	C
Lefferts Boulevard	NB	L	1.11	113.6	F	L	1.11	115.4	F	L	0.80	44.1	D
		LT	1.07	88.8	F	LT	0.91	50.6	D	LT	0.64	29.9	C
	SB	TR	0.87	57.3	E	TR	0.84	55.1	E	TR	0.54	38.8	D
Overall Intersection[2]		-	-	**44.0**	**D**	-	-	**46.4**	**D**	-	-	**47.4**	**D**
22. Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp													
Nassau Expressway Eastbound Off-Ramp	EB	defL	1.02	66.8	E	LTR	0.59	23.7	C	LTR	0.58	23.6	C
		TR	0.42	22.3	C	-	-	-	-	-	-	-	-
Lefferts Boulevard	NB	TR	0.60	13.3	B	TR	0.58	12.8	B	TR	0.38	10.1	B
	SB	LT	0.21	13.1	B	LT	0.19	12.9	B	LT	0.09	11.9	B
Overall Intersection[2]		-	-	**31.8**	**C**	-	-	**17.1**	**B**	-	-	**17.0**	**B**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
23. Lefferts Boulevard & Aqueduct Road													
Aqueduct Road	EB	LR	0.33	26.3	C	LR	0.32	26.5	C	LR	0.13	21.3	C
Lefferts Boulevard	NB	L	0.27	29.1	C	L	0.54	34.6	C	L	0.15	28.5	C
		T	0.64	14.1	B	T	0.65	14.1	B	T	0.52	14.2	B
	SB	TR	0.24	54.1	D	TR	0.24	58.1	E	TR	0.26	88.6	F
Overall Intersection[2]		-	-	**24.0**	**C**	-	-	**25.8**	**C**	-	-	**30.8**	**C**
24. Linden Boulevard & Southbound Van Wyck Service Road													
Linden Boulevard	EB	TR	0.74	36.3	D	TR	0.69	34.0	C	TR	0.69	33.9	C
	WB	-	-	-	-	-	-	-	-	LT	0.59	26.7	C
		defL	0.90	27.6	C	defL	0.91	38.9	D	-	-	-	-
		T	0.51	7.8	A	T	0.43	10.1	B	-	-	-	-
Southbound Van Wyck Service Road	SB	LTR	0.65	20.5	C	LTR	0.80	25.7	C	LTR	0.82	26.8	C
Overall Intersection[2]		-	-	**22.0**	**C**	-	-	**26.6**	**C**	-	-	**28.1**	**C**
25. Linden Boulevard & Northbound Van Wyck Service Road													
Linden Boulevard	EB	defL	1.08	106.5	F	defL	0.89	58.8	E	defL	0.88	54.1	D
		T	0.76	23.1	C	T	0.63	18.1	B	T	0.58	22.2	C
	WB	TR	0.99	66.3	E	TR	0.96	59.8	E	TR	0.83	41.9	D
Northbound Van Wyck Service Road	NB	LTR	0.87	27.1	C	LTR	0.51	18.2	B	LTR	0.70	21.4	C
Overall Intersection[2]		-	-	**38.8**	**D**	-	-	**31.5**	**C**	-	-	**28.1**	**C**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
26. North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)													
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A
Belt Parkway Westbound Off-Ramp	WB	T	-	39.7	E	T	-	36.6	E	T	-	39.9	E
Overall Intersection[2]		-	-	**4.1**	**A**	-	-	**3.0**	**A**	-	-	**4.7**	**A**
27. 155th Avenue & Belt Parkway Eastbound On-Ramp (unsignalized)													
155th Avenue	WB	R	-	14.1	B	R	-	6.9	A	R	-	6.8	A
Belt Parkway Eastbound On-Ramp	NB	T	-	0.0	A	T	-	11.2	B	T	-	9.5	A
		R	-	0.0	A	R	-	6.4	A	R	-	6.3	A
Overall Intersection[2]		-	-	**4.6**	**A**	-	-	**9.5**	**A**	-	-	**8.4**	**A**
28. Cohancy Street & 155th Avenue													
155th Avenue	EB	LT	0.23	20.2	C	LT	0.15	19.1	B	LT	0.16	19.6	B
	WB	TR	0.26	20.3	C	TR	0.28	20.7	C	TR	0.22	19.9	B
Cohancy Street	NB	LTR	0.19	5.8	A	LTR	0.13	5.5	A	LTR	0.11	5.4	A
	SB	LTR	1.01	52.0	D	LTR	0.81	21.2	C	LTR	0.65	10.4	B
Overall Intersection[2]		-	-	**39.8**	**D**	-	-	**18.9**	**B**	-	-	**11.3**	**B**

Table 11-20 No-Action Condition Intersection Traffic Levels of Service

Intersection & Approach		Friday PM Peak Hour				Saturday PM Peak Hour				Saturday Night Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
29. North Conduit Avenue & 130th Street													
North Conduit Avenue	WB	LTR	0.91	17.8	B	LTR	0.88	39.7	D	LTR	0.61	13.4	B
130th Street	NB	L	0.45	31.2	C	L	0.39	35.2	D	L	0.31	33.6	C
		T	0.65	37.6	D	T	0.28	32.6	C	T	0.24	32.3	C
	SB	T	0.64	47.2	D	T	0.68	49.8	D	T	0.60	46.4	D
		R	0.23	38.0	D	R	0.30	39.5	D	R	0.16	36.9	D
Overall Intersection[2]		-	-	**23.7**	**C**	-	-	**40.0**	**D**	-	-	**19.7**	**B**
30. South Conduit Avenue & 130th Street													
South Conduit Avenue	EB	LTR	0.60	23.0	C	LTR	0.37	19.3	B	LTR	0.25	17.9	B
130th Street	NB	TR	0.61	50.6	D	TR	0.36	44.3	D	TR	0.29	42.6	D
	SB	L	0.80	36.9	D	L	0.63	27.1	C	L	0.60	31.2	C
		T	0.21	21.0	C	T	0.12	21.5	C	T	0.11	25.0	C
Overall Intersection[2]		-	-	**27.7**	**C**	-	-	**23.1**	**C**	-	-	**24.3**	**C**
31. North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road													
North Conduit Avenue	WB	L	0.61	28.5	C	L	0.58	27.6	C	L	0.51	25.6	C
		LT	1.05	68.6	E	LT	0.98	48.7	D	LT	0.71	28.1	C
Van Wyck Expressway Service Road	SB	T	0.62	27.0	C	T	0.60	26.6	C	T	0.66	28.1	C
		R	0.49	24.7	C	R	0.48	24.5	C	R	0.34	22.2	C
Overall Intersection[2]		-	-	**48.6**	**D**	-	-	**37.8**	**D**	-	-	**27.1**	**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 No-Action conditions indicates that:

- In the Friday PM peak hour, no intersections would operate at overall LOS E or F (similar to the existing conditions) and 21 out of 136 individual traffic movements would operate at LOS E or F compared to 20 traffic movements in the existing conditions.
- In the Saturday PM peak hour, no intersections would operate at overall LOS E or F (similar to the existing conditions) and 10 out of 135 individual traffic movements would operate at LOS E or F compared to nine traffic movements in the existing conditions.
- In the Saturday night peak hour, no intersections would operate at overall LOS E or F (similar to the existing conditions) and five out of 133 individual traffic movements would operate at LOS E or F compared to four traffic movements in the existing conditions.

Based on the analysis results, the majority of intersection 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 under No-Action conditions.

- Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard
  - Westbound Rockaway Boulevard left turn movement (Friday PM)
  - Westbound Rockaway Boulevard shared through-right movement (Friday PM)
  - Southbound Woodhaven Boulevard Mainline left turn movement (Friday PM, Saturday PM, and Saturday night)
- Liberty Avenue and 94th Street
  - Eastbound Liberty Avenue right turn movement (Friday PM)
- Rockaway Boulevard and Centreville Street/109th Avenue/Plattwood Avenue
  - Northbound Centreville Street approach (Friday PM)
- Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot
  - Northbound Home Depot Parking Lot approach (Friday PM and Saturday PM)
- Rockaway Boulevard and Lefferts Boulevard
  - Northbound Lefferts Boulevard shared through-right movement (Friday PM)
- Cross Bay Boulevard and North Conduit Avenue
  - Westbound North Conduit Avenue left turn movement (Friday PM)
  - Westbound North Conduit Avenue shared left-through-right movement (Friday PM)
  - Westbound North Conduit Avenue right turn movement (Friday PM)
- Cross Bay Boulevard and Shore Parkway/Nassau Expressway Eastbound On-Ramp
  - Northbound Cross Bay Boulevard left turn movement (Friday PM, Saturday PM, and Saturday night)
  - Southbound Cross Bay Boulevard left turn movement (Friday PM, Saturday PM, and Saturday night)
- North Conduit Avenue and Cohancy Street/Albert Road
  - Southbound Cohancy Street approach (Friday PM)

- North Conduit Avenue and Lefferts Boulevard/Old South Road
  - Northbound Lefferts Boulevard left turn movement (Friday PM)
  - Northbound Lefferts Boulevard de facto left movement (Saturday PM)
  - Northbound Lefferts Boulevard shared left-through movement (Friday PM)
  - Southbound Lefferts Boulevard approach (Friday PM and Saturday PM)
- Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp
  - Eastbound Nassau Expressway Off-Ramp de facto left turn movement (Friday PM)
- Lefferts Boulevard and Aqueduct Road
  - Southbound Lefferts Boulevard approach (Saturday PM and Saturday night)
- Linden Boulevard and Northbound Van Wyck Service Road
  - Eastbound Linden Boulevard de facto left turn movement (Friday PM and Saturday PM)
  - Westbound Linden Boulevard approach (Friday PM and Saturday PM)
- North Conduit Avenue and Belt Parkway Westbound Off-Ramp (unsignalized)
  - Belt Parkway Westbound Off-Ramp approach (Friday PM, Saturday PM, and Saturday night)
- North Conduit Avenue and Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road
  - North Conduit Avenue Westbound shared left-through movement (Friday PM)

Highways

No-Action condition highway traffic volume maps for the Friday PM, Saturday midday, and Saturday night peak hours are shown in **Figure 11-47** through **Figure 11-49**.

Detailed No-Action condition highway traffic levels of service for the Friday PM, Saturday midday, and Saturday night peak hours are provided in **Table 11-21**, which shows that LOS E or F conditions would occur at the following segments under the No-Action condition:

- Westbound Belt Parkway before Exit 18B off-ramp (Overlap Freeway) [Friday PM, Saturday midday and Saturday night]
- Westbound Belt Parkway after Exit 18B off-ramp (Downstream Basic Freeway) [Friday PM and Saturday midday]
- Eastbound Belt Parkway before Exit 19 off-ramp (Upstream Basic Freeway) [Saturday midday]

Figure 11-47 No-Action Condition Highway Traffic Volumes – Friday PM Peak Hour

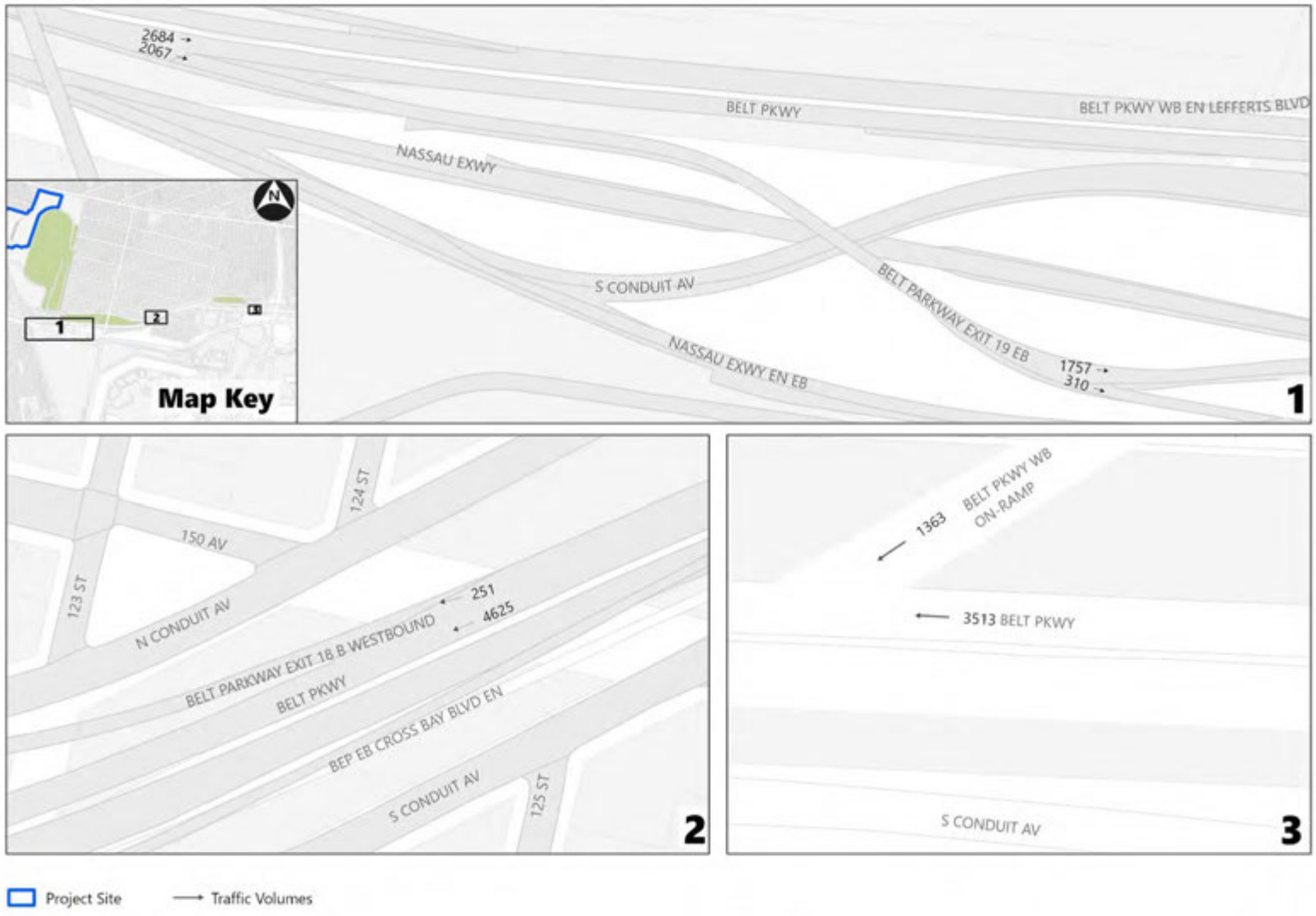


Figure 11-48 No-Action Condition Highway Traffic Volumes – Saturday Midday Peak Hour

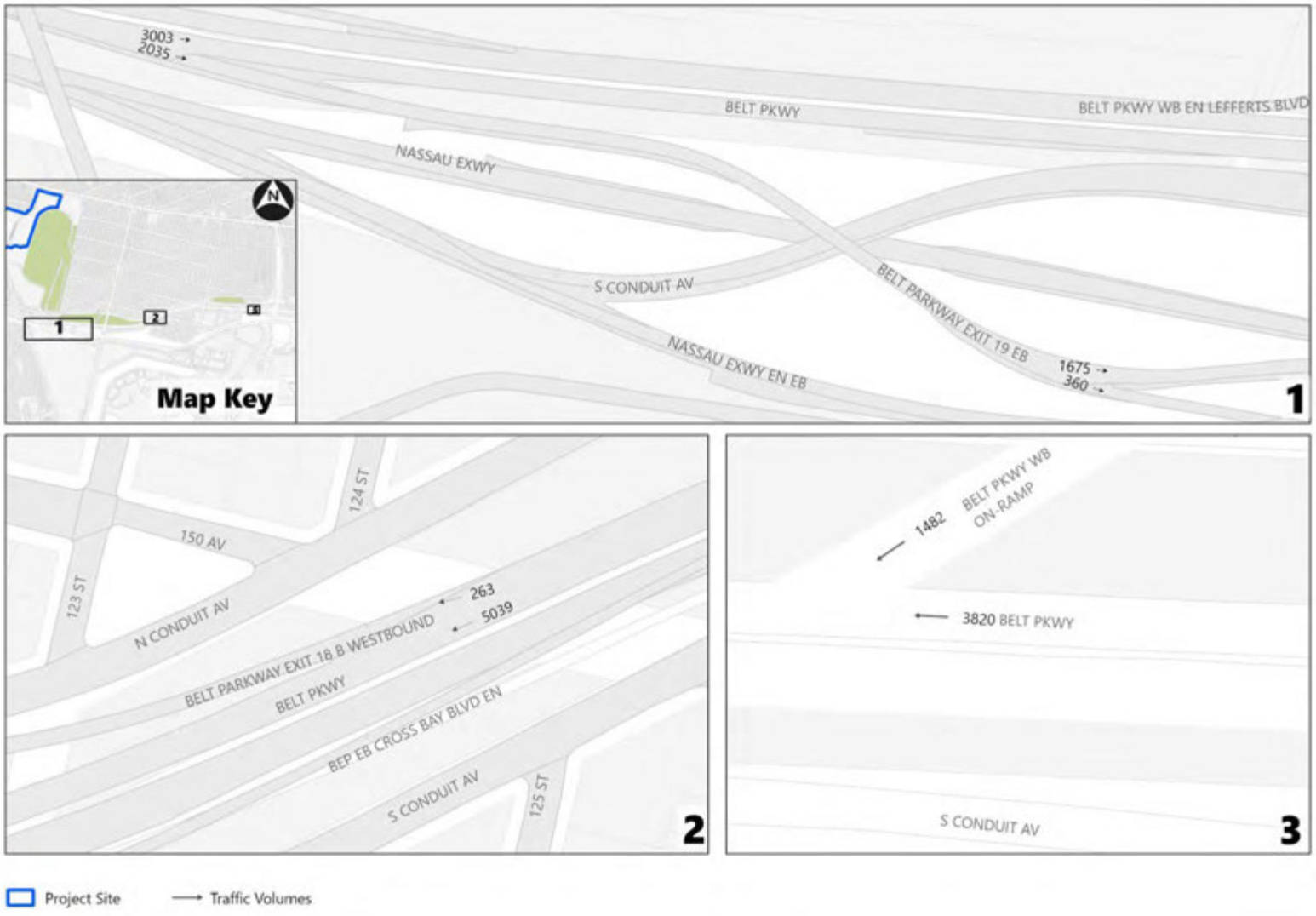


Figure 11-49 No-Action Condition Highway Traffic Volumes – Saturday Night Peak Hour

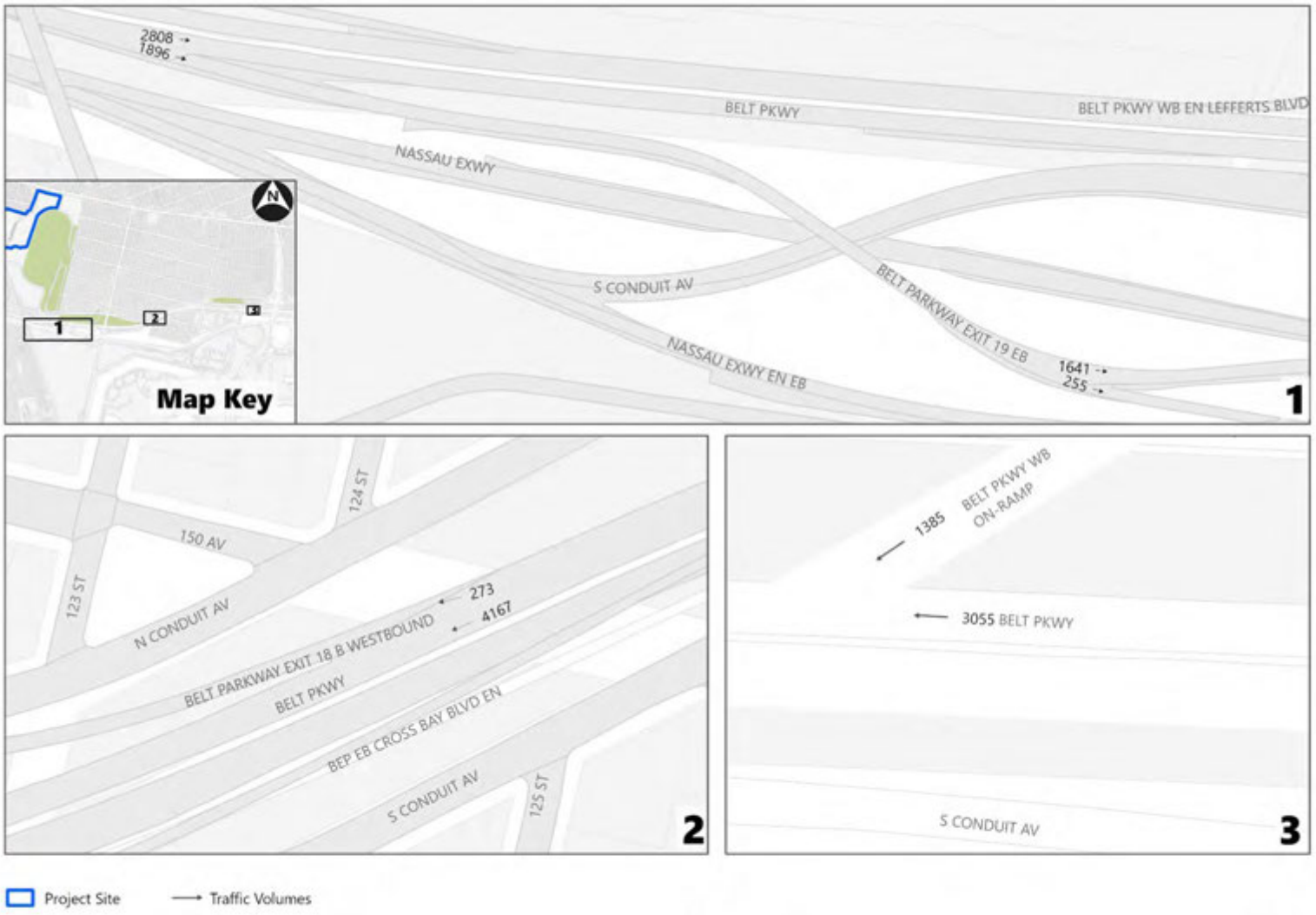


Table 11-21 No-Action Condition Highway Levels of Service

Description	Type	# Lanes	Friday PM Peak Hour Density (pc/ln/mi)	Friday PM Peak Hour LOS	Saturday Midday Peak Hour Density (pc/ln/mi)	Saturday Midday Peak Hour LOS	Saturday Night Peak Hour Density (pc/ln/mi)	Saturday Night Peak Hour LOS
Westbound Belt Parkway on-ramp from Van Wyck Expressway / North Conduit Avenue intersection to westbound North Conduit Avenue / Lefferts Boulevard (Exit 18B) off-ramp	Basic Upstream	3	28.8	D	29.1	D	23.2	C
	Merge	3 (freeway)	41.2	D	42.8	D	35.2	C
		1 (ramp)	28.8		30.1		25.5	
	Overlap	3	45.7	F	42.8	E	35.2	E
	Diverge	3 (freeway)	45.7	D	41.1	D	33.9	C
		1 (ramp)	32.2		30.0		26.1	
	Basic Downstream	3	42.7	E	38.3	E	31.6	D
Eastbound Belt Parkway off-ramp to Nassau Expressway / Lefferts Boulevard (Exit 19)	Basic Upstream	3	34.9	D	37.0	E	34.6	D
	Diverge	3 (freeway)	28.6	D	30.4	D	28.4	D
		2 (ramp)	28.6		30.4		28.4	
	Basic Downstream	3	20.3	C	22.1	C	20.7	C
Eastbound Belt Parkway off-ramp split to Nassau Expressway and to Lefferts Boulevard (downstream of the Exit 19 off-ramp)	Basic Upstream	2	25.8	C	25.4	C	23.7	C
	Diverge	2 (freeway)	26.5	C	26.2	C	24.4	B
		1 (right)	21.0		20.8		19.6	
	Basic Downstream	2	25.0	C	23.9	C	23.2	C

pc/ln/mi=Passenger cars per lane per mile

Parking

In order to estimate the 2030 future No-Action parking conditions, existing occupancies for onsite parking were increased by the background traffic growth rate in accordance with *CEQR Technical Manual* procedures. In addition, increased parking demand resulting from the Project Site's as-of-right development program detailed in the *Resorts World Casino – New York City Expansion Expanded EA (2017)* was included to develop the No-Action condition parking demand. This includes an increase of 150 casino gaming positions (totaling to 6,650 gaming positions), an additional 400-room hotel, and approximately 91,722 sf of conference center space (as there were no event/conference during the existing conditions counts, the parking demand for the full conference center space was projected in the No-Action condition). This space would primarily be used for trade shows, expos, and conferences, similar to the existing space. The parking supply would increase from 4,779 parking spaces to 4,960 spaces in the No-Action condition. Although some Aqueduct Racetrack patrons park at the RWNYC parking facilities and would no longer do so in the future after the consolidation of horseracing activities to Belmont Park, the parking analysis conservatively does not assume a credit in parking demand at RWNYC parking facilities.

Under the No-Action condition, the peak parking demand for Friday is projected to be 2,299 spaces during the 9 PM to 10 PM hour, and Saturday peak parking demand is projected to be 2,579 spaces from 9 PM to 10 PM.

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 Project Site's as-of-right development program detailed in the *Resorts World Casino – New York City Expansion Expanded EA (2017)*. The No-Action condition trip increment includes 85 subway trips (9 "in" and 76 "out") during the Friday PM peak hour. As shown in **Table 11-22** and **Table 11-23**, the subway station elements would continue to operate at an LOS A during the Friday PM peak hour under the No-Action condition.

Table 11-22 No-Action Condition Fare Control Levels of Service – Friday PM Peak Hour

Control Element	Pedestrian Volume (15-min)		Surging Factor	Friction Factor	v/c Ratio	LOS
	In	Out				
Aqueduct Racetrack Station						
4 HEETs	90	19	0.75	0.90	0.11	A
Aqueduct - North Conduit Avenue Station – North Fare Control						
2 HEETs	10	64	0.75	0.90	0.11	A

Note:
Methodology based on *CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes is 1.0.

Table 11-23 No-Action Condition Stairway Levels of Service – Friday PM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	v/c Ratio	LOS
		Up	Down	Up	Down			
Aqueduct Racetrack Station								
O4A/B/C (North Stairs)	13.5	9	4	1.00	0.75	0.90	0.01	A
O1A/B/C (South Stairs)	13.3	16	2	1.00	0.75	0.90	0.01	A
Aqueduct - North Conduit Avenue Station								
U1A/B (Underpass to Aqueduct Road)	14.9	54	7	0.80	1.00	0.90	0.04	A
S1A/B (Underpass to Hawtree Street)	9.3	11	2	0.80	1.00	0.90	0.01	A
P2A/B (Underpass to Platform)	8.6	9	65	1.00	0.75	0.90	0.08	A

Note:
Methodology based on *CEQR Technical Manual* guidelines

Subway Line-Haul

Table 11-24 summarizes anticipated 2030 No-Action condition subway line-haul conditions at the maximum load point of the A subway line in the peak direction. The No-Action condition passenger volumes reflect background growth for the period between 2019 and 2030 as well as demand from the Project Site's as-of-right development. In the No-Action condition, the A subway line would continue to operate below capacity in the peak direction during both peak hours.

Table 11-24 No-Action Condition Subway Line-Haul

Peak Hour	Route	Direction	Max Load Point (leaving station)	Average Passengers Per Hour	Average Trains Per Hour[1]	Average Cars Per Hour[1]	Average Passengers Per Car	Guideline Passengers Per Car[2]	V/C Ratio[3]
PM	A	SB	Jay Street-MetroTech	15,354	15.0	10	102	145	0.71

Source: MTA-NYCT, 2024
Notes:
[1] Based on 2019 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

With-Action Condition

The Expansion Project would consist of an increase from 6,650 to 11,000 gaming positions, an increase in the capacity of the onsite hotels from 600 to 1,963 rooms, and introduce a new 7,000-seat arena and a 19,300-sf ballroom space with an approximate capacity of 1,287 seats. New hotel buildings and a new parking garage would be developed within the Project Site. Renovation to the existing casino building would accommodate the proposed additional casino, hotel, and accessory uses.

Site access to the Project Site would remain the same. Project-related vehicle trips would access the site using the Rockaway Boulevard entrance to the north and the two Aqueduct Road access roadways to the south (connecting to North Conduit Avenue and to the Aqueduct Road Viaduct crossing the Belt Parkway and Nassau Expressway). The internal roadway network within the Project Site would be reconfigured to accommodate the Expansion Project and provide new access connections to the project's buildings. The trackside roadway along the west side of the Aqueduct Racetrack between North Conduit Boulevard and the Expansion Project would also be used to accommodate the increase in demand from the project.

To accommodate the increased vehicular volumes anticipated at the Rockaway Boulevard entrance to the north the following operational improvements are proposed and are reflected in the With-Action condition traffic analyses. Implementation of these measures would be subject to NYC DOT's approval.

- Restripe the westbound approach from one left-turn only lane and two through lanes with parking to two left turn lanes and one through lane with parking.
- Install a pedestrian refuge island for the south crosswalk by extending the Aqueduct Road median to the intersection.
- Modify the intersection's signal timing and phasing plan.
  - Shift the existing westbound left-through protected phase to a lead phase.
  - Allow northbound right-turning vehicles to overlap with the new westbound left-through protected phase.
  - Reallocate green time from the eastbound/westbound phase to the new westbound left-through protected phase and northbound right-turn phase.
  - Prohibit westbound left turns during the shared eastbound/westbound phase.
  - Allow eastbound right-turning vehicles to overlap with the northbound approach phase.

Traffic

Overall, the Proposed Actions would generate a total of 2,458 vph (2,026 "ins" and 432 "outs") in the Friday PM peak hour, 2,533 vph (1,953 "ins" and 580 "outs") in the Saturday PM peak hour, and 2,548 vph (749 "ins" and 1,799 "outs") in the Saturday night peak hour. These vehicle trips were distributed as described in the Level 2 screening assessment.

Intersection Traffic

The With-Action condition intersection traffic volumes for the Friday PM, Saturday PM, and Saturday night peak hours are shown in **Figure 11-50** through **Figure 11-61**.

Figure 11-50 With-Action Condition Intersection Traffic Volumes – Friday PM Peak Hour – Section 1

Figure 11-51 With-Action Condition Intersection Traffic Volumes – Friday PM Peak Hour – Section 2

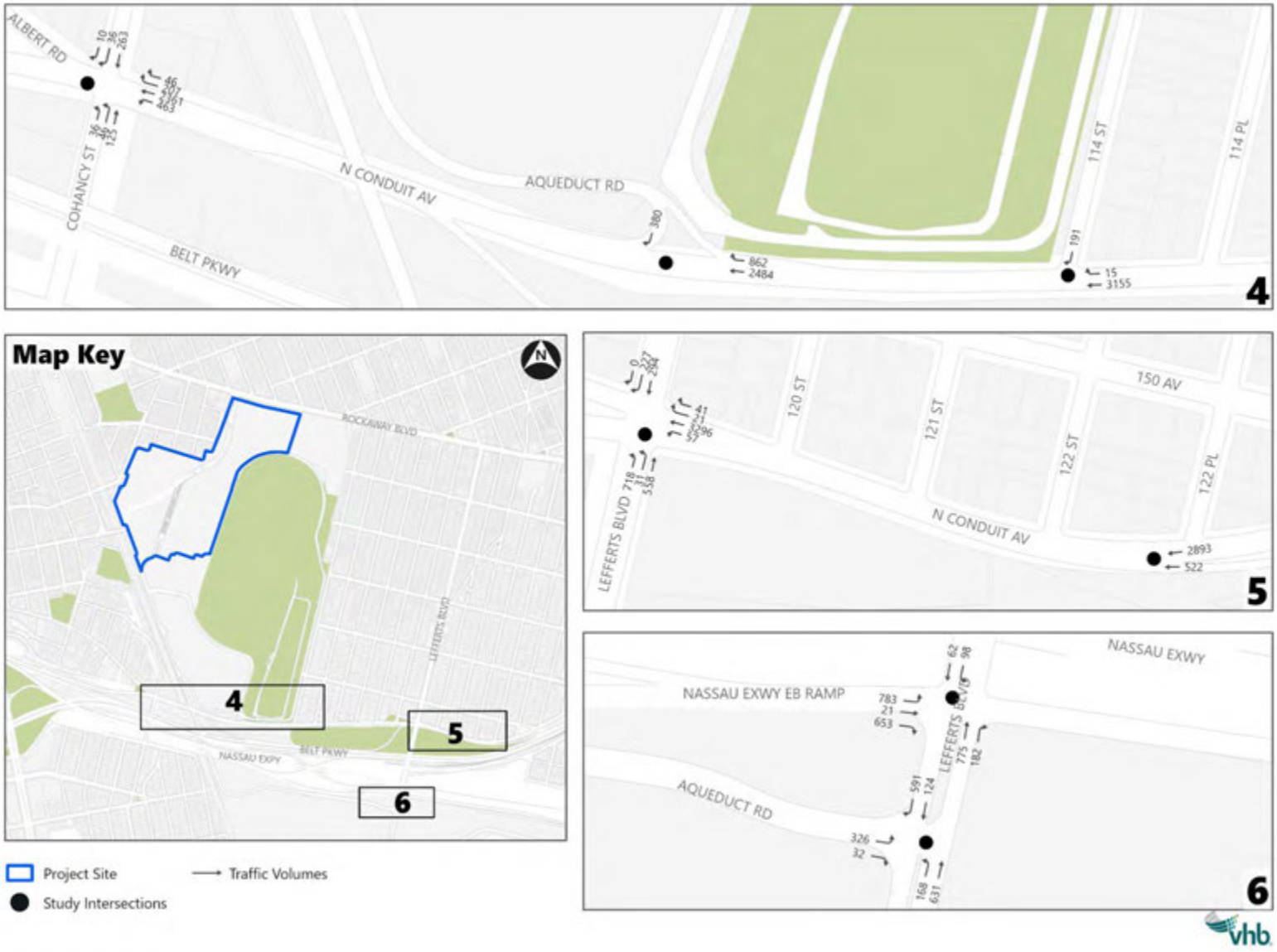


Figure 11-52 With-Action Condition Intersection Traffic Volumes – Friday PM Peak Hour – Section 3

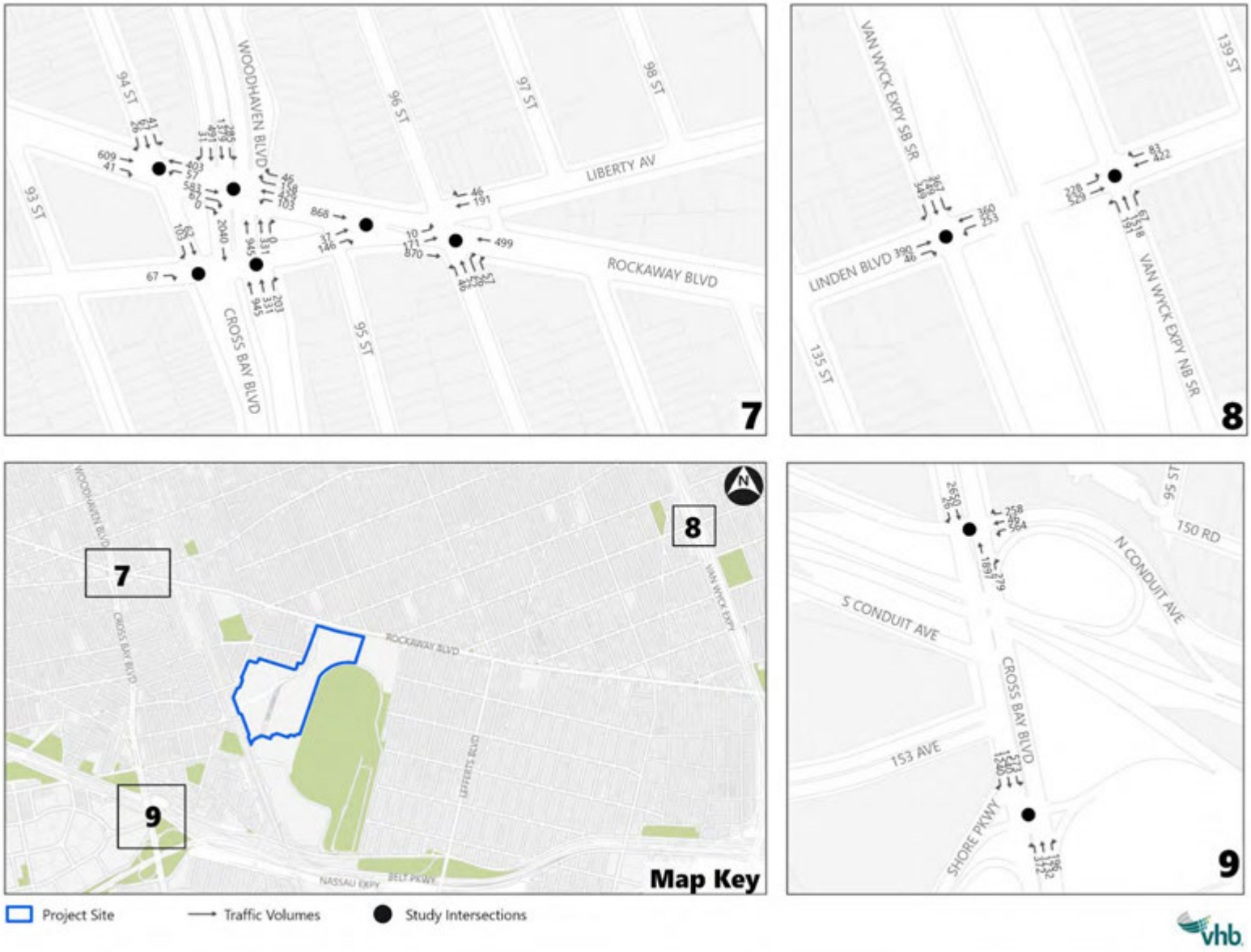


Figure 11-53 With-Action Condition Intersection Traffic Volumes – Friday PM Peak Hour – Section 4

Figure 11-54 With-Action Condition Intersection Traffic Volumes – Saturday PM Peak Hour – Section 1

Figure 11-55 With-Action Condition Intersection Traffic Volumes – Saturday PM Peak Hour – Section 2

Figure 11-56 With-Action Condition Intersection Traffic Volumes – Saturday PM Peak Hour – Section 3

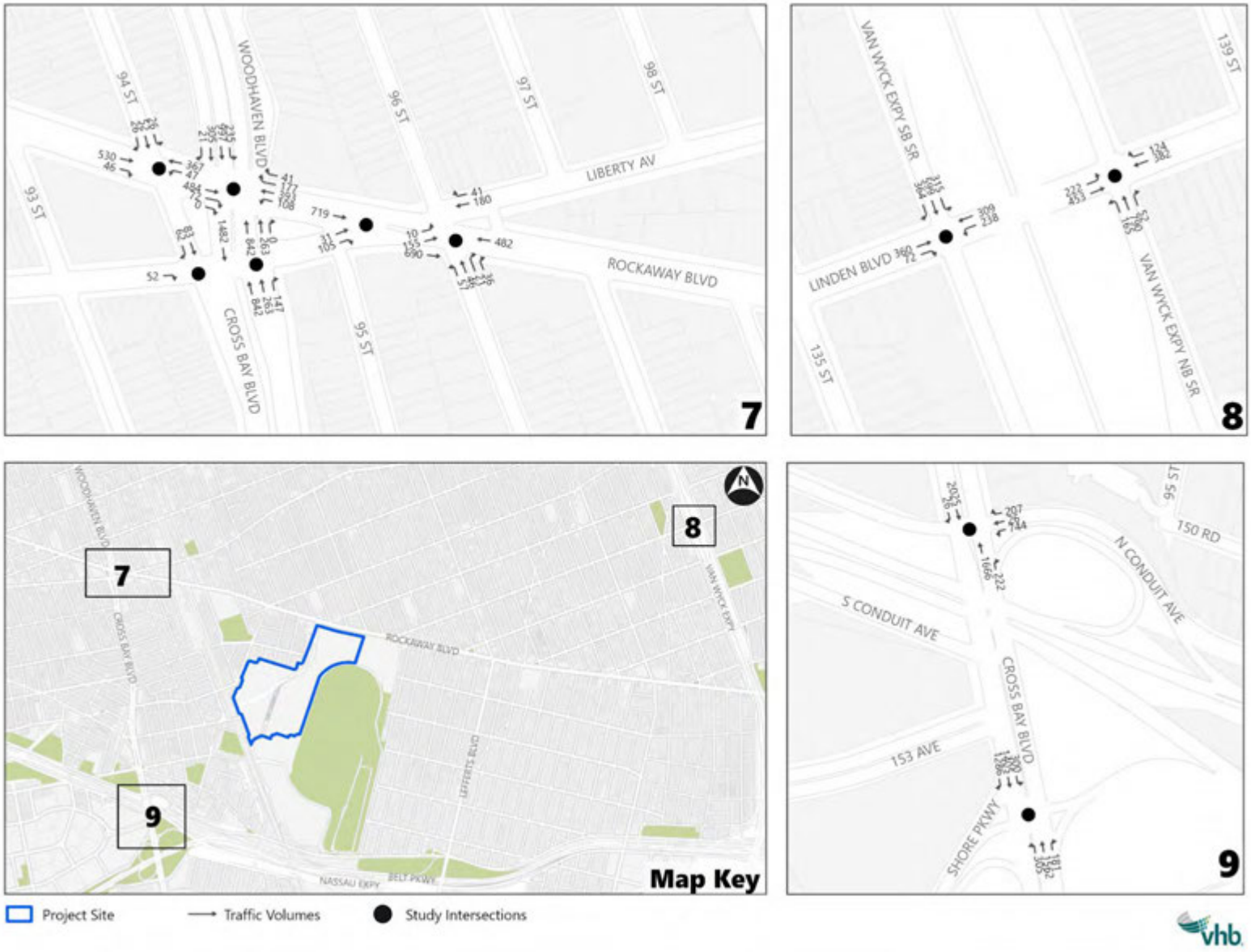


Figure 11-57 With-Action Condition Intersection Traffic Volumes – Saturday PM Peak Hour – Section 4

Figure 11-58 With-Action Condition Intersection Traffic Volumes – Saturday Night Peak Hour – Section 1

Figure 11-59 With-Action Condition Intersection Traffic Volumes – Saturday Night Peak Hour – Section 2

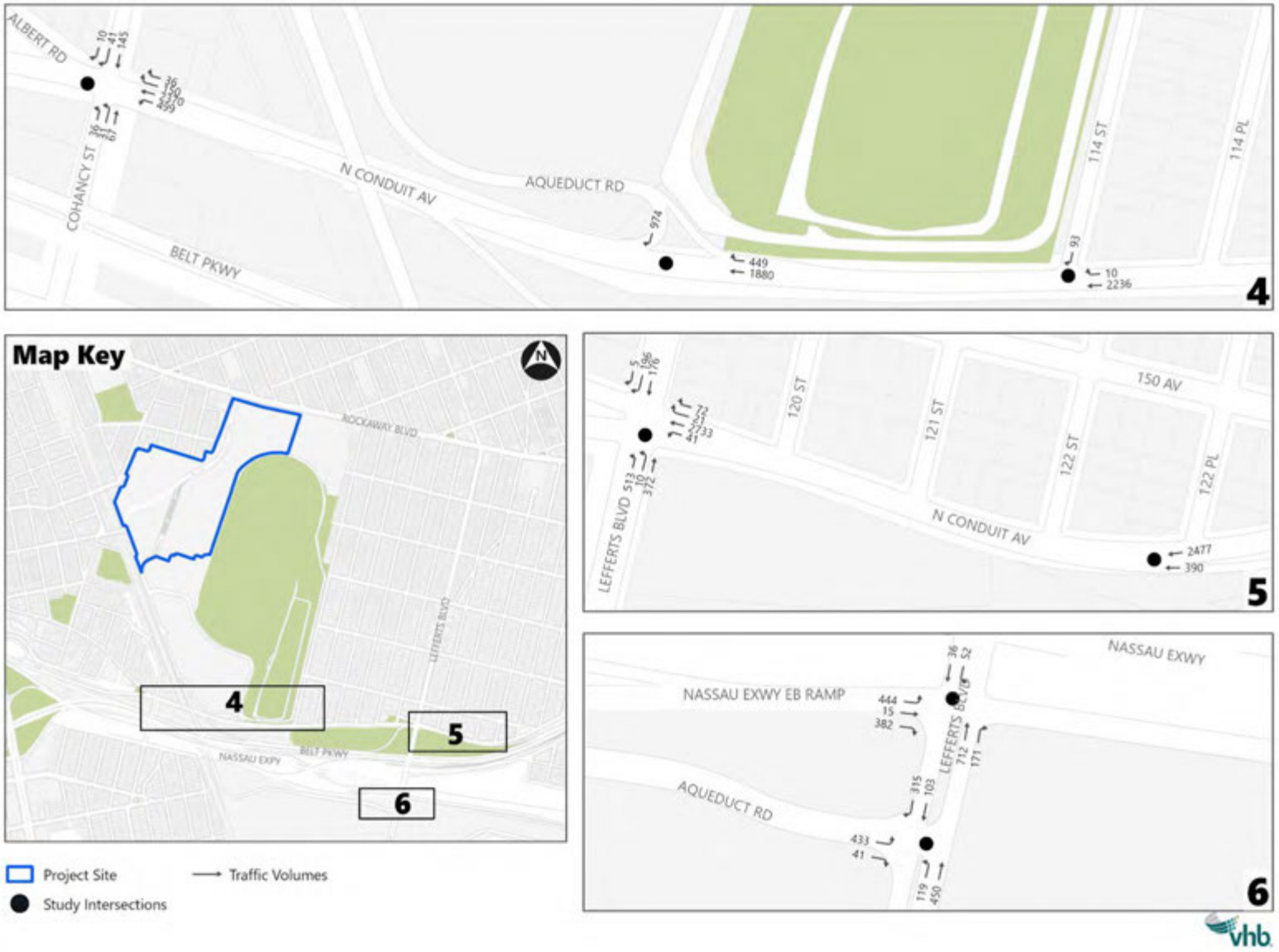


Figure 11-60 With-Action Condition Intersection Traffic Volumes – Saturday Night Peak Hour – Section 3

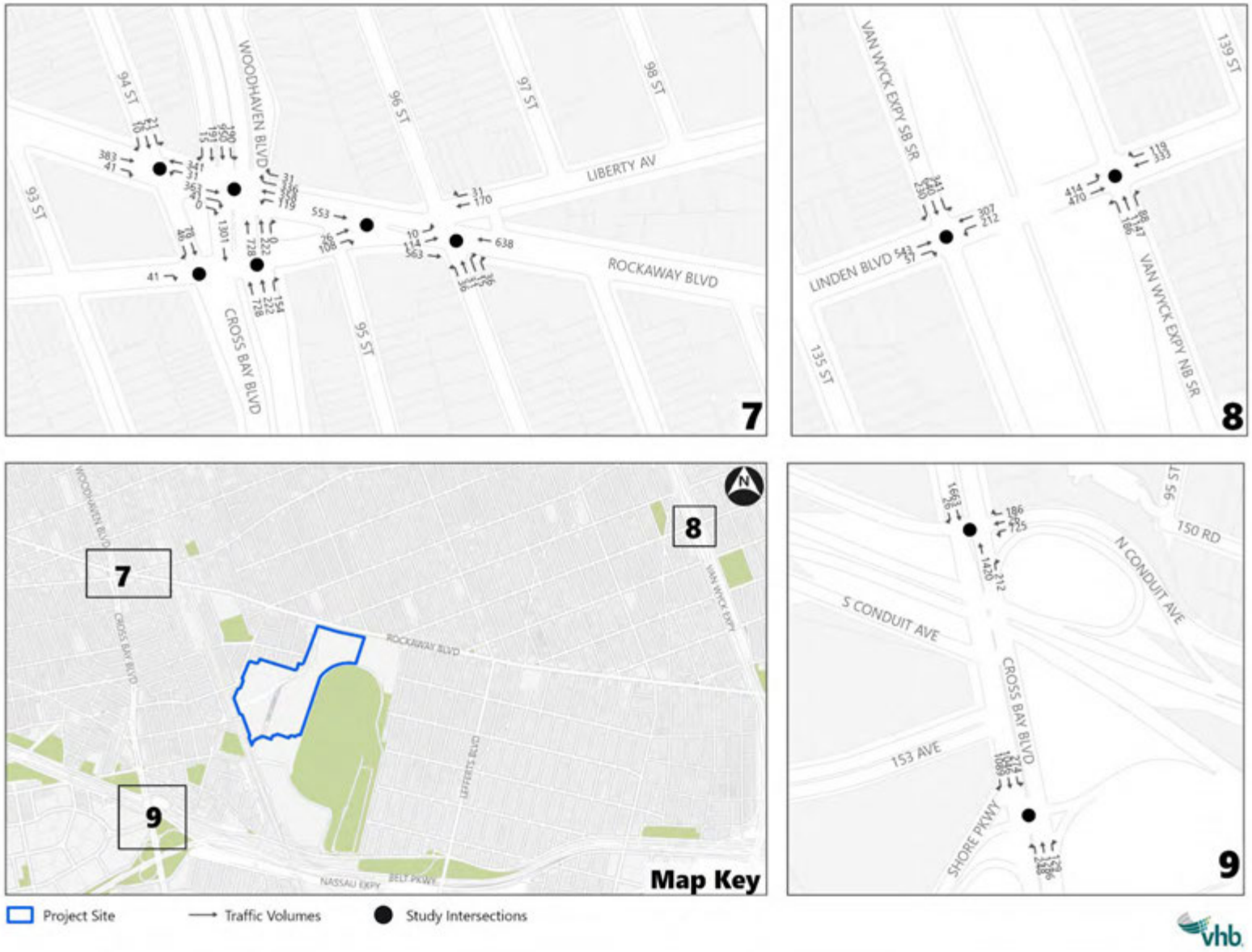
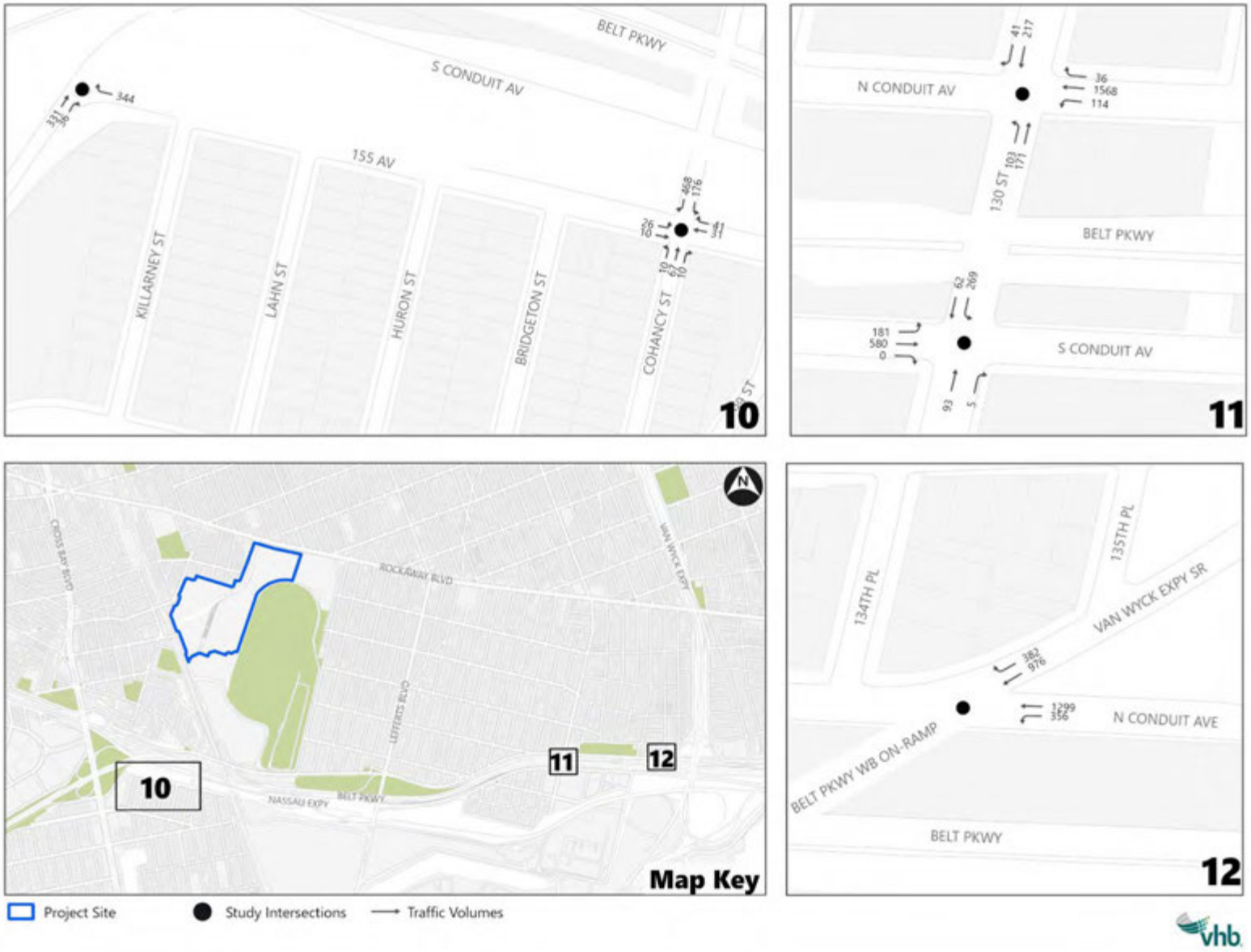


Figure 11-61 With-Action Condition Intersection Traffic Volumes – Saturday Night Peak Hour – Section 4



Levels of Service

Based on the traffic volume increments described above, the 2030 With-Action condition traffic levels of service were determined for the 31 analysis locations. **Table 11-25** and **Table 11-26** provide an overview of the levels of service that characterize 2030 With-Action overall intersection conditions and individual traffic movements during the Friday PM, Saturday PM, and Saturday night peak hours. Detailed intersection traffic levels of service comparing the No-Action and With-Action conditions during each peak hour are provided in **Table 11-27** through **Table 11-29**.

Table 11-25 With-Action Condition Intersection Traffic Levels of Service Summary – Overall Intersections

	No-Action			With-Action		
	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
Intersections at Overall LOS A/B/C	24	27	29	17	20	24
Intersections at Overall LOS D	7	4	2	11	8	1
Intersections at Overall LOS E	0	0	0	0	1	3
Intersections at Overall LOS F	0	0	0	3	2	3
Significantly Impacted Intersections	-	-	-	10	10	9

Note: Includes 28 signalized intersections and 3 unsignalized intersections

Table 11-26 With-Action Condition Intersection Traffic Levels of Service Summary – Traffic Movements

	No-Action			With-Action		
	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
Traffic Movements at LOS A/B/C	92	109	116	82	95	107
Traffic Movements at LOS D	23	16	12	26	22	16
Traffic Movements at LOS E	12	5	2	10	5	2
Traffic Movements at LOS F	9	5	3	17	13	10
Number of Individual Traffic Movements	136	135	133	135	135	135
Number of Significantly Impacted Traffic Movements	-	-	-	18	14	10

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left turn and right turn movements.

Table 11-27 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
1. Rockaway Boulevard & 94th Street									
Rockaway Boulevard	EB	TR	0.56	44.4	D	TR	0.67	47.8	D
	WB	LT	0.58	12.5	B	LT	0.69	14.9	B
94th Street	SB	LTR	0.16	13.2	B	LTR	0.16	13.2	B
Overall Intersection[2]		-	-	**27.2**	**C**	-	-	**30.8**	**C**
2. Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard									
Rockaway Boulevard	EB	TR	0.48	10.9	B	TR	0.58	10.4	B
	WB	L	0.69	55.7	E	L	0.92	94.4	F
		TR	0.95	65.8	E	TR	1.05	88.5	F
Woodhaven Boulevard SB Service Road	SB	T	0.49	18.1	B	T	0.49	18.1	B
		R	0.04	12.0	B	R	0.04	12.0	B
Woodhaven Boulevard Main Line	NB	T	0.67	6.4	A	T	0.67	6.4	A
	SB	L	1.07	151.1	F	L	1.55	337.2	F
		T	0.75	24.1	C	T	0.75	24.1	C
Cross Bay Boulevard NB Service Road	NB	TR	0.40	5.4	A	TR	0.40	5.4	A
Overall Intersection[2]		-	-	**28.3**	**C**	-	-	**44.8**	**D**
3. Liberty Avenue & Rockaway Boulevard									
Rockaway Boulevard	EB	LT	0.56	7.4	A	LT	0.73	10.8	B
Liberty Avenue	NB	T	0.09	42.7	D	T	0.09	44.1	D
		R	0.35	42.4	D	R	0.38	43.6	D
Overall intersection[2]		-	-	**14.6**	**B**	-	-	**16.5**	**B**
4. Rockaway Boulevard/Liberty Avenue & 96th Street									
Liberty Avenue	EB	LT	0.42	35.9	D	LT	0.42	35.2	D
	WB	TR	0.54	50.5	D	TR	0.54	50.5	D
96th Street	NB	LTR	0.42	48.7	D	LTR	0.42	48.7	D
Rockaway Boulevard	NW	T	0.42	36.8	D	T	0.48	38.0	D
	SE	T	0.31	0.8	A	T	0.41	0.8	A
Overall Intersection[2]		-	-	**26.8**	**C**	-	-	**24.6**	**C**

Table 11-27 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
5. Cross Bay Boulevard Northbound Service Road & Liberty Avenue									
Cross Bay Blvd NB Service Road	NB	TR	0.73	36.8	D	TR	0.75	37.8	D
Overall Intersection[2]		-	-	**36.8**	**D**	-	-	**37.8**	**D**
6. Cross Bay Boulevard & Liberty Avenue									
Cross Bay Boulevard	NB	T	0.65	31.7	C	T	0.65	31.7	C
	SB	T	0.71	6.3	A	T	0.71	6.1	A
Overall Intersection[2]		-	-	**14.7**	**B**	-	-	**14.6**	**B**
7. Liberty Avenue & 94th Street									
Liberty Avenue	EB	R	0.86	109.8	F	R	0.86	109.8	F
94th Street	SB	TR	0.20	21.0	C	TR	0.20	20.3	C
Overall Intersection[2]		-	-	**48.2**	**D**	-	-	**47.7**	**D**
8. Rockaway Boulevard & Centreville Street/109th Avenue/Plattwood Avenue									
Rockaway Boulevard	EB	L	0.38	23.1	C	L	0.41	25.4	C
		TR	0.75	27.4	C	TR	1.00	51.4	D
	WB	L	0.54	35.6	D	L	0.64	32.2	C
		TR	0.52	24.7	C	TR	0.57	15.5	B
Centreville Street	NB	LTR	1.00	71.6	E	LTR	1.00	71.6	E
109th Avenue	SB	LTR	0.70	32.4	C	LTR	0.70	32.4	C
Overall Intersection[2]		-	-	**34.7**	**C**	-	-	**41.4**	**D**
9. Rockaway Boulevard & 107th Street									
Rockaway Boulevard	EB	T	0.59	5.4	A	T	0.80	8.4	A
	WB	T	0.50	11.4	B	T	0.54	18.9	B
107th Street	NB	LTR	0.25	24.7	C	LTR	0.26	24.9	C
	SB	LTR	0.33	26.0	C	LTR	0.58	32.6	C
Overall Intersection[2]		-	-	**10.1**	**B**	-	-	**14.9**	**B**

Table 11-27 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
10. Rockaway Boulevard & Aqueduct Road/108th Street									
Rockaway Boulevard	EB	L	-	10.1	B	L	-	11.6	B
		T	0.54	9.4	A	T	0.95	40.9	D
		R	0.33	8.9	A	R	0.66	25.8	C
	WB	L	0.62	21.6	C	L	0.83	35.1	D
		T	0.41	7.1	A	T	0.84	17.2	B
Aqueduct Road	NB	LR	0.35	24.9	C	LR	0.51	27.2	C
		R	0.39	27.0	C	R	0.28	9.9	A
Overall Intersection[2]		-	-	**13.1**	**B**	-	-	**28.4**	**C**
11. Rockaway Boulevard & 109th Street									
Rockaway Boulevard	EB	T	0.42	8.5	A	T	0.46	15.0	B
	WB	T	0.40	22.1	C	T	0.59	26.2	C
109th Street	SB	LR	0.26	24.4	C	LR	0.34	25.7	C
Overall Intersection[2]		-	-	**15.6**	**B**	-	-	**21.5**	**C**
12. Rockaway Boulevard & 111th Street/Home Depot Parking Lot									
Rockaway Boulevard	EB	L	0.19	4.1	A	L	0.52	41.6	D
		TR	0.68	7.0	A	TR	0.72	17.4	B
	WB	L	0.05	23.5	C	L	0.05	18.6	B
		TR	0.76	30.2	C	TR	1.02	46.6	D
Home Depot Parking Lot	NB	LTR	0.25	22.3	C	LTR	0.28	22.9	C
111th Street	SB	LTR	0.64	32.6	C	LTR	0.89	51.8	D
Overall Intersection[2]		-	-	**20.0**	**B**	-	-	**35.7**	**D**
13. Rockaway Boulevard & 113th Street/Linden Boulevard/Home Depot Parking Lot									
Rockaway Boulevard	EB	L	0.88	47.0	D	L	1.14	122.5	F
		TR	0.78	12.9	B	TR	0.81	22.1	C
	WB	L	0.62	37.4	D	L	0.68	46.4	D
		TR	0.70	18.2	B	TR	0.75	19.5	B
Home Depot Parking Lot	NB	LTR	0.93	87.2	F	LTR	0.93	87.2	F
Linden Boulevard	SB	LTR	0.51	37.3	D	LTR	1.04	99.9	F
		R	0.47	35.7	D	R	0.97	79.0	E
Overall Intersection[2]		-	-	**25.2**	**C**	-	-	**45.6**	**D**

Table 11-27 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
14. Rockaway Boulevard & 114th Street									
Rockaway Boulevard	EB	LT	0.90	19.3	B	LT	0.99	31.9	C
		R	0.51	5.2	A	R	0.51	4.9	A
	WB	L	0.10	14.5	B	L	0.13	15.8	B
		TR	0.38	15.6	B	TR	0.41	16.0	B
114th Street	NB	LTR	0.52	28.0	C	LTR	0.52	28.0	C
Overall Intersection[2]		-	-	**17.0**	**B**	-	-	**21.9**	**C**
15. Rockaway Boulevard & Lefferts Boulevard									
Rockaway Boulevard	EB	L	0.14	19.1	B	L	0.16	19.5	B
		T	0.74	31.4	C	T	0.77	32.9	C
		R	0.19	18.9	B	R	0.19	18.9	B
	WB	L	0.46	28.8	C	L	0.49	30.6	C
		T	0.51	22.6	C	T	0.56	23.3	C
Lefferts Boulevard	NB	L	0.30	26.4	C	L	0.30	26.4	C
		TR	1.02	78.1	E	TR	1.02	78.1	E
	SB	LTR	0.58	30.1	C	LTR	0.58	30.1	C
Overall Intersection[2]		-	-	**37.1**	**D**	-	-	**37.3**	**D**
16. Cross Bay Boulevard & North Conduit Avenue									
North Conduit Avenue	WB	L	0.65	56.5	E	L	0.77	63.1	E
		LT	0.67	57.4	E	LT	0.79	65.3	E
		R	0.71	61.1	E	R	0.71	61.1	E
Cross Bay Boulevard	NB	T	0.47	12.9	B	T	0.47	13.0	B
	SB	TR	0.66	16.3	B	TR	0.66	16.3	B
Overall Intersection[2]		-	-	**21.6**	**C**	-	-	**23.2**	**C**

Table 11-27 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
17. Cross Bay Boulevard & Shore Parkway/Nassau Expressway Eastbound On-Ramp									
Cross Bay Boulevard	NB	L	0.98	94.6	F	L	0.98	94.6	F
		T	0.66	24.4	C	T	0.67	24.5	C
		R	0.15	0.2	A	R	0.15	0.2	A
	SB	L	1.08	109.3	F	L	1.08	109.3	F
		T	0.48	12.8	B	T	0.49	13.0	B
		R	0.78	3.9	A	R	0.82	5.0	A
Overall Intersection[2]		-	-	**30.3**	**C**	-	-	**30.2**	**C**
18. North Conduit Avenue & Cohancy Street/Albert Road									
North Conduit Avenue	WB	L	0.57	10.0	A	L	0.62	11.1	B
		T	0.88	17.4	B	T	0.92	18.4	B
		R	0.33	7.3	A	R	0.33	8.1	A
Cohancy Street	NB	L	0.54	40.4	D	L	0.54	40.4	D
		T	0.24	28.2	C	T	0.24	28.1	C
	SB	TR	0.97	86.2	F	TR	0.97	86.2	F
Overall Intersection[2]		-	-	**23.3**	**C**	-	-	**23.9**	**C**
19. North Conduit Avenue & Aqueduct Road (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Aqueduct Road	SB	R	-	11.7	B	R	-	26.3	D
Overall Intersection[2]		-	-	**1.1**	**A**	-	-	**3.0**	**A**
20. North Conduit Avenue & 114th Street									
North Conduit Avenue	WB	TR	0.66	5.8	A	TR	0.85	7.7	A
114th Street	SB	R	0.54	44.4	D	R	0.54	44.4	D
Overall Intersection[2]		-	-	**8.7**	**A**	-	-	**9.9**	**A**

Table 11-27 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
21. North Conduit Avenue & Lefferts Boulevard/Old South Road									
North Conduit Avenue	WB	T	0.99	20.8	C	T	1.18	95.7	F
		R	0.08	5.0	A	R	0.08	5.7	A
Lefferts Boulevard	NB	L	1.11	113.6	F	defL	1.19	128.4	F
		LT	1.07	88.8	F	T	0.88	49.1	D
	SB	TR	0.87	57.3	E	TR	0.87	57.6	E
Overall Intersection[2]		-	-	**44.0**	**D**	-	-	**89.8**	**F**
22. Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp									
Nassau Expressway Eastbound Off-Ramp	EB	defL	1.02	66.8	E	defL	1.27	159.3	F
		TR	0.42	22.3	C	TR	1.34	192.7	F
Lefferts Boulevard	NB	TR	0.60	13.3	B	TR	0.65	14.6	B
	SB	LT	0.21	13.1	B	LT	0.21	13.1	B
Overall Intersection[2]		-	-	**31.8**	**C**	-	-	**105.8**	**F**
23. Lefferts Boulevard & Aqueduct Road									
Aqueduct Road	EB	LR	0.33	26.3	C	LR	0.44	27.4	C
Lefferts Boulevard	NB	L	0.27	29.1	C	L	0.47	32.9	C
		T	0.64	14.1	B	T	0.64	14.5	B
	SB	TR	0.24	54.1	D	TR	0.46	120.4	F
Overall Intersection[2]		-	-	**24.0**	**C**	-	-	**41.6**	**D**
24. Linden Boulevard & Southbound Van Wyck Service Road									
Linden Boulevard	EB	TR	0.74	36.3	D	TR	0.80	39.9	D
	WB	defL	0.90	27.6	C	defL	0.99	40.5	D
		T	0.51	7.8	A	T	0.54	7.5	A
Southbound Van Wyck Service Road	SB	LTR	0.65	20.5	C	LTR	0.79	24.2	C
Overall Intersection[2]		-	-	**22.0**	**C**	-	-	**25.9**	**C**

Table 11-27 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
25. Linden Boulevard & Northbound Van Wyck Service Road									
Linden Boulevard	EB	defL	1.08	106.5	F	defL	1.25	164.9	F
		T	0.76	23.1	C	T	0.79	21.2	C
	WB	TR	0.99	66.3	E	TR	1.02	74.9	E
Northbound Van Wyck Service Road	NB	LTR	0.87	27.1	C	LTR	0.87	27.1	C
Overall Intersection[2]		-	-	**38.8**	**D**	-	-	**44.9**	**D**
26. North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Belt Parkway Westbound Off-Ramp	WB	T	-	39.7	E	T	-	397.3	F
Overall Intersection[2]		-	-	**4.1**	**A**	-	-	**69.9**	**F**
27. 155th Avenue & Belt Parkway Eastbound On-Ramp (unsignalized)									
155th Avenue	WB	R	-	14.1	B	R	-	15.3	C
Belt Parkway Eastbound On-Ramp	NB	T	-	0.0	A	T	-	0.0	A
		R	-	0.0	A	R	-	0.0	A
Overall Intersection[2]		-	-	**4.6**	**A**	-	-	**5.7**	**A**
28. Cohancy Street & 155th Avenue									
155th Avenue	EB	LT	0.23	20.2	C	LT	0.23	20.2	C
	WB	TR	0.26	20.3	C	TR	0.26	20.3	C
Cohancy Street	NB	LTR	0.19	5.8	A	LTR	0.19	5.8	A
	SB	LTR	1.01	52.0	D	LTR	1.06	64.2	E
Overall Intersection[2]		-	-	**39.8**	**D**	-	-	**48.8**	**D**

Table 11-27 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
29. North Conduit Avenue & 130th Street									
North Conduit Avenue	WB	LTR	0.91	17.8	B	LTR	1.00	31.9	C
130th Street	NB	L	0.45	31.2	C	L	0.45	31.0	C
		T	0.65	37.6	D	T	0.65	37.3	D
	SB	T	0.64	47.2	D	T	0.64	47.2	D
		R	0.23	38.0	D	R	0.23	38.0	D
Overall Intersection[2]		-	-	**23.7**	**C**	-	-	**33.8**	**C**
30. South Conduit Avenue & 130th Street									
South Conduit Avenue	EB	LTR	0.60	23.0	C	LTR	0.62	23.4	C
130th Street	NB	TR	0.61	50.6	D	TR	0.61	50.6	D
	SB	L	0.80	36.9	D	L	0.80	36.0	D
		T	0.21	21.0	C	T	0.21	20.5	C
Overall Intersection[2]		-	-	**27.7**	**C**	-	-	**27.7**	**C**
31. North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road									
North Conduit Avenue	WB	L	0.61	28.5	C	L	0.61	28.5	C
		LT	1.05	68.6	E	LT	1.07	76.1	E
Van Wyck Expressway Service Road	SB	T	0.62	27.0	C	T	0.62	27.0	C
		R	0.49	24.7	C	R	0.71	30.2	C
Overall Intersection[2]		-	-	**48.6**	**D**	-	-	**52.1**	**D**

[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 11-28 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
1. Rockaway Boulevard & 94th Street									
Rockaway Boulevard	EB	TR	0.50	32.4	C	TR	0.63	35.1	D
	WB	LT	0.41	5.5	A	LT	0.49	6.4	A
94th Street	SB	LTR	0.13	12.9	B	LTR	0.13	12.9	B
Overall Intersection[2]		-	-	**20.1**	**C**	-	-	**22.7**	**C**
2. Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard									
Rockaway Boulevard	EB	TR	0.38	5.8	A	TR	0.48	5.4	A
	WB	L	0.51	28.5	C	L	0.66	35.5	D
		TR	0.62	25.5	C	TR	0.72	25.5	C
Woodhaven Boulevard SB Service Road	SB	T	0.35	15.5	B	T	0.35	15.5	B
		R	0.03	12.0	B	R	0.03	12.0	B
Woodhaven Boulevard Main Line	NB	T	0.65	4.7	A	T	0.65	4.7	A
	SB	L	0.92	99.2	F	L	1.46	284.4	F
		T	0.58	18.8	B	T	0.58	18.8	B
Cross Bay Boulevard NB Service Road	NB	TR	0.34	3.6	A	TR	0.34	3.6	A
Overall Intersection[2]		-	-	**17.7**	**B**	-	-	**31.9**	**C**
3. Liberty Avenue & Rockaway Boulevard									
Rockaway Boulevard	EB	LT	0.50	9.0	A	LT	0.69	12.5	B
Liberty Avenue	NB	T	0.06	19.7	B	T	0.06	20.6	C
		R	0.21	18.8	B	R	0.24	19.9	B
Overall intersection[2]		-	-	**10.9**	**B**	-	-	**13.7**	**B**
4. Rockaway Boulevard/Liberty Avenue & 96th Street									
Liberty Avenue	EB	LT	0.36	28.7	C	LT	0.36	28.0	C
	WB	TR	0.41	35.0	C	TR	0.41	35.0	C
96th Street	NB	LTR	0.37	40.2	D	LTR	0.37	40.2	D
Rockaway Boulevard	NW	T	0.45	33.4	C	T	0.54	35.2	D
	SE	T	0.22	0.6	A	T	0.32	0.6	A
Overall Intersection[2]		-	-	**23.3**	**C**	-	-	**21.5**	**C**

Table 11-28 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
5. Cross Bay Boulevard Northbound Service Road & Liberty Avenue									
Cross Bay Blvd NB Service Road	NB	TR	0.66	35.0	C	TR	0.69	36.0	D
Overall Intersection[2]		-	-	**35.0**	**C**	-	-	**36.0**	**D**
6. Cross Bay Boulevard & Liberty Avenue									
Cross Bay Boulevard	NB	T	0.67	32.9	C	T	0.67	32.9	C
	SB	T	0.53	7.6	A	T	0.60	9.0	A
Overall Intersection[2]		-	-	**17.4**	**B**	-	-	**17.5**	**B**
7. Liberty Avenue & 94th Street									
Liberty Avenue	EB	R	0.40	36.1	D	R	0.40	36.1	D
94th Street	SB	TR	0.20	21.6	C	TR	0.20	20.6	C
Overall Intersection[2]		-	-	**25.5**	**C**	-	-	**24.8**	**C**
8. Rockaway Boulevard & Centreville Street/109th Avenue/Plattwood Avenue									
Rockaway Boulevard	EB	L	0.25	17.8	B	L	0.27	19.7	B
		TR	0.51	21.9	C	TR	0.74	26.9	C
	WB	L	0.46	25.0	C	L	0.63	28.1	C
		TR	0.40	22.2	C	TR	0.47	14.3	B
Centreville Street	NB	LTR	0.77	37.8	D	LTR	0.77	37.8	D
109th Avenue	SB	LTR	0.54	27.3	C	LTR	0.54	27.3	C
Overall Intersection[2]		-	-	**25.5**	**C**	-	-	**25.2**	**C**
9. Rockaway Boulevard & 107th Street									
Rockaway Boulevard	EB	T	0.39	4.9	A	T	0.58	5.2	A
	WB	T	0.42	8.2	A	T	0.47	14.3	B
107th Street	NB	LTR	0.25	24.6	C	LTR	0.26	24.7	C
	SB	LTR	0.33	26.1	C	LTR	0.59	33.4	C
Overall Intersection[2]		-	-	**9.3**	**A**	-	-	**12.6**	**B**

Table 11-28 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
10. Rockaway Boulevard & Aqueduct Road/108th Street									
Rockaway Boulevard	EB	L	-	9.7	A	L	-	10.8	B
		T	0.38	9.5	A	T	0.68	29.6	C
		R	0.32	9.7	A	R	0.65	23.9	C
	WB	L	0.48	15.1	B	L	0.80	28.3	C
		T	0.31	7.4	A	T	0.63	10.4	B
Aqueduct Road	NB	LR	0.39	25.5	C	LR	0.62	29.3	C
		R	0.45	28.5	C	R	0.34	10.6	B
Overall Intersection[2]		-	-	**14.1**	**B**	-	-	**23.3**	**C**
11. Rockaway Boulevard & 109th Street									
Rockaway Boulevard	EB	T	0.34	9.9	A	T	0.40	11.7	B
	WB	T	0.31	18.1	B	T	0.47	23.8	C
109th Street	SB	LR	0.20	23.6	C	LR	0.29	24.9	C
Overall Intersection[2]		-	-	**14.3**	**B**	-	-	**18.5**	**B**
12. Rockaway Boulevard & 111th Street/Home Depot Parking Lot									
Rockaway Boulevard	EB	L	0.12	2.5	A	L	0.48	34.8	C
		TR	0.55	5.8	A	TR	0.61	13.3	B
	WB	L	0.06	19.5	B	L	0.07	16.1	B
		TR	0.62	25.2	C	TR	0.85	25.2	C
Home Depot Parking Lot	NB	LTR	0.24	22.1	C	LTR	0.27	22.5	C
111th Street	SB	LTR	0.45	26.4	C	LTR	0.69	34.1	C
Overall Intersection[2]		-	-	**16.9**	**B**	-	-	**22.4**	**B**

Table 11-28 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
13. Rockaway Boulevard & 113th Street/Linden Boulevard/Home Depot Parking Lot									
Rockaway Boulevard	EB	L	0.66	26.8	C	L	0.98	83.1	F
		TR	0.63	11.2	B	TR	0.68	20.8	C
	WB	L	0.50	24.91.5	C	L	0.57	30.5	C
		TR	0.60	16.8	B	TR	0.65	17.5	B
Home Depot Parking Lot	NB	LTR	1.09	127.8	F	LTR	1.09	127.8	F
Linden Boulevard	SB	LTR	0.43	34.5	C	LTR	0.88	63.1	E
		R	0.41	34.1	C	R	0.86	59.7	E
Overall Intersection[2]		-	-	**27.9**	**C**	-	-	**40.6**	**D**
14. Rockaway Boulevard & 114th Street									
Rockaway Boulevard	EB	LT	0.73	13.9	B	LT	0.88	21.4	C
		R	0.44	6.9	A	R	0.44	6.2	A
	WB	L	0.05	13.2	B	L	0.08	13.6	B
		TR	0.36	15.5	B	TR	0.40	15.9	B
114th Street	NB	LTR	0.37	24.9	C	LTR	0.37	24.9	C
Overall Intersection[2]		-	-	**14.6**	**B**	-	-	**17.4**	**B**
15. Rockaway Boulevard & Lefferts Boulevard									
Rockaway Boulevard	EB	L	0.07	17.9	B	L	0.08	18.0	B
		T	0.66	27.8	C	T	0.70	29.3	C
		R	0.21	19.1	B	R	0.21	19.1	B
	WB	L	0.32	23.0	C	L	0.35	24.1	C
		T	0.46	21.7	C	T	0.50	22.3	C
Lefferts Boulevard	NB	L	0.29	26.2	C	L	0.29	26.2	C
		TR	0.80	42.9	D	TR	0.80	42.9	D
	SB	LTR	0.55	29.1	C	LTR	0.55	29.1	C
Overall Intersection[2]		-	-	**28.1**	**C**	-	-	**28.4**	**C**

Table 11-28 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
16. Cross Bay Boulevard & North Conduit Avenue									
North Conduit Avenue	WB	L	0.54	32.5	C	L	0.64	35.6	D
		LT	0.56	33.1	C	LT	0.66	36.2	D
		R	0.40	29.7	C	R	0.40	29.7	C
Cross Bay Boulevard	NB	T	0.51	19.0	B	T	0.51	19.1	B
	SB	TR	0.63	21.1	C	TR	0.63	21.1	C
Overall Intersection[2]		-	-	**22.5**	**C**	-	-	**23.3**	**C**
17. Cross Bay Boulevard & Shore Parkway/Nassau Expressway Eastbound On-Ramp									
Cross Bay Boulevard	NB	L	0.99	95.5	F	L	0.99	95.5	F
		T	0.46	8.5	A	T	0.47	8.5	A
		R	0.13	0.2	A	R	0.13	0.2	A
	SB	L	0.96	87.2	F	L	0.96	87.2	F
		T	0.41	7.9	A	T	0.42	8.0	A
		R	0.83	5.2	A	R	0.89	7.8	A
Overall Intersection[2]		-	-	**17.6**	**B**	-	-	**18.1**	**B**
18. North Conduit Avenue & Cohancy Street/Albert Road									
North Conduit Avenue	WB	L	0.59	11.6	B	L	0.65	16.4	B
		T	1.06	49.8	D	T	1.12	77.9	E
		R	0.26	8.2	A	R	0.26	11.8	B
Cohancy Street	NB	L	0.33	21.6	C	L	0.33	21.6	C
		T	0.12	18.1	B	T	0.12	18.0	B
	SB	TR	0.50	38.5	D	TR	0.50	38.5	D
Overall Intersection[2]		-	-	**40.4**	**D**	-	-	**60.9**	**E**
19. North Conduit Avenue & Aqueduct Road (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Aqueduct Road	SB	R	-	12.9	B	R	-	51.6	F
Overall Intersection[2]		-	-	**1.4**	**A**	-	-	**7.0**	**A**

Table 11-28 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
20. North Conduit Avenue & 114th Street									
North Conduit Avenue	WB	TR	0.68	5.25	A	TR	0.85	7.4	A
114th Street	SB	R	0.54	44.4	D	R	0.54	44.4	D
Overall Intersection[2]		-	-	**8.1**	**A**	-	-	**9.6**	**A**
21. North Conduit Avenue & Lefferts Boulevard/Old South Road									
North Conduit Avenue	WB	T	1.04	37.4	D	T	1.22	113.4	F
		R	0.06	4.9	A	R	0.06	5.6	A
Lefferts Boulevard	NB	L	1.11	115.4	F	defL	1.19	132.5	F
		LT	0.91	50.6	D	T	0.74	38.1	D
	SB	TR	0.84	55.1	E	TR	0.85	55.5	E
Overall Intersection[2]		-	-	**46.4**	**D**	-	-	**101.7**	**F**
22. Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp									
Nassau Expressway Eastbound Off-Ramp	EB	LTR	0.59	23.7	C	LTR	1.10	84.8	F
Lefferts Boulevard	NB	TR	0.58	12.8	B	TR	0.65	14.4	B
	SB	LT	0.19	12.9	B	LT	0.19	12.9	B
Overall Intersection[2]		-	-	**17.1**	**B**	-	-	**50.9**	**D**
23. Lefferts Boulevard & Aqueduct Road									
Aqueduct Road	EB	LR	0.32	26.5	C	LR	0.51	30.3	C
Lefferts Boulevard	NB	L	0.54	34.6	C	L	0.75	43.3	D
		T	0.65	14.1	B	T	0.63	12.8	B
	SB	TR	0.24	58.1	E	TR	(a)	88.6	F
		-	-	-	-	T	0.29	39.4	D
		-	-	-	-	defR	0.69	111.6	F
Overall Intersection[2]		-	-	**25.8**	**C**	-	-	**39.0**	**D**

Table 11-28 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
24. Linden Boulevard & Southbound Van Wyck Service Road									
Linden Boulevard	EB	TR	0.69	34.0	C	TR	0.81	40.1	D
	WB	defL	0.91	38.9	D	defL	1.08	84.5	F
		T	0.43	10.1	B	T	0.46	9.9	A
Southbound Van Wyck Service Road	SB	LTR	0.80	25.7	C	LTR	1.00	49.5	D
Overall Intersection[2]		-	-	**26.6**	**C**	-	-	**46.3**	**D**
25. Linden Boulevard & Northbound Van Wyck Service Road									
Linden Boulevard	EB	defL	0.89	58.8	E	defL	1.19	135.2	F
		T	0.63	18.1	B	T	0.66	15.1	B
	WB	TR	0.96	59.8	E	TR	0.99	67.3	E
Northbound Van Wyck Service Road	NB	LTR	0.51	18.2	B	LTR	0.51	18.2	B
Overall Intersection[2]		-	-	**31.5**	**C**	-	-	**41.0**	**D**
26. North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Belt Parkway Westbound Off-Ramp	WB	T	-	36.6	E	T	-	381.5	F
Overall Intersection[2]		-	-	**3.0**	**A**	-	-	**58.0**	**F**
27. 155th Avenue & Belt Parkway Eastbound On-Ramp (unsignalized)									
155th Avenue	WB	R	-	6.9	A	R	-	7.1	A
Belt Parkway Eastbound On-Ramp	NB	T	-	11.2	B	T	-	11.2	B
		R	-	6.4	A	R	-	6.4	A
Overall Intersection[2]		-	-	**9.5**	**A**	-	-	**9.5**	**A**
28. Cohancy Street & 155th Avenue									
155th Avenue	EB	LT	0.15	19.1	B	LT	0.15	19.1	B
	WB	TR	0.28	20.7	C	TR	0.28	20.7	C
Cohancy Street	NB	LTR	0.13	5.5	A	LTR	0.13	5.5	A
	SB	LTR	0.81	21.2	C	LTR	0.85	24.9	C
Overall Intersection[2]		-	-	**18.9**	**B**	-	-	**21.6**	**C**

Table 11-28 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
29. North Conduit Avenue & 130th Street									
North Conduit Avenue	WB	LTR	0.88	39.7	D	LTR	0.97	43.1	D
130th Street	NB	L	0.39	35.2	D	L	0.39	35.0	C
		T	0.28	32.6	C	T	0.28	32.4	C
	SB	T	0.68	49.8	D	T	0.68	49.8	D
		R	0.30	39.5	D	R	0.30	39.5	D
Overall Intersection[2]		-	-	**40.0**	**D**	-	-	**42.6**	**D**
30. South Conduit Avenue & 130th Street									
South Conduit Avenue	EB	LTR	0.37	19.3	B	LTR	0.40	19.7	B
130th Street	NB	TR	0.36	44.3	D	TR	0.36	44.3	D
	SB	L	0.63	27.1	C	L	0.63	26.5	C
		T	0.12	21.5	C	T	0.12	21.2	C
Overall Intersection[2]		-	-	**23.1**	**C**	-	-	**23.1**	**C**
31. North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road									
North Conduit Avenue	WB	L	0.58	27.6	C	L	0.57	26.2	C
		LT	0.98	48.7	D	LT	0.98	46.3	D
Van Wyck Expressway Service Road	SB	T	0.60	26.6	C	T	0.59	26.1	C
		R	0.48	24.5	C	R	0.66	28.5	C
Overall Intersection[2]		-	-	**37.8**	**D**	-	-	**36.5**	**D**

[1] Control delay is measured in seconds per vehicle.
[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.
(a) Under the With-Action condition, this approach operates as separate through and de facto right movements. The delay for the entire approach is shown for impact comparison purposes.
Denotes a significantly impacted movement

Table 11-29 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
1. Rockaway Boulevard & 94th Street									
Rockaway Boulevard	EB	TR	0.37	30.1	C	TR	0.43	31.1	C
	WB	LT	0.33	4.2	A	LT	0.38	6.0	A
94th Street	SB	LTR	0.10	12.6	B	LTR	0.10	12.6	B
Overall Intersection[2]		-	-	**17.0**	**B**	-	-	**18.3**	**B**
2. Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard									
Rockaway Boulevard	EB	TR	0.27	5.7	A	TR	0.32	5.3	A
	WB	L	0.42	25.6	C	L	0.47	22.7	C
		TR	0.58	25.1	C	TR	(a)	36.5	D
		-	-	-	-	T	0.81	30.0	C
		-	-	-	-	R	0.92	42.7	D
Woodhaven Boulevard SB Service Road	SB	T	0.21	13.8	B	T	0.21	13.8	B
		R	0.02	11.9	B	R	0.02	11.9	B
Woodhaven Boulevard Main Line	NB	T	0.56	4.3	A	T	0.56	4.3	A
	SB	L	0.92	97.9	F	L	1.09	141.8	F
		T	0.55	18.1	B	T	0.55	18.1	B
Cross Bay Boulevard NB Service Road	NB	TR	0.33	4.1	A	TR	0.33	4.1	A
Overall Intersection[2]		-	-	**18.1**	**B**	-	-	**26.3**	**C**
3. Liberty Avenue & Rockaway Boulevard									
Rockaway Boulevard	EB	LT	0.43	8.5	A	LT	0.51	9.0	A
Liberty Avenue	NB	T	0.06	17.8	B	T	0.06	19.3	B
		R	0.20	17.3	B	R	0.23	18.6	B
Overall intersection[2]		-	-	**10.3**	**B**	-	-	**10.9**	**B**

Table 11-29 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
4. Rockaway Boulevard/Liberty Avenue & 96th Street									
Liberty Avenue	EB	LT	0.28	28.1	C	LT	0.28	27.4	C
	WB	TR	0.38	34.3	C	TR	0.38	34.3	C
96th Street	NB	LTR	0.30	38.9	D	LTR	0.30	38.9	D
Rockaway Boulevard	NW	T	0.42	33.0	C	T	0.68	38.6	D
	SE	T	0.20	0.6	A	T	0.25	0.6	A
Overall Intersection[2]		-	-	**22.6**	**C**	-	-	**24.9**	**C**
5. Cross Bay Boulevard Northbound Service Road & Liberty Avenue									
Cross Bay Blvd NB Service Road	NB	TR	0.63	33.9	C	TR	0.66	34.9	C
Overall Intersection[2]		-	-	**33.9**	**C**	-	-	**34.9**	**C**
6. Cross Bay Boulevard & Liberty Avenue									
Cross Bay Boulevard	NB	T	0.58	30.6	C	T	0.58	30.6	C
	SB	T	0.51	8.2	A	T	0.51	7.8	A
Overall Intersection[2]		-	-	**16.2**	**B**	-	-	**15.9**	**B**
7. Liberty Avenue & 94th Street									
Liberty Avenue	EB	R	0.20	28.5	C	R	0.20	28.5	C
94th Street	SB	TR	0.17	18.6	B	TR	0.17	17.8	B
Overall Intersection[2]		-	-	**20.9**	**C**	-	-	**20.3**	**C**
8. Rockaway Boulevard & Centreville Street/109th Avenue/Plattwood Avenue									
Rockaway Boulevard	EB	L	0.16	15.7	B	L	0.21	21.0	C
		TR	0.45	20.8	C	TR	0.56	22.5	C
	WB	L	0.30	14.2	B	L	0.36	11.1	B
		TR	0.36	11.6	B	TR	0.58	13.5	B
Centreville Street	NB	LTR	0.60	29.7	C	LTR	0.60	29.7	C
109th Avenue	SB	LTR	0.42	24.9	C	LTR	0.42	24.9	C
Overall Intersection[2]		-	-	**19.8**	**B**	-	-	**20.0**	**C**

Table 11-29 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
9. Rockaway Boulevard & 107th Street									
Rockaway Boulevard	EB	T	0.38	5.6	A	T	0.47	5.5	A
	WB	T	0.42	18.4	B	T	0.60	19.2	B
107th Street	NB	LTR	0.14	24.4	C	LTR	0.14	24.4	C
	SB	LTR	0.25	26.1	C	LTR	0.33	27.6	C
Overall Intersection[2]		-	-	**13.7**	**B**	-	-	**14.4**	**B**
10. Rockaway Boulevard & Aqueduct Road/108th Street									
Rockaway Boulevard	EB	L	-	9.1	A	L	-	11.0	B
		T	0.29	9.6	A	T	0.52	17.0	B
		R	0.43	11.3	B	R	0.50	15.4	B
	WB	L	0.57	6.9	A	L	0.58	33.0	C
		T	0.28	1.5	A	T	0.57	4.0	A
Aqueduct Road	NB	LR	0.29	24.2	C	LR	0.80	35.0	C
		R	0.33	26.0	C	R	0.43	11.8	B
Overall Intersection[2]		-	-	**10.5**	**B**	-	-	**21.2**	**C**
11. Rockaway Boulevard & 109th Street									
Rockaway Boulevard	EB	T	0.27	7.7	A	T	0.45	17.1	B
	WB	T	0.34	12.3	B	T	0.43	12.7	B
109th Street	SB	LR	0.15	24.5	C	LR	0.17	24.7	C
Overall Intersection[2]		-	-	**10.9**	**B**	-	-	**15.4**	**B**
12. Rockaway Boulevard & 111th Street/Home Depot Parking Lot									
Rockaway Boulevard	EB	L	0.11	11.5	B	L	0.73	48.6	D
		TR	0.42	14.6	B	TR	0.64	16.0	B
	WB	L	0.03	4.1	A	L	0.05	4.3	A
		TR	0.64	8.4	A	TR	0.75	10.1	B
Home Depot Parking Lot	NB	LTR	0.12	20.6	C	LTR	0.12	20.6	C
111th Street	SB	LTR	0.41	25.4	C	LTR	0.57	29.2	C
Overall Intersection[2]		-	-	**12.9**	**B**	-	-	**17.6**	**B**

Table 11-29 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
13. Rockaway Boulevard & 113th Street/Linden Boulevard/Home Depot Parking Lot									
Rockaway Boulevard	EB	L	0.71	54.3	D	L	1.49	283.5	F
		TR	0.44	34.9	C	TR	0.58	36.0	D
	WB	L	0.14	12.5	B	L	0.18	13.5	B
		TR	0.54	14.5	B	TR	0.56	14.6	B
Home Depot Parking Lot	NB	LTR	0.36	32.1	C	LTR	0.36	32.1	C
Linden Boulevard	SB	LTR	0.43	34.7	C	LTR	0.59	39.9	D
		R	0.41	34.0	C	R	0.57	38.8	D
Overall Intersection		-	-	**28.2**	**C**	-	-	**62.7**	**E**
14. Rockaway Boulevard & 114th Street									
Rockaway Boulevard	EB	LT	0.50	7.3	A	LT	1.02	53.5	D
		R	0.28	4.9	A	R	0.28	4.1	A
	WB	L	0.06	13.5	B	L	0.09	14.3	B
		TR	0.32	15.6	B	TR	0.34	15.8	B
114th Street	NB	LTR	0.43	27.5	C	LTR	0.43	27.5	C
Overall Intersection[2]		-	-	**13.4**	**B**	-	-	**30.6**	**C**
15. Rockaway Boulevard & Lefferts Boulevard									
Rockaway Boulevard	EB	L	0.07	18.4	B	L	0.08	18.5	B
		T	0.47	23.7	C	T	0.54	25.3	C
		R	0.19	19.5	B	R	0.19	19.5	B
	WB	L	0.23	20.8	C	L	0.26	21.6	C
		T	0.43	21.9	C	T	0.45	22.2	C
Lefferts Boulevard	NB	L	0.22	26.3	C	L	0.22	26.3	C
		TR	0.82	46.4	D	TR	0.82	46.4	D
	SB	LTR	0.56	31.0	C	LTR	0.56	31.0	C
Overall Intersection[2]		-	-	**28.7**	**C**	-	-	**28.8**	**C**

Table 11-29 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
16. Cross Bay Boulevard & North Conduit Avenue									
North Conduit Avenue	WB	L	0.32	28.0	C	L	0.60	34.2	C
		LT	0.33	28.2	C	LT	0.62	35.0	C
		R	0.37	29.1	C	R	0.37	29.1	C
Cross Bay Boulevard	NB	T	0.44	18.0	B	T	0.44	18.1	B
	SB	TR	0.54	19.5	B	TR	0.54	19.5	B
Overall Intersection[2]		-	-	**20.4**	**C**	-	-	**22.2**	**C**
17. Cross Bay Boulevard & Shore Parkway/Nassau Expressway Eastbound On-Ramp									
Cross Bay Boulevard	NB	L	0.90	75.4	E	L	0.90	75.4	E
		T	0.38	7.7	A	T	0.38	7.7	A
		R	0.10	0.1	A	R	0.10	0.1	A
	SB	L	1.01	100.6	F	L	1.01	100.6	F
		T	0.29	7.0	A	T	0.31	7.2	A
		R	0.55	1.4	A	R	0.73	3.1	A
Overall Intersection[2]		-	-	**18.8**	**B**	-	-	**17.9**	**B**
18. North Conduit Avenue & Cohancy Street/Albert Road									
North Conduit Avenue	WB	L	0.49	34.7	C	L	0.80	44.8	D
		T	0.90	44.6	D	T	1.20	136.3	F
		R	0.34	31.7	C	R	0.34	30.4	C
Cohancy Street	NB	L	0.19	24.5	C	L	0.19	24.6	C
		T	0.09	22.9	C	T	0.09	22.9	C
	SB	TR	0.38	32.3	C	TR	0.38	32.3	C
Overall Intersection[2]		-	-	**40.2**	**D**	-	-	**104.7**	**F**
19. North Conduit Avenue & Aqueduct Road (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Aqueduct Road	SB	R	-	10.7	B	R	-	176.1	F
Overall Intersection[2]		-	-	**0.9**	**A**	-	-	**51.8**	**F**

Table 11-29 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
20. North Conduit Avenue & 114th Street									
North Conduit Avenue	WB	TR	0.66	22.3	C	TR	0.73	23.5	C
114th Street	SB	R	0.17	27.0	C	R	0.17	27.0	C
Overall Intersection[2]		-	-	**22.5**	**C**	-	-	**23.6**	**C**
21. North Conduit Avenue & Lefferts Boulevard/Old South Road									
North Conduit Avenue	WB	T	0.99	54.1	D	T	1.05	70.7	E
		R	0.14	21.7	C	R	0.14	21.2	C
Lefferts Boulevard	NB	L	0.80	44.1	D	defL	0.87	41.9	D
		LT	0.64	29.9	C	T	0.54	27.9	C
	SB	TR	0.54	38.8	D	TR	0.55	39.0	D
Overall Intersection[2]		-	-	**47.4**	**D**	-	-	**58.2**	**E**
22. Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp									
Nassau Expressway Eastbound Off-Ramp	EB	LTR	0.58	23.6	C	LTR	0.76	28.1	C
Lefferts Boulevard	NB	TR	0.38	10.1	B	TR	0.57	15.4	B
	SB	LT	0.09	11.9	B	LT	0.09	12.0	B
Overall Intersection[2]		-	-	**17.0**	**B**	-	-	**21.2**	**C**
23. Lefferts Boulevard & Aqueduct Road									
Aqueduct Road	EB	LR	0.13	21.3	C	LR	0.43	24.6	C
Lefferts Boulevard	NB	L	0.15	28.5	C	L	0.38	32.0	C
		T	0.52	14.2	B	T	0.52	14.2	B
	SB	TR	0.26	88.6	F	TR	0.32	114.1	F
Overall Intersection[2]		-	-	**30.8**	**C**	-	-	**35.3**	**D**

Table 11-29 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
24. Linden Boulevard & Southbound Van Wyck Service Road									
Linden Boulevard	EB	TR	0.69	33.9	C	TR	1.08	90.0	F
	WB	LT	0.59	26.7	C	LT	(b)	89.3	F
		-	-	-	-	defL	1.25	181.1	F
		-	-	-	-	T	0.43	24.4	C
Southbound Van Wyck Service Road	SB	LTR	0.82	26.8	C	LTR	0.88	30.2	C
Overall Intersection[2]		**-**	**-**	**28.1**	**C**	**-**	**-**	**64.5**	**E**
25. Linden Boulevard & Northbound Van Wyck Service Road									
Linden Boulevard	EB	defL	0.88	54.1	D	defL	1.74	375.1	F
		T	0.58	22.2	C	T	0.62	23.4	C
	WB	TR	0.83	41.9	D	TR	0.87	45.6	D
Northbound Van Wyck Service Road	NB	LTR	0.70	21.4	C	LTR	0.70	21.4	C
Overall Intersection[2]		**-**	**-**	**28.1**	**C**	**-**	**-**	**80.6**	**F**
26. North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Belt Parkway Westbound Off-Ramp	WB	T	-	39.9	E	T	-	125.7	F
Overall Intersection[2]		**-**	**-**	**4.7**	**A**	**-**	**-**	**19.8**	**C**
27. 155th Avenue & Belt Parkway Eastbound On-Ramp (unsignalized)									
155th Avenue	WB	R	-	6.8	A	R	-	8.1	A
Belt Parkway Eastbound On-Ramp	NB	T	-	9.5	A	T	-	9.5	A
		R	-	6.3	A	R	-	6.3	A
Overall Intersection[2]		**-**	**-**	**8.4**	**A**	**-**	**-**	**8.6**	**A**
28. Cohancy Street & 155th Avenue									
155th Avenue	EB	LT	0.16	19.6	B	LT	0.16	19.6	B
	WB	TR	0.22	19.9	B	TR	0.22	19.9	B
Cohancy Street	NB	LTR	0.11	5.4	A	LTR	0.11	5.4	A
	SB	LTR	0.65	10.4	B	LTR	0.90	24.1	C
Overall Intersection[2]		**-**	**-**	**11.3**	**B**	**-**	**-**	**21.4**	**C**
29. North Conduit Avenue & 130th Street									

Table 11-29 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS
North Conduit Avenue	WB	LTR	0.61	13.4	B	LTR	0.63	13.1	B
130th Street	NB	L	0.31	33.6	C	L	0.31	33.2	C
		T	0.24	32.3	C	T	0.24	31.8	C
	SB	T	0.60	46.4	D	T	0.60	46.4	D
		R	0.16	36.9	D	R	0.16	36.9	D
Overall Intersection[2]		-	-	**19.7**	**B**	-	-	**19.3**	**B**
30. South Conduit Avenue & 130th Street									
South Conduit Avenue	EB	LTR	0.25	17.9	B	LTR	0.32	18.7	B
130th Street	NB	TR	0.29	42.6	D	TR	0.29	42.6	D
	SB	L	0.60	31.2	C	L	0.60	31.0	C
		T	0.11	25.0	C	T	0.11	24.8	C
Overall Intersection[2]		-	-	**24.3**	**C**	-	-	**23.9**	**C**
31. North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road									
North Conduit Avenue	WB	L	0.51	25.6	C	L	0.51	25.6	C
		LT	0.71	28.1	C	LT	0.73	28.8	C
Van Wyck Expressway Service Road	SB	T	0.66	28.1	C	T	0.66	28.1	C
		R	0.34	22.2	C	R	0.34	22.2	C
Overall Intersection[2]		-	-	**27.1**	**C**		-	**27.4**	**C**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

(a) Under the With-Action condition, this approach operates as separate through and de facto right movements. The delay for the entire approach is shown for impact comparison purposes.

(b) Under the With-Action condition, this approach operates as separate de facto left and through movements. The delay for the entire approach is shown for impact comparison purposes.

Denotes a significantly impacted movement

The summary overview of the With-Action condition at analyzed intersections indicates that:

- In the Friday PM peak hour, three intersections—North Conduit Avenue and Lefferts Boulevard/Old South Road; Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp; and North Conduit Avenue and Belt Parkway Westbound Off-Ramp—would operate at overall LOS E or F compared to none in the No-Action condition, and 27 out of 135 individual traffic movements would operate at LOS E or F compared to 21 traffic movements under the No-Action condition.
- In the Saturday PM peak hour, three intersections—North Conduit Avenue and Cohancy Street/Albert Road; North Conduit Avenue and Lefferts Boulevard/Old South Road; and North Conduit Avenue and Belt Parkway Westbound Off-Ramp—would operate at overall LOS E or F

compared to none in the No-Action condition, and 18 out of 135 individual traffic movements would operate at LOS E or F compared to 10 traffic movements in the No-Action condition.

- In the Saturday night peak hour, six intersections—Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot; North Conduit Avenue and Cohancy Street/Albert Road; North Conduit Avenue and Aqueduct Road; North Conduit Avenue and Lefferts Boulevard/Old South Road; Linden Boulevard and Southbound Van Wyck Service Road; and Linden Boulevard and Northbound Van Wyck Service Road—would operate at overall LOS E or F compared to none in the No-Action condition, and 12 out of 135 individual traffic movements would operate at LOS E or F compared to five traffic movements under the No-Action condition.

Intersection traffic movements that operate at unacceptable levels of service under the No-Action condition would generally 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 Actions are listed below.

- Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot
  - Eastbound Rockaway Boulevard left-turn movement (Friday PM, Saturday PM, and Saturday night)
  - Southbound Linden Boulevard shared left-through-right movement (Friday PM and Saturday PM)
  - Southbound Linden Boulevard right turn movement (Friday PM and Saturday PM)
- North Conduit Avenue and Cohancy Street/Albert Road
  - Westbound North Conduit Avenue through movement (Saturday PM and Saturday night)
- North Conduit Avenue and Aqueduct Road
  - Southbound Aqueduct Road approach (Saturday PM and Saturday night)
- North Conduit Avenue and Lefferts Boulevard/Old South Road
  - Westbound North Conduit Avenue through movement (Friday PM, Saturday PM, and Saturday night)
- Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp
  - Eastbound Nassau Expressway Off-Ramp shared through-right movement (Friday PM)
  - Eastbound Nassau Expressway Off-Ramp approach (Saturday PM)
- Lefferts Boulevard and Aqueduct Road
  - Southbound Lefferts Boulevard approach (Friday PM)
  - Southbound Lefferts Boulevard de facto right turn movement (Saturday PM)
- Linden Boulevard and Southbound Van Wyck Service Road
  - Eastbound Linden Boulevard approach (Saturday night)
  - Westbound Linden Boulevard de facto left turn movement (Saturday PM and Saturday night)
- Linden Boulevard and Northbound Van Wyck Service Road
  - Eastbound Linden Boulevard de facto left-turn movement (Saturday night)
- Cohancy Street and 155th Avenue
  - Southbound Cohancy Street approach (Friday PM)

Of the 31 intersections analyzed, the Proposed Actions would result in significant adverse traffic impacts at 10 intersections (at 18 movements) during the Friday PM peak hour, 10 intersections (at 14 movements) during the Saturday PM peak hour, and nine intersections (at 10 movements) during the Saturday night peak hour. The majority of the impacted movements are left and right turns from key roadways in the area (e.g., Rockaway Boulevard, Woodhaven Boulevard, etc.) or along major street through movements for these key roadways. The significantly impacted traffic movements are identified below:

- Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard
  - Westbound Rockaway Boulevard left turn movement (Friday PM)
  - Westbound Rockaway Boulevard shared through-right movement (Friday PM)
  - Southbound Woodhaven Boulevard Mainline left turn movement (Friday PM, Saturday PM, and Saturday night)
- Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot
  - Eastbound Rockaway Boulevard left turn movement (Friday PM, Saturday PM, and Saturday night)
  - Southbound Linden Boulevard shared left-through-right movement (Friday PM and Saturday PM)
  - Southbound Linden Boulevard right-turn movement (Friday PM and Saturday PM)
- Cross Bay Boulevard and North Conduit Avenue
  - Westbound North Conduit Avenue left turn movement (Friday PM)
  - Westbound North Conduit Avenue shared left-through-right movement (Friday PM)
- North Conduit Avenue and Cohancy Street/Albert Road
  - Westbound North Conduit Avenue through movement (Saturday PM and Saturday night)
- North Conduit Avenue and Aqueduct Road
  - Southbound Aqueduct Road approach (Saturday PM and Saturday night)
- North Conduit Avenue and Lefferts Boulevard/Old South Road
  - Westbound North Conduit Avenue through movement (Friday PM, Saturday PM, and Saturday night)
  - Northbound Lefferts Boulevard de facto left turn movement (Friday PM and Saturday PM)
- Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp
  - Eastbound Nassau Expressway Ramp de facto left turn movement (Friday PM)
  - Eastbound Nassau Expressway Ramp shared through-right movement (Friday PM)
  - Eastbound Nassau Expressway Ramp approach (Saturday PM)
- Lefferts Boulevard and Aqueduct Road
  - Southbound Lefferts Boulevard approach (Friday PM, Saturday PM, and Saturday night)
- Linden Boulevard and Southbound Van Wyck Service Road
  - Eastbound Linden Boulevard approach (Saturday night)
  - Westbound Linden Boulevard de facto left turn movement (Saturday PM)
  - Westbound Linden Boulevard approach (Saturday night)
- Linden Boulevard and Northbound Van Wyck Service Road

  - Eastbound Linden Boulevard de facto left turn movement (Friday PM, Saturday PM, and Saturday night)
  - Westbound Linden Boulevard approach (Friday PM and Saturday PM)
- North Conduit Avenue and Belt Parkway Westbound Off-Ramp (unsignalized)
  - Belt Parkway Westbound Off-Ramp approach (Friday PM, Saturday PM, and Saturday night)
- Cohancy Street and 155th Avenue
  - Southbound Cohancy Street approach (Friday PM)
- North Conduit Avenue and Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road
  - Westbound North Conduit Avenue shared left-through movement (Friday PM)

The identification and evaluation of traffic capacity improvements needed to mitigate potential significant adverse traffic impacts created by the Proposed Actions are presented in **Chapter 17, Mitigation**.

Highways

Project-generated vehicle trips were assigned to the highway mainline segments, ramps, and merge/diverge or weave segments providing the most logical and direct routes to the Project Site. The With-Action condition traffic volumes are shown in **Figure 11-62** through **Figure 11-64**. For the eleven analysis segments, detailed highway traffic levels of service comparing the No-Action and With-Action conditions during the Friday PM, Saturday midday, and Saturday night peak hours are provided in **Table 11-30** through **Table 11-32**.

Figure 11-62 With-Action Condition Highway Traffic Volumes – Friday PM Peak Hour

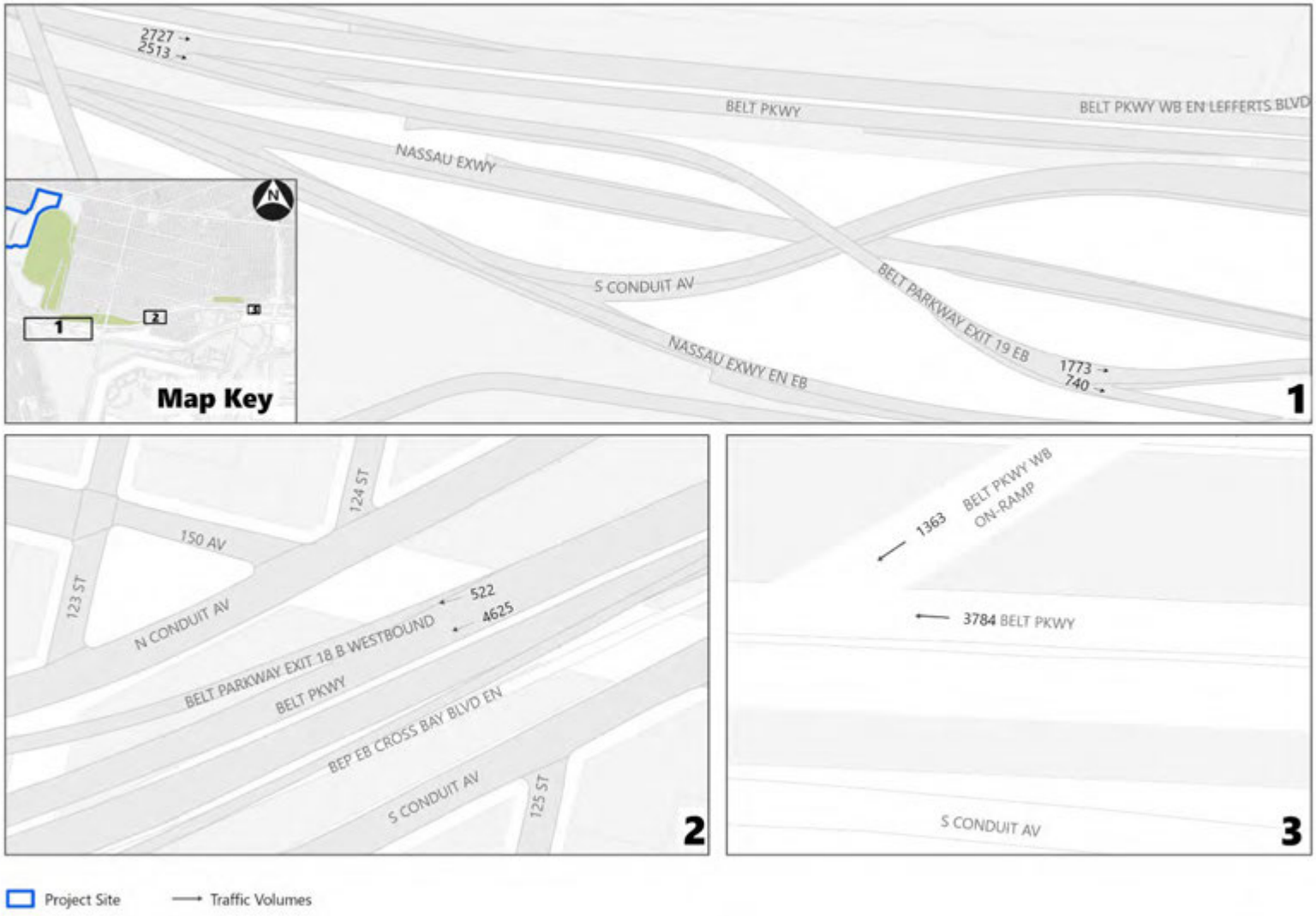


Figure 11-63 With-Action Condition Highway Traffic Volumes – Saturday Midday Peak Hour

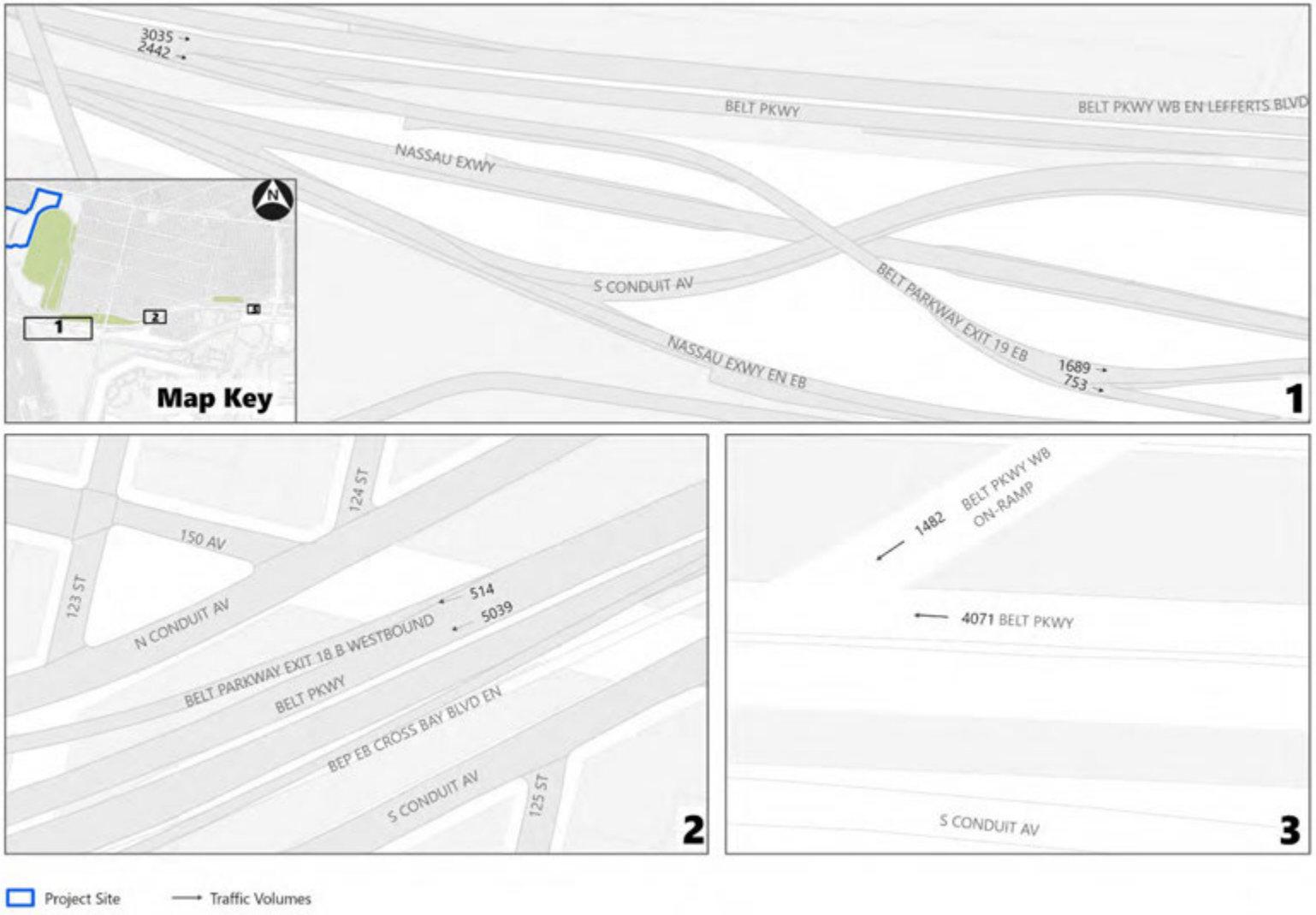


Figure 11-64 With-Action Condition Highway Traffic Volumes – Saturday Night Peak Hour

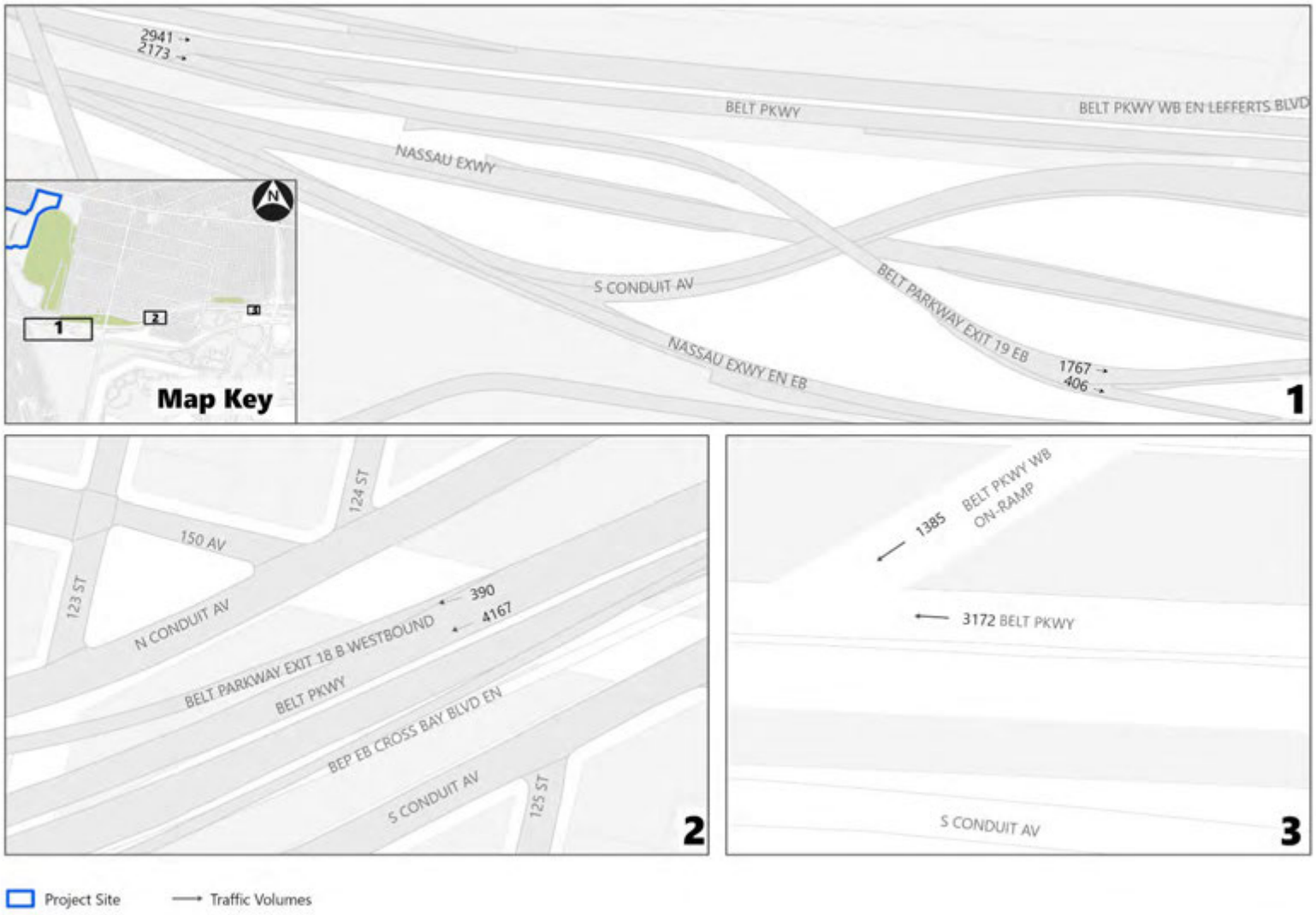


Table 11-30 No-Action vs. With-Action Conditions Freeway Traffic Levels of Service – Friday PM Peak Hour

			No-Action		With-Action	
Description	**Type**	**# Lanes**	**Density (pc/ln/mi)**	**LOS**	**Density (pc/ln/mi)**	**LOS**
Westbound Belt Parkway on-ramp from Van Wyck Expressway / North Conduit Avenue intersection to westbound North Conduit Avenue / Lefferts Boulevard (Exit 18B) off-ramp	Basic Upstream	3	28.8	D	31.1	D
	Merge	3 (freeway)	41.2	D	43.8	D
		1 (ramp)	28.8		30.2	
	Basic Upstream	3	45.7	F	48.6	F
	Diverge	3 (freeway)	45.7	D	48.6	D
		1 (ramp)	32.2		33.8	
	Basic Downstream	3	42.7	E	42.7	E
Eastbound Belt Parkway off-ramp to Nassau Expressway / Lefferts Boulevard (Exit 19)	Basic Upstream	3	34.9	D	38.5	E
	Diverge	3 (freeway)	28.6	D	31.6	D
		2 (ramp)	28.6		31.6	
	Basic Downstream	3	20.3	C	20.7	C
Eastbound Belt Parkway off-ramp split to Nassau Expressway and to Lefferts Boulevard (downstream of the Exit 19 off-ramp)	Basic Upstream	2	25.8	C	31.4	D
	Diverge	2 (freeway)	26.5	C	32.1	C
		1 (right)	21.0		25.0	
	Basic Downstream	2	25.0	C	25.3	C

pc/ln/mi=Passenger cars per lane per mile

Table 11-31 No-Action vs. With-Action Conditions Freeway Traffic Levels of Service – Saturday Midday Peak Hour

Description	Type	# Lanes	No-Action		With-Action	
			Density (pc/ln/mi)	LOS	Density (pc/ln/mi)	LOS
Westbound Belt Parkway on-ramp from Van Wyck Expressway / North Conduit Avenue intersection to westbound North Conduit Avenue / Lefferts Boulevard (Exit 18B) off-ramp	Basic Upstream	3	29.1	D	31.0	D
	Merge	3 (freeway)	42.8	D	45.0	D
		1 (ramp)	30.1		31.3	
	Basic Upstream	3	42.8	E	45.0	E
	Diverge	3 (freeway)	41.1	D	43.3	D
		1 (ramp)	30.0		31.4	
	Basic Downstream	3	38.3	E	38.3	E
Eastbound Belt Parkway off-ramp to Nassau Expressway / Lefferts Boulevard (Exit 19)	Basic Upstream	3	37.0	E	40.3	E
	Diverge	3 (freeway)	30.4	D	33.1	D
		2 (ramp)	30.4		33.1	
	Basic Downstream	3	22.1	C	22.3	C
Eastbound Belt Parkway off-ramp split to Nassau Expressway and to Lefferts Boulevard (downstream of the Exit 19 off-ramp)	Basic Upstream	2	25.4	C	30.5	D
	Diverge	2 (freeway)	26.2	C	31.2	C
		1 (right)	20.8		24.4	
	Basic Downstream	2	23.9	C	24.1	C

pc/ln/mi=Passenger cars per lane per mile

Table 11-32 No-Action vs. With-Action Conditions Freeway Traffic Levels of Service – Saturday Night Peak Hour

Description	Type	# Lanes	No-Action		With-Action	
			Density (pc/ln/mi)	LOS	Density (pc/ln/mi)	LOS
Westbound Belt Parkway on-ramp from Van Wyck Expressway / North Conduit Avenue intersection to westbound North Conduit Avenue / Lefferts Boulevard (Exit 18B) off-ramp	Basic Upstream	3	23.2	C	24.1	C
	Merge	3 (freeway)	35.2	C	36.2	C
		1 (ramp)	25.5		26.0	
	Basic Upstream	3	35.2	E	36.2	E
	Diverge	3 (freeway)	33.9	C	34.8	C
		1 (ramp)	26.1		26.9	
	Basic Downstream	3	31.6	D	31.6	D
Eastbound Belt Parkway off-ramp to Nassau Expressway / Lefferts Boulevard (Exit 19)	Basic Upstream	3	34.6	D	37.6	E
	Diverge	3 (freeway)	28.4	D	30.9	D
		2 (ramp)	28.4		30.9	
	Basic Downstream	3	20.7	C	21.7	C
Eastbound Belt Parkway off-ramp split to Nassau Expressway and to Lefferts Boulevard (downstream of the Exit 19 off-ramp)	Basic Upstream	2	23.7	C	27.1	D
	Diverge	2 (freeway)	24.4	B	27.9	C
		1 (right)	19.6		22.0	
	Basic Downstream	2	23.2	C	25.0	C

pc/ln/mi=Passenger cars per lane per mile

Highway segments that would operate at LOS E or F under the No-Action condition would be expected to continue to do so, in one or more peak hours, under the With-Action condition. All other segments are expected to operate at LOS D or better under the With-Action condition. Based on *CEQR Technical Manual* criteria, the projected increase in density with the Proposed Actions would not result in a significant adverse impact at any analysis highway segments during the peak analysis hours.

Parking

The Expansion Project would be developed over Lots A and B, displacing most of the parking within these lots, as well as portions of the parking garage. The Expansion Project would provide a total of 7,309 parking spaces consisting of a new 3,727 space parking garage, the existing 2,365 space parking garage, and 1,217 spaces of surface parking.

Table 11-33 and **Table 11-34** show the Project Site's projected hourly Friday and Saturday parking demand under the Proposed Actions. The peak With-Action condition parking demand for Friday is projected to be during the 8 PM to 9 PM hour, with a demand of 6,006 spaces, and the Saturday peak parking demand of 6,008 spaces would be expected during the 8 PM to 9 PM hour.

Overall, the Expansion Project would provide enough spaces to accommodate the Friday and Saturday peak project demands.

Table 11-33 Projected Parking Demand – Friday

Hour	Existing Conditions	No-Action Condition	Project Increment	With-Action Condition
12 AM - 1 AM	1,099	1,190	950	2,140
1 AM - 2 AM	943	1,024	819	1,843
2 AM - 3 AM	817	892	717	1,609
3 AM - 4 AM	656	721	569	1,290
4 AM - 5 AM	521	578	451	1,029
5 AM - 6 AM	338	384	327	711
6 AM - 7 AM	365	416	341	757
7 AM - 8 AM	382	474	311	785
8 AM - 9 AM	477	639	315	954
9 AM - 10 AM	677	995	315	1,310
10 AM - 11 AM	877	1,277	365	1,642
11 AM - 12 PM	1,113	1,581	429	2,010
12 PM - 1 PM	1,309	1,827	530	2,357
1 PM - 2 PM	1,388	1,901	595	2,496
2 PM - 3 PM	1,560	2,061	754	2,815
3 PM - 4 PM	1,569	2,022	895	2,917
4 PM - 5 PM	1,627	2,021	1,032	3,053
5 PM - 6 PM	1,604	1,859	1,302	3,161
6 PM - 7 PM	1,797	1,930	2,289	4,219
7 PM - 8 PM	2,082	2,226	3,712	5,938
8 PM - 9 PM	2,149	2,296	3,710	6,006
9 PM - 10 PM	2,151	2,299	3,224	5,523
10 PM - 11 PM	2,062	2,207	1,718	3,925
11 PM - 12 AM	1,880	2,015	1,481	3,496

Note: The Expansion Project would provide 7,309 parking spaces

Table 11-34 Projected Parking Demand – Saturday

Hour	Existing Conditions	No-Action Condition	Project Increment	With-Action Condition
12 AM - 1 AM	1,680	1,801	1,322	3,123
1 AM - 2 AM	1,428	1,536	1,138	2,674
2 AM - 3 AM	1,205	1,300	962	2,262
3 AM - 4 AM	994	1,076	793	1,869
4 AM - 5 AM	737	803	592	1,395
5 AM - 6 AM	374	420	379	799
6 AM - 7 AM	374	421	388	809
7 AM - 8 AM	405	453	436	889
8 AM - 9 AM	504	557	487	1,044
9 AM - 10 AM	703	790	572	1,362
10 AM - 11 AM	903	1,090	567	1,657
11 AM - 12 PM	1,139	1,409	615	2,024
12 PM - 1 PM	1,409	1,694	716	2,410
1 PM - 2 PM	1,678	1,978	916	2,894
2 PM - 3 PM	1,890	2,202	1,120	3,322
3 PM - 4 PM	1,982	2,227	1,307	3,534
4 PM - 5 PM	1,992	2,186	1,382	3,568
5 PM - 6 PM	1,886	2,030	1,846	3,876
6 PM - 7 PM	1,863	1,987	3,282	5,269
7 PM - 8 PM	2,207	2,350	3,500	5,850
8 PM - 9 PM	2,324	2,471	3,537	6,008
9 PM - 10 PM	2,423	2,579	2,370	4,949
10 PM - 11 PM	2,347	2,501	1,710	4,211
11 PM - 12 AM	2,174	2,319	1,613	3,932

Note: The Expansion Project would provide 7,309 parking spaces

Subways

The Proposed Actions would generate 1,144 subway trips (1,012 trips "in" and 132 trips "out" of the Project Site) during the Friday PM peak hour. Approximately 75 percent of the subway inbound trips were assigned to use the Aqueduct – North Conduit Avenue station, where there is only a southbound track in the north fare control area located within the Aqueduct Racetrack property, and 25 percent from the Aqueduct Racetrack station, where there is only a northbound track. Project-generated subway outbound trips were primarily assigned to the Aqueduct Racetrack station (approximately 92 percent) with the remaining trips assigned to the Aqueduct – North Conduit Avenue subway station. Assignment patterns were developed based on existing subway station travel patterns during the peak hour.

Subway Station Elements

As shown in **Table 11-35** and **Table 11-36**, the subway station elements would continue to operate at LOS A during the Friday PM peak hour.

Table 11-35 No-Action vs. With-Action Conditions Fare Control Levels of Service – Friday PM Peak Hour

Control Element	Pedestrian Volume (15-min)		Surging Factor	Friction Factor (No-Action/ With-Action)	No-Action		With-Action	
	In	Out			v/c Ratio	LOS	v/c Ratio	LOS
Aqueduct Racetrack Station								
4 HEETs	128	98	0.75	0.90/0.90	0.11	A	0.21	A
Aqueduct - North Conduit Avenue Station – North Fare Control								
2 HEETs	13	301	0.75	0.90/1.00	0.11	A	0.40	A

Note:
Methodology based on *CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes is 1.0.

Table 11-36 No-Action vs. With-Action Conditions Fare Control Levels of Service – Friday PM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor (No-Action/With-Action)	No-Action		With-Action	
		Up	Down	Up	Down		v/c Ratio	LOS	v/c Ratio	LOS
Aqueduct Racetrack Station										
O4A/B/C (North Stairs)	13.5	13	22	1.00	0.75	0.90/0.90	0.01	A	0.02	A
O1A/B/C (South Stairs)	13.3	23	10	1.00	0.75	0.90/0.90	0.01	A	0.02	A
Aqueduct - North Conduit Avenue Station										
U1A/B (Underpass to Aqueduct Road)	14.9	291	10	0.80	1.00	0.90/1.00	0.04	A	0.17	A
S1A/B (Underpass to Hawtree Street)	9.3	11	2	0.80	1.00	0.90/0.90	0.01	A	0.01	A
P2A/B (Underpass to Platform)	8.6	12	302	1.00	0.75	0.90/1.00	0.08	A	0.32	A

Note:
Methodology based on *CEQR Technical Manual* guidelines

Aqueduct Racetrack Station with Southbound Access

RWNYC is exploring the potential to provide a new southbound platform at the Aqueduct Racetrack station, which currently only has northbound service. Access to the southbound platform would be provided via an overpass over the tracks, with one new stair on each platform. It is assumed that subway riders that access the Aqueduct Racetrack property from the Aqueduct – North Conduit Avenue Station would use the proposed southbound platform at the Aqueduct Racetrack station. Design and construction of the southbound platform would need MTA approval and coordination.

The new overpass stairways would be at least 60 inches wide. At this width, both the northbound platform and southbound stairs would operate at LOS C. All other subway station elements at the two subway stations would operate at LOS A. The results for the potential new stairways and other analyzed station elements are shown in **Table 11-37** and **Table 11-38**.

Table 11-37 With-Action Condition with Aqueduct Racetrack Southbound Access Fare Control Levels of Service – Friday PM Peak Hour

Control Element	Pedestrian Volume (15-min)		Surging Factor	Friction Factor	v/c Ratio	LOS
	In	Out				
Aqueduct Racetrack Station						
4 HEETs	138	389	0.75	0.90	0.42	A
Aqueduct - North Conduit Avenue Station – North Fare Control						
2 HEETs	2	11	0.75	0.90	0.02	A

Note:
Methodology based on *CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes is 1.0.

Table 11-38 With-Action Condition with Aqueduct Racetrack Southbound Access Stairway Levels of Service – Friday PM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	v/c Ratio	LOS
		Up	Down	Up	Down			
Aqueduct Racetrack Station								
O4A/B/C (North Stairs)	13.5	13	22	1.00	0.75	0.90	0.02	A
O1A/B/C (South Stairs)	13.3	23	10	1.00	0.75	0.90	0.02	A
New Stair (Northbound side)	4.0	10	291	1.00	0.75	0.90	0.74	C
New Stair (Southbound side)	4.0	291	10	0.75	1.00	0.90	0.74	C
Aqueduct - North Conduit Avenue Station								
U1A/B (Underpass to Aqueduct Road)	14.9	0	0	0.80	1.00	1.00	0.00	A
S1A/B (Underpass to Hawtree Street)	9.3	11	2	0.80	1.00	0.90	0.01	A
P2A/B (Underpass to Platform)	8.6	2	11	1.00	0.75	0.90	0.01	A

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines

Subway Line-Haul

Table 11-39 summarizes anticipated 2030 With-Action condition subway line-haul conditions at the maximum load point of the A subway line in the peak direction. Under this condition, the A subway line would continue to operate below capacity during the Friday PM peak hour. Therefore, significant adverse impacts to subway line haul conditions are not anticipated, based on *CEQR Technical Manual* criteria.

Table 11-39 With-Action Condition Subway Line-Haul

Peak Hour	Route	Direction	Max Load Point (leaving station)	Average Passengers Per Hour	Average Trains Per Hour[1]	Average Cars Per Hour[1]	Average Passengers Per Car	Guideline Passengers Per Car[2]	V/C Ratio[3]
PM	A	SB	Jay Street-MetroTech	15,723	15.0	10	105	145	0.72

Source: MTA-NYCT, 2024
Notes:
[1] Based on 2019 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

The Expansion Project would generate 1,012 subway "in" trips during the Friday PM peak hour, of which the vast majority (approximately 96 percent) would arrive via the southbound A subway line; in total approximately 972 subway "in" trips would arrive to at the Aqueduct Racetrack subway station in the southbound direction during the peak hour. The A subway line operates with three branch lines, and two branch lines pass by the Project Site. Based on the December 2023 subway timetable for the A subway line, the average service frequency at the Project Site subway stations is eight trains per hour. The subway line capacity during the Friday PM peak hour is 11,600 passengers, and the 972 subway "in" trip increment would reflect an approximately eight percent increase in ridership. Therefore, the increase in subway load arriving at the Aqueduct Racetrack subway station would not be expected to exceed the load capacity.

Vehicular and Pedestrian Safety

Crash data were obtained for the study area intersections from NYC DOT for the most recent pre-COVID three-year period for which such data are available (2017 through 2019). Crash data from the year 2020 were available but were not used, as they did not represent a typical year because of the COVID-19 pandemic, consistent with NYC DOT guidance. 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 New York City Police Department (NYPD).

The crash data detail 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 if it is identified as a Vision Zero Priority Intersection, located along a Vision Zero Priority Corridor and experienced three or more pedestrian/bicyclist injury crashes in any consecutive 12 months within the most recent three-year study period, or experienced five or more pedestrian/bicyclist injury crashes in any consecutive 12 months within the three-year study period.

Table 11-40 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 Rockaway Boulevard at Liberty Avenue/96th Street[6] and North Conduit Avenue at Lefferts Boulevard 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.

There are four Vision Zero Priority Corridors in the study area—Rockaway Boulevard, Woodhaven Boulevard, Liberty Avenue, and 104th Street – and three intersections along the Vision Zero Priority Corridors experienced three or more pedestrian/bicyclist injury crashes in a consecutive 12-month period. Therefore, these three additional locations are considered high-crash locations (total of five high-crash locations) per NYC DOT's criteria — Cross Bay Boulevard/Woodhaven Boulevard at Rockaway Boulevard, Rockaway Boulevard at Centreville Street/109th Avenue/Plattwood Avenue, and Cross Bay Boulevard/94th Street at Liberty Avenue.[7] The intersection of Rockaway Boulevard at Liberty Avenue/96th Street, which exceeds the threshold for pedestrian/bicyclist high-crash locations, is also located along a Vision Zero Priority Corridor. The intersection of Cross Bay Boulevard at Liberty Avenue is also identified as a Vision Zero Priority Intersection.

Table 11-40 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
94th Street	Rockaway Boulevard	2	3	2	0	3	1	1	1	0	0	0
Cross Bay Boulevard / Woodhaven Boulevard*	Rockaway Boulevard	11	48	27	0	56	0	3	2	0	0	0
Liberty Avenue / 96th Street*	Rockaway Boulevard	13	12	8	0	27	5	1	2	0	2	2
Centreville Street / 109th Avenue / Plattwood Avenue*	Rockaway Boulevard	1	11	17	0	18	0	2	3	0	0	0
107th Street	Rockaway Boulevard	4	6	3	0	9	2	0	0	0	0	0
108th Street / Aqueduct Road	Rockaway Boulevard	3	4	7	0	11	0	0	0	0	0	0

[6] Due to the proximity of the intersections, crash data for the intersection of Rockaway Boulevard at Liberty Avenue/96th Street includes crashes at the traffic analysis intersection of Liberty Avenue and Rockaway Boulevard.

[7] Due to the proximity of the intersections, crash data for the intersection of Cross Bay Boulevard at Liberty Avenue includes crashes at the traffic analysis intersections of the Cross Bay Boulevard Northbound Service Road at Liberty Avenue, and Liberty Avenue at 94th Street.

Table 11-40 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
109th Street	Rockaway Boulevard	0	2	0	0	1	0	0	0	0	0	0
111th Street	Rockaway Boulevard	4	8	8	0	12	0	2	0	0	0	0
113th Street / Linden Boulevard	Rockaway Boulevard	2	2	3	0	8	0	0	0	1	0	0
114th Street	Rockaway Boulevard	3	5	9	1	8	1	0	1	0	1	1
Lefferts Boulevard	Rockaway Boulevard	6	12	17	0	24	0	0	1	0	1	0
Cross Bay Boulevard*	Liberty Avenue	12	15	8	0	18	4	1	1	0	1	0
Cross Bay Boulevard	Shore Parkway/ Eastbound Nassau Expressway On-Ramp	1	3	5	0	7	0	0	0	0	0	0
Cross Bay Boulevard	North Conduit Avenue	13	30	33	0	51	0	0	0	0	0	0
Cohancy Street	North Conduit Avenue	22	52	32	0	60	0	0	0	0	0	0
114th Street	North Conduit Avenue	4	10	9	0	15	0	0	0	0	0	0
Lefferts Boulevard**	North Conduit Avenue	24	43	53	0	77	2	4	5	0	0	1
122nd Place	North Conduit Avenue	3	4	3	0	6	0	0	0	0	0	0
Lefferts Boulevard	Nassau Expressway / Belt Parkway EB Exit Ramp	0	0	0	0	0	0	0	0	0	0	0

Table 11-40 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
Van Wyck Expressway NB	Linden Boulevard	10	12	13	0	23	0	1	1	0	0	0
Van Wyck Expressway SB	Linden Boulevard	2	9	7	0	10	0	0	0	0	0	1
Cohancy Street	155th Avenue	2	1	2	0	1	0	0	0	0	0	0
Belt Parkway (EB) On-Ramp	155th Avenue	0	0	0	0	0	0	0	0	0	0	0
130th Street	South Conduit Avenue	5	7	11	0	18	0	1	1	0	0	0
130th Street	North Conduit Avenue	13	17	20	0	30	0	1	0	0	0	0
Van Wyck Expressway SB Off-Ramp	North Conduit Avenue	8	21	17	0	20	0	0	0	0	0	0

Denotes a high crash location

* Intersection has three or more pedestrian/bicyclist-related crashes in a consecutive 12-month period and is along a Vision Zero Priority Corridor.

** Intersection has five or more pedestrian/bicyclist-related crashes in a consecutive 12-month period .

Source: NYSDOT/NYSDMV (2017-2019)

Rockaway Boulevard

Rockaway Boulevard is a Vision Zero Priority Corridor. A total of three analysis locations are located along this corridor that are considered high-crash locations. A summary of crashes that occurred at the Rockaway Boulevard corridor high-crash locations is provided below.

Rockaway Boulevard and Cross Bay Boulevard/Woodhaven Boulevard

A total of 86 crashes, including 56 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 through 2019, three involved conflicts with turning vehicles and two involved pedestrians not crossing at a crosswalk/signal. Of the 81 crashes between multiple vehicles, 20 crashes involved one vehicle rear-ending another, 19 crashes involved one vehicle overtaking another, 12 crashes involved turning vehicles, and 11 crashes involved right-angle collisions. The intersection is signalized and operates in three phases (including a southbound lag phase, which includes a protected southbound left turn movement) with high-visibility crosswalks

striped along each approach and with pedestrian countdown signals. Both Rockaway Boulevard and Cross Bay Boulevard/Woodhaven Boulevard are two-way roadways; southbound Woodhaven Boulevard and northbound Cross Bay Boulevard operate with mainline and service roads.

In late 2017, NYC DOT implemented improvements along the Cross Bay Boulevard corridor to complement the implementation of the Woodhaven-Cross Bay Boulevard Select Bus Service—which included restriping one of the travel lanes along northbound Cross Bay Boulevard/Woodhaven Boulevard mainline, along the southbound Woodhaven Boulevard service road approach, and the Cross Bay Boulevard southbound receiving side as a dedicated bus lane and installing a raised pedestrian refuge island along the northbound approach of this intersection. Northbound left turns were also prohibited.

Rockaway Boulevard/Liberty Avenue and 96th Street

The intersection of Rockaway Boulevard/Liberty Avenue and 96th Street is identified as a high-crash location due to having five crashes involving pedestrians or bicyclists between April 2017 and November 2017. The Proposed Actions would not be expected to result in an increase in pedestrian activities at this intersection, and although the intersection would experience an increase of up to approximately 345 vph during the highest trip generating peak hour, these vehicles would be traveling through the intersection along Rockaway Boulevard and would not conflict with pedestrian crossings. A total of 33 crashes, including 27 personal injuries and 12 pedestrian/bicyclist-related crashes, occurred at this intersection between 2017 and 2019. Based on a review of the crash data, of the 12 pedestrian/bicycle crashes that occurred from 2017 through 2019, at least half involved pedestrians not crossing at a crosswalk/signal. The intersection is signalized and operates in three phases, with high-visibility crosswalks striped along most approaches and with pedestrian countdown signals. Rockaway Boulevard and Liberty Avenue north of Rockaway Boulevard are two-way roadways, while 96th Street and Liberty Avenue south of Rockaway Boulevard are one-way roadways. Potential measures to improve pedestrian safety at this intersection could include signage identifying designated crosswalks at this intersection and the adjacent intersection of Liberty Avenue and Rockaway Boulevard.

Rockaway Boulevard and Centreville Street/109th Avenue/Plattwood Avenue

A total of 29 crashes, including 18 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 through 2019, three occurred during dark hours and involved westbound vehicles making right turns and pedestrians crossing with the signal, and two involved pedestrians not crossing at a crosswalk/signal. Of the 24 crashes between multiple vehicles, seven crashes involved one vehicle overtaking another while five crashes involved one vehicle rear-ending another. The intersection is signalized and operates in three phases (including a protected eastbound/westbound left turn phase), with high-visibility crosswalks striped along each approach and with pedestrian countdown signals. Rockaway Boulevard, Centreville Street, and 109th Avenue are two-way roadways, while Plattwood Avenue is a one-way southbound roadway. In 2019, NYC DOT implemented improvements at this intersection by striping additional cat-tracks within the center of the intersection to guide vehicles through the intersection. As a result of this change, the overall level of safety may improve at this intersection.

Liberty Avenue and Cross Bay Boulevard

A total of 35 crashes, including 18 personal injuries and seven pedestrian/bicyclist-related crashes, occurred at this intersection between 2017 and 2019. Based on a review of the crash data, of the seven pedestrian/bicycle crashes that occurred from 2017 through 2019, one involved a conflict with a turning vehicle, and one occurred during dark hours. The intersection is signalized and operates in three phases (including a lagging southbound approach phase coinciding with the leading pedestrian interval along the east crosswalk), with high-visibility crosswalks striped along each approach and with pedestrian countdown signals. The Cross Bay Boulevard mainline is a two-way roadway with a northbound service road, while Liberty Avenue east of Cross Bay Boulevard is a one-way eastbound roadway. In late 2017, NYC DOT implemented the Woodhaven-Cross Bay Boulevards Select Bus Service and incorporated improvements along the Cross Bay Boulevard corridor. At this intersection, improvements include restriping one of the northbound and southbound travel lanes as dedicated bus lanes and installing a raised pedestrian refuge along the northbound approach—separating the mainline and service road—and southbound receiving leg of this intersection, hardening the separation of southbound Cross Bay Boulevard and 94th Street. As a result of these changes, the overall level of pedestrian and bicyclist safety may improve at this intersection.

North Conduit Avenue and Lefferts Boulevard

The intersection of North Conduit Avenue and Lefferts Boulevard was identified as a high-crash location due to the eight crashes involving pedestrians or bicyclists between November 2018 and October 2019. A total of 120 crashes, including 77 personal injuries and 12 pedestrian/bicyclist-related crashes, occurred at this intersection between 2017 and 2019. Based on a review of the crash data, of the 12 pedestrian/bicycle crashes that occurred from 2017 through 2019, 10 involved conflicts with turning vehicles, eight of which occurred during dark hours. Seven of the pedestrian/bicycle crashes involved vehicles traveling in the westbound direction either in the dark hours and/or in inclement weather conditions. Of the 108 crashes between multiple vehicles, 36 crashes) involved one vehicle overtaking another, of which two-thirds of these vehicles were traveling westbound on North Conduit Avenue, while 30 crashes involved one vehicle rear-ending another.

The intersection is a five-legged signalized intersection whose fifth leg, Old South Road, is a one-way receiving roadway in the northwest direction, and operates in three phases (including a northbound lead phase) with high-visibility crosswalks striped along each approach and with pedestrian countdown signals with the exception of the crossing along the westbound North Conduit Avenue receiving side; the pedestrian signal head at the southwest corner of this intersection was removed in the year 2022 and has not been replaced. Lefferts Boulevard is a two-way roadway, while North Conduit Avenue is a one-way westbound roadway. The Proposed Actions would not be expected to result in an increase in pedestrian activities at this intersection and, although the intersection would experience an increase of up to 730 vph during the Friday PM peak hour, the highest trip-generating peak hour, the majority of these vehicles would be expected to be traveling through along the westbound approach (approximately 555 vph) and would not conflict with pedestrian crossings. The remaining trips would be expected to be making the northbound left turn (approximately 175 vph), conflicting with the west crosswalk's pedestrian crossing phase. Safety improvements addressing crashes involving pedestrians/bicycles and turning vehicles could include turn calming treatments to reduce turning vehicle speeds and enforcing safe driving behavior, specifically to the westbound right lane—including implementation of delineator poles, slow turn wedges and/or striping, and increased visibility for motorists during the dark hours.

Environmental Justice Analysis

An analysis of environmental justice considers whether a proposed project would cause or increase an inequitable burden on disadvantaged communities. Guidance on addressing environmental justice (EJ) and determining potential effects on EJ communities is provided in New York State Department of Environmental Conservation (NYSDEC) Commissioner Policy 29 (CP 29). According to CP 29, a potential environmental justice area (PEJA) refers to "a minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."[8]

In furtherance of New York State environmental justice goals, the New York State Climate Leadership and Community Protection Act (CLCPA) and associated Climate Justice Working Group also identified disadvantaged communities (DACs).[9] The CLCPA defines DACs as communities burdened by negative public health effects, environmental pollution, and climate change impacts as well as communities that comprise high concentrations of low- and moderate-income households. Under the CLCPA, DACs receive priority for at least 35 percent of state spending on clean-energy and energy-efficiency programs.

This assessment of environmental justice for the Expansion Project involves three steps:

1. Identify PEJAs and DACs within the Expansion Project's area of potential effect, based on the criteria set forth by the NYSDEC and CLCPA;
2. Identify the Expansion Project's potential adverse effects on these communities; and,
3. Evaluate the Expansion Project's potential adverse effects on disadvantaged communities relative to its overall effects, in order to determine whether any potential adverse impacts on those communities would be disproportionate.

The study area for this environmental justice analysis encompasses the area most likely to be affected by the Expansion Project and considers the area where potential impacts resulting from construction and operation of the Expansion Project could occur. The study area includes both the PEJAs and the DACs intersecting the 1/4-mile radius of the Project Site, in keeping with the study areas analyzed for other technical analysis areas included in this document, such as land use and zoning. As detailed below, the study area includes 19 Census Block Groups (corresponding to the PEJAs) and six Census Tracts (corresponding to the DACs).

Existing Conditions

Figure 11-65 shows the study area PEJAs and disadvantaged communities. U.S. Census Bureau race, ethnicity and poverty status data were gathered from the 2022 American Community Survey (ACS) for the 19 block groups within the study area. As shown in **Table 11-41**, approximately 84.8 percent of the population in the study area as a whole is minority—greater than the percentage for the borough of Queens, which is reported as approximately 76.2 percent. The percentage of the study area households that are below the poverty line is lower (approximately 10.4 percent) than in Queens as a whole (approximately 13.7 percent).

[8] NYSDEC Commissioner Policy 29, Available at https://extapps.dec.ny.gov/docs/permits_ej_operations_pdf/cp29a.pdf. Accessed September 20, 2024

[9] https://climate.ny.gov/resources/disadvantaged-communities-criteria/

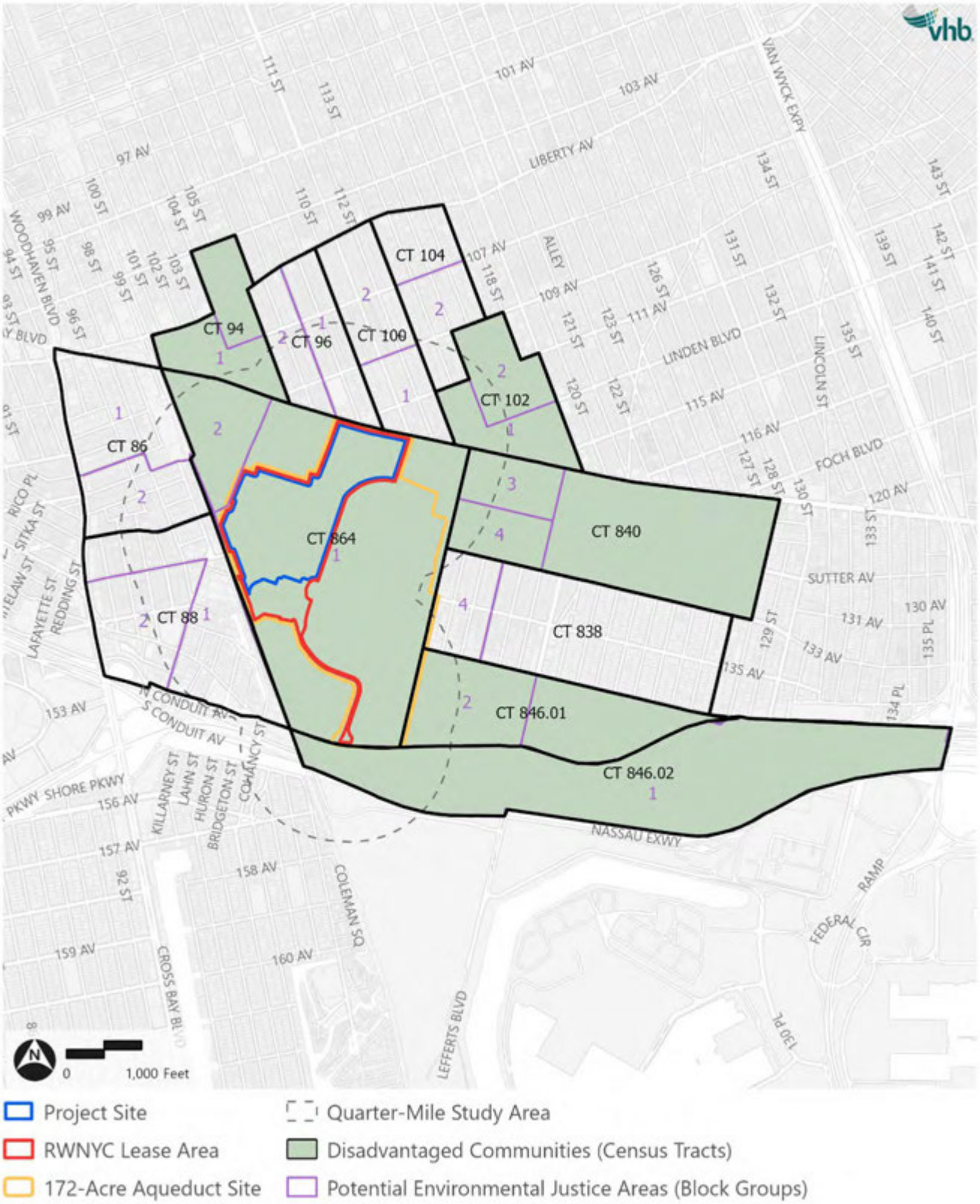
Given the existing demographic characteristics, as well as the PEJAs and DACs identified within the 1/4-mile radius of the Project Site, almost the entire study area comprises one or more communities subject to environmental justice analysis and consideration.

Table 11-41 Study Area Minority and Low Income Populations

Queens Census Tract[1]	Block Group[2]	Percentage Below the Poverty Level (%)	Percentage Minority Population (%)[3]
86	1	11.2	78.9
	2	11.7	65.5
88	1	11.0	72.5
	2	10.5	71.6
94*	1	16.0	92.3
96	1	9.0	95.8
	2	12.6	97.2
100	1	0.0	96.6
	2	20.5	78.1
102*	1	10.4	96.5
	2	20.9	99.7
104	2	7.2	91.4
838	4	9.8	67.2
840*	3	0.0	79.7
	4	4.2	87.5
846.01*	2	5.6	85.5
846.02*	1	0.0	88.6
864*	1	13.1	85.3
	2	10.3	84.5
	Total Study Area	**10.4**	**84.8**
	Queens County	**13.7**	**76.2**

SOURCE: US Census Bureau. 2018-2022 American Community Survey 5-year Estimates
NOTE:
[1] Starred (*) Census Tracts are designated Disadvantaged Communities (DACs)
[2] All Block Groups in this table are designated Potential Environmental Justice Areas (PEJAs)
[3] Minority populations are defined as including persons that self identified as American Indian, Asian and Pacific Islanders, African-American or Black, or Hispanic. For the purposes of this environmental justice analysis, Alaskan Natives and persons of some other race or two or more races are conservatively considered to represent minority populations.

Figure 11-65 Study Area Potential Environmental Justice Areas and Disadvantaged Communities



Potential for Impacts

As detailed above, the EJ analysis considers whether the Proposed Actions would cause or increase a disproportionate or inequitable burden on disadvantaged communities. In other words, it considers if impacts within the study area would be appreciably more severe or greater in magnitude than those that would be experienced in non-EJ communities.

Of the 31 intersections analyzed in this chapter, the Proposed Actions would result in significant adverse traffic impacts at ten intersections during the Friday PM peak hour, ten intersections during the Saturday PM peak hour, and nine intersections during the Saturday night peak hour. Overall, given the location of the Project Site within an area with a high concentration of PEJAs and DACs, it is expected that the transportation impacts would affect disadvantaged communities within the EJ study area.

However, it is important to note that given the proposed uses on the Project Site, trips would be heaviest during the Friday evening, Saturday afternoon, and Saturday evening hours, and would occur when the background traffic on the surrounding roadway network is lighter as compared to peak commuting hours. Therefore, there is expected to be minimal disruption related to access to jobs or during peak activities within the surrounding communities. In addition, **Chapter 17, Mitigation** identifies the traffic capacity improvements needed to mitigate potential significant adverse traffic impacts created by the Proposed Actions. These are standard improvements that are typically implemented by the New York City Department of Transportation. With the implementation of these measures, impacts to the EJ communities within the study would be minimal.

Overall, the potential transportation impacts that would affect the surrounding community would not cause an inequitable burden. Rather, the proposed Expansion Project is expected to provide numerous benefits to the local community, including an increase in job opportunities for a range of employee skill sets as well as increased opportunities for local businesses to provide supplies and services to the expanded uses onsite. Details of the Expansion Project's expected benefits for the local community are provided in **Chapter 3, Socioeconomic Conditions**. The Applicant believes the anticipated benefits for the surrounding EJ communities resulting from the proposed Expansion Project would outweigh the potential for traffic impacts. Therefore, no significant adverse environmental justice impacts are anticipated.

12

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. 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 associated with the Expansion Project. Air quality analyses were carried out in accordance with the *2021 CEQR Technical Manual* as well as other relevant guidance and protocols provided by New York State Department of Environmental Conservation (NYSDEC), New York City Department of Environmental Protection (NYCDEP), and U.S. Environmental Protection Agency (USEPA).

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) and hot water 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 *CEQR Technical Manual*, air quality analyses for the Expansion Project focuses on the following areas of potential concern:

- Potential impacts from mobile sources at intersections introduced by the project.
- Emissions from the project's proposed parking garage.
- Potential impacts on the Expansion Project from nearby manufacturing/processing facilities emitting air toxics.

The Project Site is located in South Ozone Park, Queens—between Rockaway Boulevard to the north, 114th Street to the east, North Conduit Avenue to the south and Aqueduct Road to the west. The Proposed Actions would facilitate the conversion of the existing Resorts World New York City (RWNYC) casino space to accommodate additional gaming space and the expansion of the existing casino with the development of an arena, new hotel, new multilevel parking garage, central utility plant, and publicly accessible open space. The existing uses of approximately 1.9 million gross square feet (gsf) would expand to a total of approximately 5.3 million gsf as a result of the Proposed Actions. **Figure 12-1** shows an illustrative 3D rendering of the Expansion Project.

The following analyses were considered but not required for the Expansion Project:

- Atypical source analysis (e.g., not at-grade): The sensitive uses within the Project Site (i.e., a new hotel and casino, promenade, plaza, arena, conference center, pool deck, and conservatory) are not within 200 feet of atypical sources (i.e. Belt Parkway). Therefore, an atypical source analysis is not required.
- HVAC and hot water analysis: The Expansion Project proposes all-electric space and water heating systems at a central utility plant with distributed hydronic loops to all the new buildings. With use of electric HVAC systems for all new buildings as a project commitment, the Expansion Project would not incur any local air quality impacts. Furthermore, local fossil fuel emission sources resulting from the Proposed Actions include natural gas boilers and diesel generators at the new plant.[1] As these boilers and generators would only be used as backup and standby, a CEQR HVAC and hot water analysis is not required for these sources.
- Large/major source analysis: The Project Site is not located within 1,000 feet of any large or major sources. Therefore, such an analysis is not warranted.

Principal Conclusions

The air quality analysis addressed emissions from mobile sources at intersections, parking facilities, and industrial sources.

Intersection Analysis

The number of incremental trips generated by the Proposed Expansion would be higher than the screening thresholds for carbon monoxide (CO) and particulate matter (PM) identified in the *CEQR Technical Manual*. As such, a mobile source screening assessment was undertaken, which indicated the need for additional analysis. Based on the screening analysis results, the intersection of Rockaway Boulevard and Aqueduct Road was selected as a worst-case location. A microscale analysis for CO and PM was conducted for this location using weekend traffic data. The highest predicted CO and PM concentrations were below respective National Ambient Air Quality Standards (NAAQS) and the *CEQR de minimis* values. Therefore, no significant adverse air quality impacts are expected from mobile sources generated by the Expansion Project.

[1] Diesel generators are the only reasonable option for the Expansion Project because of the required generator size and life and safety requirements.

Parking Analysis

A parking garage analysis was undertaken for the proposed parking garage. The garage would have one sub-grade level that is mechanically ventilated and several above-grade levels that are naturally ventilated. The analysis determined that emissions from both portions of the parking garage would not result in a significant adverse air quality impact. Overall, no significant adverse air quality impacts are expected from the parking facilities.

Industrial Source Analysis

An industrial source analysis was conducted for sites emitting air toxics within a 400-foot radius of the Project Area. The analysis presented that there would be no potential for impacts from the sources identified. Therefore, further analysis of industrial sources was not warranted, and no significant adverse air quality impacts are expected.

Project Commitments

As described in further detail below, the Applicant is making several project commitments in conjunction with the Expansion Project. The project commitments discussed below include:

- Use of all-electric space and water heating systems at a central utility plant with distributed hydronic loops to all the new buildings.
- Use of electric HVAC systems for all new buildings.
- Use of natural gas boilers for backup only to the electric heating system and diesel generators for emergency power use.

Figure 12-1 Illustrative 3D Rendering

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 12-1**.

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, 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. New York State has adopted similar standards as those set by the EPA, with the exception of SO_2, particulates, fluorides, and hydrogen sulfide.

Table 12-1 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	9.0 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

Source: https://www.epa.gov/criteria-air-pollutants/naaqs-table; Updated on February 7, 2024

(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. CO 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 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. NO_2 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.

Non-criteria pollutants may be of concern in addition to the criteria pollutants discussed above. Non-criteria pollutants are emitted by a wide range of man-made and naturally occurring sources. These pollutants are sometimes referred to as hazardous air pollutants (HAP) and when emitted from mobile sources, as Mobile Source Air Toxics (MSATs). Emissions of non-criteria pollutants from industrial sources are regulated by the U.S. EPA.

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.

Queens County is designated as a severe 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. Queens

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. Queens 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 described 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 for non-criteria pollutant ambient air concentrations and an acceptable risk management range to determine the potential effects to the public.

The NYSDEC DAR-1 guidance document presents short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs) in micrograms per cubic meter ($\mu g/m^3$) for the one-hour and annual average time periods, respectively, for various air toxic compounds.[2] Concentrations should not exceed the SGC at any time.

Additionally, according to the NYSDEC's Division of Air Resources (DAR)-1 guidance, residual risk of carcinogenic emissions is evaluated through the excess cancer risks per one million people associated with the carcinogenic pollutants. If the total cancer risk of all the carcinogenic toxic pollutants combined is less than 10-in-one million, the residual risk is deemed acceptable, and no significant adverse air quality impacts are predicted to occur due to these pollutant releases.

Furthermore, the risk of non-carcinogenic toxic air emissions is evaluated through the hazard index, which is based on annual exposure limits. If the sum of all the toxic pollutants' concentrations divided by their annual exposure thresholds is found to be less than 2.0, the residual risk is acceptable and no significant adverse air quality impacts are predicted to occur due to these pollutant releases.

Background Concentrations

Background concentrations are ambient pollution levels associated with existing stationary, mobile, and other area emission sources, but not with the Expansion Project. The latest three years of monitoring data (2019 to 2021) from the representative monitoring stations were used to develop background concentrations for all pollutants. All pollutant levels were collected at the Queens College monitoring station located at 65-30 Kissena Boulevard. These concentrations were estimated using the form of the NAAQS (see the "Form" column in **Table 12-1** for more information).

Table 12-2 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 8.3 $\mu g/m^3$.

[2] NYSDEC DAR-1 - http://www.dec.ny.gov/docs/air_pdf/dar1.pdf.

Table 12-2 Background Concentrations

Pollutant	Averaging Time	Monitoring Location	Background Concentration
Carbon Monoxide (CO)	1-Hour	Queens College 2	2.1 ppm
	8-Hour		1.6 ppm
Nitrogen Dioxide (NO_2)	1-Hour		97.2 µg/m^3
	Annual		26.7 µg/m^3
Particulate Matter ($PM_{2.5}$)	24-Hour		18.3 µg/m^3
	Annual		6.8 µg/m^3
Particulate Matter (PM_{10})	24-Hour		38 µg/m^3

Source: EPA Monitor Values Report, Outdoor Air Quality Data, https://www.epa.gov/outdoor-air-quality-data/monitor-values-report
µg/m^3: micrograms per cubic meter; ppm: parts per million; ppb: parts per billion

Existing Condition

Existing conditions in the area are characterized by the monitored concentrations representative of the Project Area. The background concentrations (see **Table 12-2**) are representative of the existing conditions in the Project Area for the presented pollutants. Pollutant concentrations that are not shown in **Table 12-2** are presented in the **Table 12-3**.

Ozone and SO_2 concentrations were collected at the same Queens College monitoring station as the pollutant concentrations for **Table 12-2**. 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 Queens County, where the project would be located.

Table 12-3 Existing Monitored Concentrations (2019-2021)

Pollutant	Averaging Time	Concentration	NAAQS
Ozone	8-Hour	0.071 ppm	0.070 ppm
Sulfur Dioxide (SO_2)	1-Hour	5.7 ppb	75 ppb

Source: EPA Monitor Values Report, Outdoor Air Quality Data, https://www.epa.gov/outdoor-air-quality-data/monitor-values-report
ppm: parts per million; ppb: parts per billion

Methodology

Mobile Sources

Intersection Screening Analysis

A screening analysis of mobile source emissions of CO and PM on ambient pollutant levels in the study area was conducted pursuant to guidance in the *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, the number of project-generated peak hour heavy-duty diesel vehicles (HDDVs) or its equivalency in vehicular $PM_{2.5}$ emissions, and vehicle classification as determined using the worksheet provided on page 17-12 of the *CEQR Technical Manual*.

Detailed Intersection Analysis

The CEQR thresholds for CO and $PM_{2.5}$ were exceeded at several intersections. The intersection with the highest project-generated (i.e., With-Action increment) traffic volume, which is at Rockaway Boulevard and Aqueduct Road, was selected for detailed modeling. A detailed mobile source (microscale) intersection analysis of $PM_{2.5}$, CO and PM_{10} was conducted for this intersection.

Vehicle Emissions

Vehicular CO and $PM_{2.5}$ emission factors utilized in the dispersion modeling were computed using the latest version of the EPA's Motor Vehicle Emission Simulator, MOVES4. 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, and various other factors that influence emissions, such as an inspection maintenance program.

MOVES input files (e.g., fuel data, county-specific hourly temperature and relative humidity data, inspection/maintenance coverage, etc.) for Queens 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 MOVES4*.[3]

Traffic Data

Traffic information relevant to the analysis included No-Action and With-Action volumes, vehicle classes, and speeds obtained from the transportation team. Volumes were developed for each hour of the day from the available traffic information for the peak hours and the ATR data collected for the study area. Vehicle classes for future conditions were calculated based on the existing vehicle class breakdown collected from vehicle turning movement count (TMC) data with the addition of project-generated vehicles. The future speed estimations were calculated from existing speed runs collected for the project and estimated control delays from the highway capacity manual (HCM) results from the Synchro analysis presented in **Chapter 11, Transportation**. This information was used to establish geometries for the dispersion modeling.

CO Emissions

CO emissions were estimated for the month of January, which is the month with the highest CO emissions. The MOVES4 runs for CO were conducted for the peak period of Saturday PM for the No-Action and With-Action conditions. It is anticipated that if no adverse impacts are identified during the highest peak hour, no adverse impacts would be identified during the other hours.

[3] EPA. Age Distribution Projection Tool for MOVES4.xlsx <Tools to Develop or Convert MOVES Inputs | US EPA>

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*[4] (PM Transportation Conformity Guidance), $PM_{2.5}$ MOVES runs were conducted for four time periods—AM, midday, PM, and overnight—of the peak day (i.e., worst-case scenario) in January. The traffic volumes shown in **Chapter 11, Transportation** indicated that the peak day was Saturday (i.e., weekend). MOVES runs were developed for the No-Action and With-Action conditions for each roadway link using the data presented in the **Traffic Data** subsection of the **Methodology** section of this chapter and other link-specific parameters. Additionally, one worst time period was considered for the PM_{10} MOVES run—the peak PM hour—for conservative analysis purposes.

Fugitive Dust

In addition to exhaust, tirewear and brakewear emission factors estimated by MOVES4 for PM, fugitive dust emissions were estimated using EPA's *Compilation of Air Pollutant Emissions Factors* (AP-42) guidance for paved roads[5]. 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 23132) was used for the CO and PM analyses at the selected intersections. The intersection links were modeled using the EPA line source option in the model and following the EPA's PM Transportation Conformity Guidance. Initial vertical dimensions and source release heights were determined based on the source types in the fleet using the methodology described in Appendix J.3 of the PM Transportation Conformity Guidance. Furthermore, the CO and PM_{10} analyses conservatively used peak hour emission rates at each link, while the $PM_{2.5}$ analysis utilized variable hourly emission rates at each link.

Receptor Placement

Sensitive receptors for both the No-Action and With-Action conditions were placed near the intersection at the existing sidewalks and the proposed park walkway at 1.8 meters above grade. For the assessment of short-term impacts, receptors were placed around the intersection at the middle of the sidewalks or approximately 7.5 feet from the curb. For compliance with the annual neighborhood $PM_{2.5}$ criterion, receptors were placed 15 meters away from the curb.

Analysis Year

The mobile sources analyses were performed for 2030, the analysis year for this EIS.

Meteorological Data

The dispersion analysis used the latest available five years (2017-2021) from NYSDEC of hourly meteorological observations from JFK Airport National Weather Service station. Upper air data was obtained from the Brookhaven station, New York. JFK Airport is located not far from the project

[4] https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1013C6A.pdf

[5] 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

location in South Ozone and was therefore considered to be most representative from the available data of the Project Area.

Parking Analysis

A multilevel parking garage would be constructed on the Project Site under the With-Action condition. This includes eight naturally ventilated above-grade levels and one below-grade mechanically ventilated level, for a total of nine levels. The potential for air quality impacts from the vehicles traveling in and out of the above-grade levels and the below-grade level was assessed separately, and then worst-case impacts from both analyses were summed together to determine the overall impacts from the proposed garage. The on-street vehicle emission contribution from the proposed local road, Perimeter Road, was also included in the analysis. Vehicular emission factors were calculated using MOVES4 for Queens County with similar assumptions as in the intersection analysis for the year 2030. 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 level. The parking facilities were analyzed following the procedures described in sections 311.2 and 321.2 in Chapter 17 of the *CEQR Technical Manual*.

Stationary Sources

Industrial Source Analysis

As described in Section 220 and Section 322 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, etc.). If any sources are identified, a screening analysis is performed using Table 17-3 in Chapter 17 of the *CEQR Technical Manual*. The screening table provides maximum 1-hour, 8-hour, 24-hour and annual average modeled pollutant concentration values at a 20-foot-tall receptor for distances of 30 to 400 feet from a 20-foot-tall stack. These values are based on a generic emission rate of 1 gram per second of a pollutant from the 20-foot-tall point source. Pollutant concentrations predicted from the industrial source of concern based on the screen table are compared with the SGCs and AGCs recommended in NYSDEC's DAR-1 AGC/SGC tables.

The residual risk of carcinogenic emissions and risk of non-carcinogenic toxic air emissions are also evaluated and compared with the thresholds presented in the **Non-Criteria Pollutant Thresholds** subsection of the **Impact Criteria** section of this chapter.

If a proposed project fails the above screening analysis, or the screening analysis methodology is not applicable to the project, a refined analysis using EPA's AERSCREEN and/or AERMOD model is warranted to determine any potential for significant adverse impacts.

Assessment

Mobile Sources

Intersection Screening Analysis

A mobile source intersection screening analysis was conducted consistent with *CEQR Technical Manual* guidance for the Proposed Actions, which would facilitate a mixed-use development with the conversion and expansion of the existing casino and hotel.

As described in **Chapter 11, Transportation**, the Expansion Project fails the transportation level 1 screening thresholds. Project-generated vehicle trips obtained from the level 2 transportation assessment indicated that the Expansion Project would generate mostly autos and some trucks and shuttle buses at intersections around the Project Site. The project-generated peak hour trips for Friday PM, Saturday PM, and Saturday Night were screened using the CEQR screening thresholds for CO and $PM_{2.5}$.

A detailed intersection analysis was warranted because several intersections around the project area failed the CO and $PM_{2.5}$ screening thresholds for all peak hours. The intersection with the greatest number of incremental auto, truck and bus trips was the combination of the Rockaway Boulevard at Aqueduct Road during the Saturday PM hour. This intersection resulted in the largest quantity of vehicles and was close to pedestrian walkways (i.e., existing sidewalks and a park walkway proposed as a part of the Expansion Project in the With-Action condition). Therefore, the primary intersection selected for the detailed mobile source intersection analysis was Rockaway Boulevard at Aqueduct Road. The Rockaway Boulevard at 108th Street, Rockaway Boulevard at 109th Street and Rockaway Boulevard at 111th Street intersections, which also failed the intersection CO and $PM_{2.5}$ screening thresholds, were included in the assessment.

Detailed Intersection Analysis

An analysis was performed with and without the Expansion Project (i.e., No-Action and With-Action conditions) at the worst-case intersection of Rockaway Boulevard at Aqueduct Road for the 2030 analysis year. The detailed mobile source intersection analysis compares the future No-Action traffic condition to the future With-Action traffic 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 Project generated trips and proximity to nearby receptors, other intersections would not experience significant adverse air quality impacts.

The No-Action condition considered the effects of the Proposed Actions outlined in the Approved 2017 Plan on the Project Site. The No-Action condition also considered the effects of background growth and growth generated by known projects around the Project Site (e.g., developments that are under construction, planned, or proposed by the 2030 build year; see the **No-Action Conditions** section in **Chapter 11, Transportation**). The With-Action condition considered the No-Action traffic and the increase in traffic from the Proposed Expansion (see the **With-Action Conditions** section in **Chapter 11, Transportation**).

CO Analysis

The results of the AERMOD analysis using the assumptions described in the **Detailed Intersection Analysis** subsection of the **Methodology** section of this chapter are presented in **Table 12-4** for the highest CO concentrations.

Table 12-4 2030 No-Action and With-Action Conditions: Highest 1-Hour and 8-Hour CO Concentrations (ppm)

		1-Hour		8-Hour		
Intersection	**Time Period**	**No-Action Total**	**With-Action Total**	**No-Action Total**	**With-Action Total**	**Increment[1,2]**
Rockaway Boulevard & Aqueduct Road	Saturday PM	2.6	2.9	1.9	2.1	0.19
CO NAAQS/*de minimis*		**35**		**9**		**3.7**

Source: VHB, Inc. October 2024

Note:

[1] The incremental concentration is the difference between the 8-hour No-Action and With-Action modeled concentrations. The increment is compared with the CEQR *de minimis*.

[2] No-Action and With-Action total results include background concentrations from **Table 12-2.**

As the results show, the highest modeled concentrations under the No-Action and With-Action conditions at the selected intersection were below the 1-hour and 8-hour NAAQS. The 8-hour impact of the With-Action condition over the No-Action condition was below the CEQR *de minimis* criterion for CO. As such, the Expansion Project would not adversely impact CO levels near the affected intersections.

PM Analysis

The PM analysis was conducted by estimating the 24-hour $PM_{2.5}$ and PM_{10} and annual $PM_{2.5}$ concentrations and comparing them with the CEQR *de minimis* thresholds for 24-hour and annual $PM_{2.5}$, and NAAQS for 24-hour PM_{10}.

$PM_{2.5}$ concentrations were estimated for the 24-hour and annual periods. **Table 12-5** presents the 24-hour results in comparison with the 24-hour *de minimis* criterion and **Table 12-6** presents the annual results.

Table 12-5 2030 No-Action and With-Action Conditions: Highest 24-Hour $PM_{2.5}$ Concentrations ($\mu g/m^3$)

Intersection	Time Period	No-Action Impact[1]	No-Action Total[2]	With-Action Impact[1]	With-Action Total[2]	Increment[1]
Rockaway Boulevard & Aqueduct Road	Weekend	5.7	24.0	13.4	31.7	7.7
$PM_{2.5}$ NAAQS/ *de minimis*			**35**		**35**	**8.3**

Source: VHB, Inc. October 2024

Notes:

[1] The 98-percentile modeled $PM_{2.5}$ concentrations averaged over 5 years.

[2] No-Action and With-Action total results include background concentrations from **Table 12-2**.

Table 12-6 2030 No-Action and With-Action Conditions: Highest Annual $PM_{2.5}$ Concentrations ($\mu g/m^3$)

Intersection	Time Period	No-Action Impact[1]	No-Action Total[2]	With-Action Impact[1]	With-Action Total[2]	Increment[3]
Rockaway Boulevard & Aqueduct Road	Weekend	0.15	6.9	0.24	7.0	0.097
$PM_{2.5}$ NAAQS/*de minimis*			**9**		**9**	**0.1**

Source: VHB, Inc. October 2024

Notes:

[1] No-Action and With-Action impacts are the average concentrations over the modeled five years of meteorological observations corresponding to the highest annual incremental impact. The highest No-Action impact is at a different receptor than the highest With-Action impact.

[2] The No-Action and With-Action total results include background concentrations from **Table 12-2**.

[3] The highest incremental impact is at a different receptor than the No-Action and With-Action impacts.

Additionally, the results of the PM_{10} assessment are presented in **Table 12-7**.

Table 12-7 2030 With-Action Condition: Highest 24-Hour PM_{10} Concentrations ($\mu g/m^3$)

Intersection	Time Period	With-Action Impact	With-Action Total[1]
Rockaway Boulevard & Aqueduct Road	Weekend	89.6	128
PM_{10} NAAQS			**150**

Source: VHB, Inc. October 2024

Notes:

[1] The total results include background concentrations from **Table 12-2**.

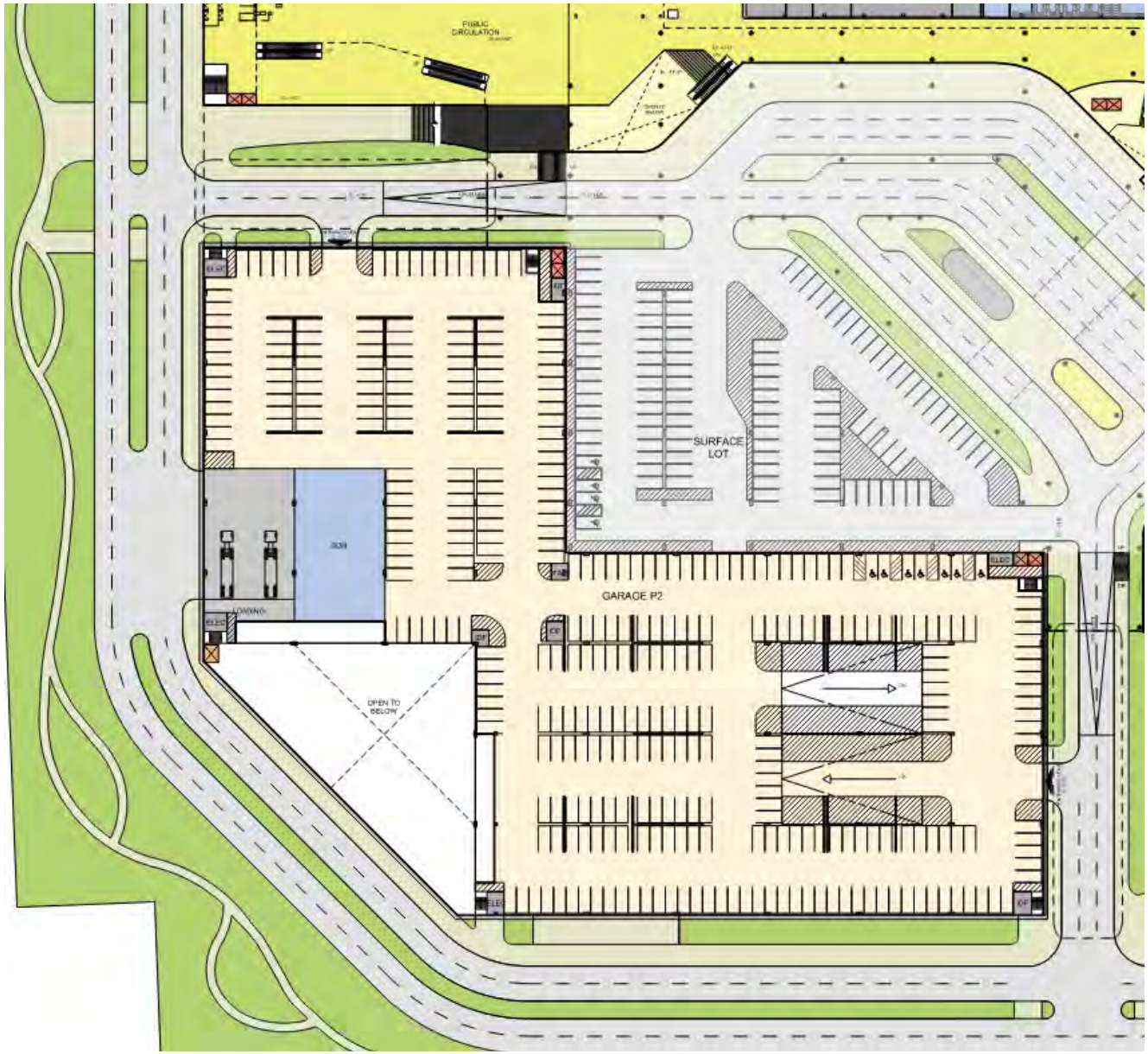
The results presented in **Table 12-5** through **Table 12-7** indicate that the 24-hour $PM_{2.5}$, annual $PM_{2.5}$ and 24-hour PM_{10} concentrations at the modeled intersection would be below the applicable thresholds. The maximum 24-hour $PM_{2.5}$ increment of the With-Action condition over the No-Action condition would be below the CEQR *de minimis* threshold for 24 hours at the modeled intersection. The annual $PM_{2.5}$ increment would be below the CEQR *de minimis* threshold for the annual averaging period. 24-hour PM_{10} concentrations would be below the 24-hour averaging period NAAQS.

Parking Analysis

The Expansion Project includes the construction of a nine-level parking garage with one level of below-grade, mechanically ventilated parking and eight levels of above-grade, naturally ventilated parking (see **Figure 12-2** for a plan view of the proposed garage). For the purposes of analysis, the below-grade level was conservatively assumed to have the louvers for the exhaust located only above the first-floor entrance facing the proposed arena. The proposed parking garage is configured in an "L" shape with the central utility plant (CUP) located at the bend of the "L." As such, all levels were analyzed as two separate rectangles representing the northwest portion of the garage above the CUP and the southeast portion of the garage to the right of the central plant. The estimated pollutant concentrations from all sources (the northwest below-grade level, the southeast below-grade level, the northwest above-grade structure, and the southeast above-grade structure) and the concentrations associated with local vehicle travel on the proposed Perimeter Road were summed together to determine the potential for impact. It is unlikely that a wind condition, which would result in the summation of maximum emission impacts from all sources, would exist.

The air quality analysis was conducted to assess the potential for impacts related to emissions from the proposed parking garage. The analysis estimated emissions from the above-grade levels and from the below-grade parking level according the *CEQR Technical Manual* for each design type. The resulting emissions from both the above and below-grade analyses were conservatively summed together to assess the total emissions at the near and far sidewalk receptor locations. The hourly parking garage exits were examined to identify the hour of the highest vehicle volumes for the garage. The hour with the highest number of vehicles leaving the garage was considered to represent the hour of the highest emissions. Based on the projected vehicle volumes, the Saturday 9:00 PM to 10:00 PM hour was selected for the analysis of CO and PM_{10}. The With-Action condition had a total of 1,634 vehicle exits. To assess 24-hour and annual $PM_{2.5}$ concentrations which are compared against the CEQR *de minimis*, the incremental increase of traffic between the With-Action and No-Action conditions was averaged and used in the 24-hour and annual $PM_{2.5}$ analyses.

Figure 12-2 Proposed Multilevel Garage: Plan View



The analysis of the parking 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 below-grade portion of the garage. The multilevel parking garage emission spreadsheet was used for the above-grade portion of the garage. The impacts of garage emissions on the near and far (opposite) sidewalks were estimated using contributions from the parking garage and on-street traffic on Perimeter Road. The results from the below-grade and above-grade analyses presented in **Table 12-8** through **Table 12-10** 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 the proposed garage to have significant adverse impacts on the surrounding air quality levels.

Table 12-8 Highest $PM_{2.5}$ Impact from Parking Facility ($\mu g/m^3$)

Averaging Period	Location	Mech. Ventilated Impact	Nat. Ventilated Impact	Total Impact	CEQR *de minimis*
24-hour	Near Sidewalk	0.39	0.00014	0.4	8.3
	Far Sidewalk	0.34	0.03	0.4	8.3
Annual	Near Sidewalk	0.08	0.00003	0.078	0.3
	Far Sidewalk	0.07	0.01	0.074	0.3

Table 12-9 Highest CO Impact from Parking Facility (ppm)

Averaging Period	Location	Mech. Ventilated Impact	Nat. Ventilated Impact	Background Concentration	Total Concentration	NAAQS/CEQR *de minimis*
1-hour (NAAQS)	Near Sidewalk	1.18	0.23	2.1	3.5	35
	Far Sidewalk	1.03	0.36	2.1	3.5	35
8-hour (NAAQS)	Near Sidewalk	0.83	0.16	1.6	2.6	9
	Far Sidewalk	0.72	0.25	1.6	2.6	9
8-hour (CEQR *de minimis*)	Near Sidewalk	0.83	0.16	-	1.0	3.7
	Far Sidewalk	0.72	0.25	-	1.0	3.7

Table 12-10 Highest PM10 Impact from Parking Facility (mg/m3)

Averaging Period	Location	Mech. Ventilated Impact	Nat. Ventilated Impact	Background Concentration	Total Concentration	NAAQS
24-hour	Near Sidewalk	13	0.002	38	51	150
	Far Sidewalk	12	0.73	38	50	150

Stationary Sources

Industrial Source Analysis

To assess potential air quality impacts on the Expansion Project from existing industrial sources that emit toxic air contaminants, an investigation of existing land uses within a 400-foot radius of the Project Site was conducted to identify potential sources and determine if there are active NYCDEP-issued industrial permits associated with those sources. These sources are typically sites classified as industrial/manufacturing, transportation/utility, public facilities/institutions, or commercial buildings.

A review of land use maps, the NYCDEP's Clean Air Tracking System (NYCDEP CATS) website, and NYCDEP registration forms were conducted to identify land uses that could have NYCDEP-issued industrial permits and land uses that are unpermitted sources of air toxics within 400 feet of the Project Site. Although permits were identified at several sites, further analysis was required for only one facility, which was the OZ Auto Body & Towing autobody shop at 98-25 Linden Boulevard. The remaining permits were not analyzed for the following reasons:

- Permits PA058192 and PA058292: PA058192 and PA058292 are expired permits for small natural gas combustion units (1.46 MMBtu/hr) under the ownership of New York Racing Association, Inc. at the current Project Site. As these units are not air toxic sources, and are no longer in use,[6] an air toxics analysis of these sources is not warranted.
- Permit PR034117: Permit PR034117 is for 2 small (0.77 MMBtu/hr) natural gas combustion units within the project area. As these units are not air toxic sources and are well over 400 feet away from the sensitive uses at the Project Site, an air toxics analysis is not warranted for these sources.
- Permit PR011319: The existing commercial use at 112-10 Rockaway Boulevard is The Home Depot. The associated permit is for a generator that is only used for emergency purposes. Furthermore, the use is well over 400 feet away from the sensitive uses at the Project Site. Therefore, an industrial source analysis is not warranted for this site.

There is an active permit for the OZ Auto Body & Towing autobody shop at 98-25 Linden Boulevard. This shop is approximately 125 feet away from the Project Site when conservatively measuring from the perimeter of one site lot to the other. Industrial permit PB400903 indicated that there is a spray booth for automobiles at this facility. Therefore, a *CEQR Technical Manual* air toxics screening analysis was performed for the spray booth to assess impacts from paint spraying emissions on the Expansion Project. The list of contaminants and their corresponding hourly and annual emission rates from the permit records were used for the analysis. The permit provided overall emission rates for solids and solvents. Since individual pollutant emission rates were not provided in permit PB400903, a permit for a similar autobody shop facility was used to determine the emission rate breakdown for each type of pollutant form a typical auto body spray booth. The USEPA's AP-42 Appendix B1 was used to determine particle size distribution.

The emission rates and results of this analysis are presented in the **Table 12-11**. The results indicate that all individual contaminant concentrations are below their respective short and long-term guidance levels obtained from the NYSDEC DAR-1 Guidelines for the Evaluation and Control of

[6] RWNYC confirmed that the units associated with the expired permits were removed during the renovation of the casino.

Ambient Air Contaminants.[7] They also show that solid particulates 2.5 and 10 ($PM_{2.5}$ and PM_{10}) are below their respective short-term and annual NAAQS.

Table 12-11 Results of Industrial Source Analysis

Chemical Name	CAS	Total Short-term Concentration (µg/m³)	NAAQS/SGC (µg/m³)[3]	Total Annual Concentration (µg/m³)	NAAQS/ AGC (µg/m³)[3]
Solids ($PM_{2.5}$)[1,2]	NY075-02-5	19.37	35	6.81	9
Solids (PM_{10})[1,2]	NY079-00-0	39.75	150	-	-
Acetone	00067-64-1	138.15	180,000	0.67	30,000
Ligroine	08032-32-4	-	-	0.14	900
Butanone	00078-93-3	49.68	13,000	0.24	5,000
Benzyl butyl phthalate	00085-68-7	-	-	0.03	0.42
4-methylpentan-2-one	00108-10-1	3.53	31,000	0.02	3,000
2-metholxy-1-methylet	00108-65-6	29.80	36,850	0.14	2,000
Heptan-2-one	00110-43-0	-	-	0.006	550
Solvent Naptha	64742-89-8	-	-	0.03	3,200
Methylcyclohexane	00108-87-2	-	-	0.08	3,800
Heptane	00142-82-5	50.56	210,000	0.24	3,900
Isobutyl Acetate	00110-19-0	21.67	71,300	0.10	565
Isopropyl Alcohol	00067-63-0	10.83	98,000	0.05	7,000
Ethyl 3-Ethoxypropianate	00763-69-9	10.39	140	0.05	64
Ethylbenzene	00100-41-4	-	-	0.03	1,000
N-Butyl Acetate	00123-86-4	295.57	71,300	1.43	565
Toluene	00108-88-3	103.55	37,000	0.50	5,000
Xylene	01330-20-7	30.05	22,000	0.14	100

Notes:

[1] Based on AP-42 Appendix B.1, Table 4.2.28, 28.6% of emissions of solids from paint are assumed to be $PM_{2.5}$, and 46.7% are assumed to be PM_{10}.

[2] Total $PM_{2.5}$ and PM_{10} concentrations includes background concentration from **Table 12-2**.

[3] Particulates are compared against the NAAQS, as there are no SGCs or AGCs for PM.

The combined effects of multiple air toxic contaminants were also assessed using procedures outlined in the DAR-1 guidance for risk characterization. Health risk is characterized using excess cancer risks per one million people for carcinogenic compounds and as hazard index for non-carcinogens. Both cancer risk and non-cancer health risk were estimated using procedures from the NYSDEC DAR-1 based on the annual concentrations and AGC levels. Cancer risk assessment results are presented in **Table 12-12**, and non-cancer hazard index is presented in **Table 12-13**.

[7] https://www.dec.ny.gov/docs/air_pdf/dar1.pdf

Table 12-12 Cancer Risk Assessment

Chemical Name	CAS	Cancer Risk
Benzyl butyl phthalate	00085-68-7	0.07787

Table 12-13 Hazard Index Assessment

Chemical Name	CAS	DAR-1 classification	Hazard Quotient
Acetone	00067-64-1	Low toxicity	0.00002
Ligroine	08032-32-4	Medium toxicity	0.0002
Butanone	00078-93-3	Medium toxicity	0.00005
4-methylpentan-2-one	00108-10-1	Medium toxicity	0.000006
2-methoxy-1-methylet	00108-65-6	Medium toxicity	0.00007
Solvent Naptha	64742-89-8	Medium toxicity	0.00001
Methylcyclohexane	00108-87-2	Medium toxicity	0.00002
Heptane	00142-82-5	Medium toxicity	0.00006
Isobutyl Acetate	00110-19-0	Lox toxicity	0.00018
Isopropyl Alcohol	00067-63-0	Medium toxicity	0.000007
Ethyl 3-Ethoxypropianate	00763-69-9	Medium toxicity	0.0008
Ethylbenzene	00100-41-4	Medium toxicity	0.000025
N-Butyl Acetate	00123-86-4	Low toxicity	0.0025
Toluene	00108-88-3	Low toxicity	0.0001
Xylene	01330-20-7	Medium toxicity	0.0014
Hazard Index			**0.005**

The cancer risk was compared to the DAR-1 threshold of 10 in a million and the non-cancer hazard index was compared to the DAR-1 threshold of 2. The risk and index at the Expansion Project are below the respective thresholds. Therefore, no significant adverse air quality impacts from the spray booth are anticipated on the Expansion Project.

13

Noise

This chapter evaluates whether the Expansion Project would have a significant adverse impact on the environment at existing noise-sensitive receptors and whether noise levels at any new receptors introduced as part of the Expansion Project would exceed applicable New York City noise limits.

Introduction

This chapter evaluates the potential for the proposed project to result in significant adverse noise impacts. As described in **Chapter 1, Project Description**, the Applicant, Genting New York, LLC d/b/a Resorts World Casino New York City, is seeking approval for modification of the existing ground lease of State-owned property and issuance of a Gaming Facility license from the New York State Gaming Commission (the Gaming Commission) in conjunction with the proposed expansion of the existing approximately 1.9-million-gross-square-foot (gsf) Resorts World New York City (RWNYC) casino and installation and operation of live table games (the Proposed Actions). The Proposed Actions would facilitate the construction of an expansion to the existing facilities on a 62-acre portion of the RWNYC Lease Area, comprising Queens Block 11543, Lot 2 (the Project Site), as illustrated in **Figure 13-1**. The Proposed Actions involve the expansion of the existing RWNYC facility by approximately 3,442,665 gsf (the Expansion Project), resulting in a total of approximately 5,331,200 gsf (existing gsf, plus the Expansion Project).

Key elements of the proposed expansion include the construction of a new hotel, additional retail and dining options (including new restaurants, a spa, a bar/stage area, and a club), expanded casino and gaming facilities, essential support spaces (such as a count room, surveillance room, and employee lounges), and the build-out of a full-service event center to replace the current facility. Additional developments include the creation of a central utility plant, a new central plaza, a conservatory, and a parking garage to replace the existing surface parking area.

For the noise assessment, the following potential noise sources associated with the With-Action conditions were considered:

- A central utility plant (CUP) building located in the southwest area of the Project Site.
- A parking garage also situated in the southwest area.
- A multipurpose arena located centrally within the Project Site.
- Increased vehicular traffic accessing and departing from the Project Site.

The noise analysis was conducted in compliance with the *2021 CEQR Technical Manual* guidance. Per the *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. Mobile sources include vehicular traffic; stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment.

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 Expansion Project to significantly affect existing receptors due to the introduction of new mobile or stationary sources.
- An evaluation of the ambient sound levels at new receptor locations.

Principal Conclusions

A noise assessment was conducted to determine whether (i) the Expansion Project would significantly increase sound levels from mobile and stationary sources at existing noise receptors, and (ii) the new noise receptors that would be introduced by the Expansion Project would be in an acceptable ambient sound level environment. The Expansion Project is not anticipated to result in significant adverse noise impacts. To ensure the effective implementation of the noise reduction commitments and mitigation measures outlined in this chapter, an enforceable legal mechanism will be established, in the form of a licensing agreement, prior to the issuance of a Gaming Facility license from the New York State Gaming Commission and would be a condition of the awarded license.

Existing Receptors

Mobile Source Analysis

Traffic-related impacts were evaluated at 31 intersections within the Expansion Project's study area during weekday PM, Saturday PM, and Saturday nighttime periods. The analysis considers existing, No-Action, and With-Action condition traffic volumes. The identified intersections were assessed to understand how traffic noise would change in the future With-Action condition by comparing the No-Action and With-Action passenger car equivalents (PCEs) to determine whether the CEQR impact threshold of 3 dB(A) is exceeded. The analysis concludes that, at the intersection with the highest increase in traffic volume, noise levels are expected to increase by 1.9 dB(A) under the With-Action condition compared to the No-Action condition. As incremental noise levels at each of the identified intersections are not expected to exceed the CEQR impact threshold of 3 dB(A), no significant

adverse mobile source noise impacts are anticipated as a result of the Expansion Project and no further analysis is warranted.

Stationary Source Analysis

The analysis includes the CUP Building, the parking garage, and the multipurpose arena as stationary noise sources in the With-Action condition. Approximately 950 noise-sensitive receptors (NSRs) were identified within a 1,500-foot radius of the Project Site, with 19 receptor points used to represent receptors with a direct line of sight to the proposed CUP building. These receptors were identified using GIS, satellite imagery, and field surveys conducted in October 2022. For the arena and parking garage assessments, no receptors were identified as the assessment determined that the construction of these buildings would sufficiently attenuate noise, ensuring compliance with the *CEQR Technical Manual* for all NSRs.

CUP Building

Predicted noise levels from the proposed CUP building at nearby existing NSRs indicate that during both daytime and nighttime hours, no noise levels would exceed the *CEQR Technical Manual* threshold of a 3 dB(A) L_{eq1hr} increase. Therefore, no significant adverse noise impacts are anticipated.

The impact determination assumes that the CUP building would incorporate the specific measures which are outlined in the Project Commitments section below. With the provision of these measures, no significant adverse noise impacts due to stationary sources from the CUP building are anticipated.

An assessment was conducted in accordance with §24-227 (Circulation Devices) of the NYC Noise Code, confirming that all predicted noise levels comply with the 45 dB(A) criterion.

Arena

The proposed arena design would be fully enclosed, and the building would be designed to ensure noise does not adversely affect the surrounding environment. The building envelope, including the roof, would use materials with a high Sound Transmission Class (STC) and the design would require that all seams and joints are tightly sealed to avoid noise breakout. Additionally, the internal acoustic design would ensure sound energy and reverberation is limited with acoustic panels distributed across the arena.

The design measures outlined above and in the Project Commitments section below would sufficiently attenuate noise, such that no existing NSRs would experience incremental noise increases exceeding 3 dB(A) compared to No-Action noise levels. Additionally, the design would be developed such that noise levels at proposed NSRs on the Project Site do not exceed 65 dB(A) L10 during the day or 55 dB(A) L10 at night, in order to meet 'Acceptable General External Exposure' levels as defined by the *CEQR Technical Manual*. Given these measures, the noise generated by the multipurpose arena is not anticipated to result in a significant adverse noise impact.

Parking Garage

The Expansion Project would include a new accessory parking garage to be built on the western portion of the Project Site, connected to the CUP Building. Various noise reduction measures would be implemented during the detailed design phase of the parking garage, which are outlined in the Project Commitments section below.

By incorporating noise reduction measures, noise from the proposed parking garage would be significantly minimized. The combination of structural design improvements and operational controls are anticipated to result in acceptable noise levels at nearby receptors, and, as such, no significant adverse noise impacts are anticipated.

New Future Receptors

An assessment of potential significant adverse noise impacts on proposed new sensitive receptors (project-generated NSRs) is provided and concludes that the anticipated incident noise levels on the proposed hotel façade fall under the "Acceptable General External Exposure" category. Therefore, no significant adverse noise impacts on project-generated NSRs are anticipated and no further analysis is warranted.

Project Commitments

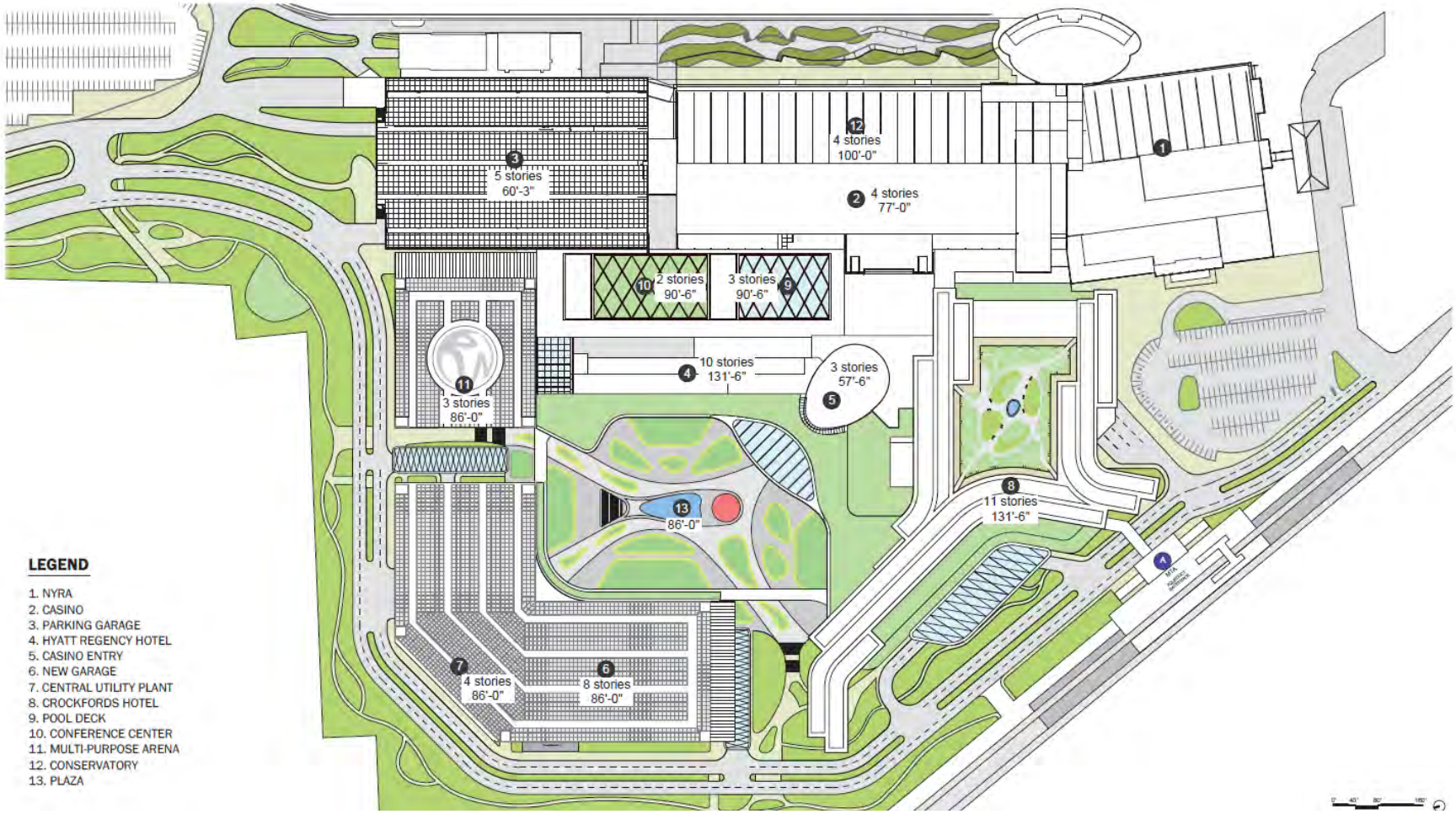
This section summarizes the noise reduction commitments that have been made throughout this chapter. These measures would be a condition of the awarded Gaming Facility License.

- Contractual Obligations: The Applicant must include the noise reduction requirements as contractual obligations for all design, construction, and operational contractors.
- CUP Building:
  - Mechanical equipment within and on the rooftop of the CUP building will be designed to maintain noise levels below the allowable limits outlined in the following section for all octave band levels between 31.5Hz to 8kHz.
  - The Applicant must install acoustic louvres on the building facade where ventilation openings are required.
  - The Applicant must install acoustical silencers on the cooling towers fan discharges.
- Multipurpose Arena:
  - Fully Enclosed Design: The arena will have a fully enclosed structure to attenuate noise breakout into the surrounding environment.
  - High Sound Transmission Class (STC) Materials: The building envelope, including the roof, will utilize materials with a high STC to attenuate noise effectively.
  - Sealed Construction: All seals and joints in the building structure would be sealed to prevent noise breakout.
  - Internal Acoustic Treatments: Acoustic panels would be strategically distributed inside the arena to limit sound energy and reduce reverberation.
- Parking Garage:
  - Incorporate sound absorbing materials in the construction of the parking garage walls ceilings and floors to help reduce the reflection and transmission of noise both within and outside the parking garage.
  - Design the wall to be semi-enclosed with a 'green wall' on the external façade that would help absorb sound emissions from the parking garage.
  - Enforce a No 'Tailgating' or No 'Partying' Policy: If necessary, provide designated areas for fans to congregate before and after events at the arena.

- Enforce low-speed limits within the parking garage to reduce noise from vehicle acceleration, braking and tire friction.
- Allocate parking spaces for larger or noisier vehicles, such as trucks or SUVs, in areas of the parking garage that are farther from NSRs.

› Screening Wall: A 9-meter (29-foot) high screening wall is proposed above the rooftop to provide visual and acoustic benefits for cooling towers, generator stacks, and air source heat pumps (ASHP), which should be constructed to achieve an absorption coefficient of at least 0.6 across the frequency spectrum.

Figure 13-1 Expansion Project Site Plan



Source: Perkins Eastman

Noise Fundamentals

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, communication, work, or recreation. How people perceive sound depends on several measurable physical characteristics, which include the following:

- Intensity - Sound intensity is often equated to 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. Pure tones have all their energy concentrated in a narrow frequency range.

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 (zero dB) to the threshold of pain (130 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels creates 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 but is perceived as a doubling in loudness to the average person.

The human ear does not perceive sound levels from each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A weighting, or dB(A), is used to evaluate environmental noise levels. **Table 13-1** presents a list of common outdoor and indoor sound levels.

Table 13-1 Common Outdoor and Indoor Sound Levels

Outdoor Sound Levels	Sound Level dB(A)**	Indoor Sound Levels
	110	Rock Band at 5 m
Jet Over Flight at 300 m	105	
	100	Inside New York Subway Train
Gas Lawn Mower at 1 m	95	
	90	Food Blender at 1 m
Diesel Truck at 15 m	85	
Noisy Urban Area—Daytime	80	Garbage Disposal at 1 m
	75	Shouting at 1 m
Gas Lawn Mower at 30 m	70	Vacuum Cleaner at 3 m
Suburban Commercial Area	65	Normal Speech at 1 m
	60	
Quiet Urban Area—Daytime	55	Quiet Conversation at 1 m
	50	Dishwasher Next Room
Quiet Urban Area—Nighttime	45	
	40	Empty Theater or Library
Quiet Suburb—Nighttime	35	
	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime	25	Empty Concert Hall
Rustling Leaves	20	
	15	Broadcast and Recording Studios
	10	
	5	
Reference Pressure Level	0	Threshold of Hearing

Source: Highway Noise Fundamentals. Federal Highway Administration, September 1980.
*μPA – MicroPascals, which describe pressure. The pressure level is what sound level monitors measure.
* dB(A) – A-weighted decibels, which describe pressure logarithmically with respect to 20 μPa (the reference pressure level).

A variety of sound level indicators can be used for an environmental noise analysis. These indicators describe the variations in intensity and temporal patterns of sound levels. The following is a list of common sound level descriptors used for environmental noise analyses:

- L_{90} is the sound level which is exceeded 90 percent of the time during a given time period. The L_{90} is generally considered to be the ambient or background sound level.
- 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 *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 A-weighted equivalent sound level, which averages the background sound levels with short-term transient sound levels and provides a uniform method for comparing sound levels that vary over time.
- L_{dn} is the day-night average A-weighted sound level. Similar to L_{eq}, L_{dn} accounts for how loud noise events are and how long they last. The L_{dn} accounts for how many noise events occur over

a 24-hour period and applies a 10-decibel penalty to events occurring from 10:00 PM to 7:00 AM due to the greater sensitivity to noise occurring at night.

- L_{max} is the maximum sound level, used to denote the highest level of noise recorded over a specific period.
- L_{min} is the minimum sound level, used to denote the lowest level of noise recorded over specific period.

Impact Significance Criteria

CEQR Technical Manual

The *CEQR Technical Manual*'s Chapter 19, Noise has established noise level guidelines for sensitive areas impacted by projects. Acceptable noise levels are set at 45 dB(A) and below for interior noise levels and 70 to 75 dB(A) for exterior noise levels from 7:00 AM to 10:00 PM (daytime hours), with levels exceeding these considered disruptive to indoor activities and outdoor communication. Traditional construction methods, like using single-glazed windows, typically offer a noise reduction of about 20 dB(A) from outside to inside. Based on this, for the purposes of determining a significant impact during daytime hours, it is reasonable to consider a L_{eq1hr} noise level of 65 dB(A) as an absolute noise level that should not be significantly exceeded. Therefore, a significant noise impact would occur at existing sensitive noise receptor (i.e., residences, play areas, parks, schools, libraries, and houses of worship) during daytime hours under the following conditions:

- An increase of 3 dB(A) L_{eq1hr} or more in the With-Action condition is significant if the No-Action noise level is 62 dB(A) L_{eq1hr} or higher.
- When the No-Action noise level is below 62 dB(A) L_{eq1hr}, the noise increase caused by the With-Action should not exceed the difference between 65 dB(A) L_{eq1hr} and the No-Action level. For example, if the No-Action noise level is 61 dB(A) L_{eq1hr}, the With-Action should not increase noise by more than 4 dB(A) L_{eq1hr}, as this would push the total noise level above the 65 dB(A) L_{eq1hr} threshold, indicating a significant impact.
- An increase of 5 dB(A) L_{eq1hr} or more resulting from the With-Action above the No-Action noise level is significant if the No-Action noise level is 60 dB(A) L_{eq1hr} lower.
- When No-Action noise levels are 65 dB(A) L_{eq1hr} or higher, a significant adverse impact is identified when the With-Action is predicted to increase by 3 dB(A) L_{eq1hr} or more.

During nighttime periods (10:00 PM to 7:00 AM), if the With-Action noise level is predicted to increase by 3 dB(A) L_{eq1hr} or more when compared against the No-Action noise levels, then a significant impact is identified.

For NSRs that are introduced as part of the With-Action condition, the *CEQR Technical Manual* sets external noise exposure standards, which are shown in **Table 13-2**. Noise exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable.

Table 13-2 Noise Exposure Guidelines for Use in City Environmental Impact Review[1]

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1. Outdoor area requiring serenity and quiet[2]		L10 < 55 dB(A)	DNL < 60 dB(A)		60 dB(A) < DNL < 65 dB(A)		65 dB(A) <DNL < 75 dB(A)		75 dB(A) ≤ DNL
2. Hospital, Nursing Home		L10 < 55 dB(A)		55 < L10< 65 dB(A)		65<L10<80 dB(A)		L10>80 dB(A)	
3. Residence, residential hotel or motel	7 AM to 10 PM	L10 < 65 dB(A)		65 <L10< 70 dB(A)		70<L10<80 dB(A)		L10>80 dB(A)	
	10 PM to 7 AM	L10 < 55 dB(A)		55 < L10< 70 dB(A)		70<L10<80 dB(A)		L10>80 dB(A)	
4. School, museum, library, courthouse of worship, transient hotel or motel, public meeting room, auditorium, out- patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM- 10 PM)		Same as Residential Day (7 AM –10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM – 10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only[4]	Note[4]	Note[4]		Note[4]		Note[4]		Note[4]	

Source: Table 19-2, *2021 CEQR Technical Manual*.

(i) In addition, any new activity shall comply with Impact Thresholds detailed in Section 410.

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

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

[3] One may use the FAA-approved DNL contours supplied by the Port Authority of New York and New Jersey (PANYNJ), or the noise contours may be computed from the federally approved Aviation Environmental Design Tool (AEDT) Computer Model using flight data supplied by the PANYNJ.

[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are listed by octave bands). Sources: New York City Department of Environmental Protection (adopted policy 1983).

In addition to this, the *CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise levels, which are shown in **Table 13-3**. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dB(A) or lower for residential dwellings or community facility uses and 50 dB(A) or lower for commercial office uses and are determined based on exterior L_{10} noise levels.

Table 13-3 Recommended Noise Attenuation Values Under the New York City Noise Code

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	$70<L_{10}<73$	$73<L_{10}<76$	$76<L_{10}<78$	$78<L_{10}<80$	$80<L_{10}$
Aircraft	65<DNL<68[1]	68<DNL<71[1]	71<DNL<73[1]	73<DNL<75[1]	75<DNL[1]
Train	65<Ldn<68	68<Ldn<71	71<Ldn<73	73<Ldn<85	75<Ldn
Attenuation[2]	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	See note[3]

Source: New York City Department of Environmental Protection/*2021 CEQR Technical Manual*
Notes:
[1] DNL descriptor based on average values of Ldn over a year period.
[2] The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[3] The required attenuation value is the difference between L_{build} and $L_{interior}$, using the appropriate noise descriptor where:
L_{build} is the projected noise level under the build condition rounded up to a whole number
$L_{interior}$ is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

New York City Noise Code

The Expansion Project would also adhere to the requirements of the New York City Noise Code. §24-227 (Circulation Devices) specifies that no circulation device may produce a sound level exceeding 42 dB(A) when measured inside a receiving property dwelling unit with a window or terrace open. Furthermore, the cumulative sound from all circulation devices must not exceed 45 dB(A) under the same conditions.

§24-232 (Allowable Decibel Levels—Octave Band Measurement) states that no commercial or business enterprise may exceed the decibel thresholds outlined in **Table 13-4** when measured inside a receiving property dwelling unit with a window or terrace open.

While these noise limits do not apply to construction activities or equipment, they do govern the mechanical systems associated with the proposed CUP building (construction noise is addressed in **Chapter 16, Construction**). All mechanical equipment, both existing and introduced as part of the Expansion Project, would comply fully with the New York City Noise Code.

This report focuses exclusively on noise emissions from equipment located within and on the roof of the CUP building. Mechanical equipment elsewhere on the Project Site is situated at sufficient distances from the nearest Noise Sensitive Receptors (NSRs) to comply with both CEQR and New York City Noise Code criteria.

Table 13-4 Permitted Sound Levels Under the New York City Noise Code

Octave Band	Maximum Sound Pressure Levels (dB) As Measured Within a Receiving Property, as Specified Below.	
Frequency (Hz)	Residential receiving property for mixed use buildings and residential buildings (as measured within any room of the residential portion of the building with windows open, if possible).	Commercial receiving property (as measured within any room containing offices within the building with windows open, if possible.
31.5	70	74
63	61	64
125	53	56
250	46	50
500	40	45
1,000	36	41
2,000	34	39
4,000	33	38
8,000	32	37

Source: New York City Noise Code

Noise Prediction Methodology

Mobile Source Analysis

In accordance with the *CEQR Technical Manual*, the mobile source analysis typically follows the desktop analysis presented within this chapter. However, a more detailed model using the Traffic Noise Model (TNM) should be employed under the following conditions:

- New or significant changes in roadway or street geometry are anticipated under both the No-Action and With-Action conditions;
- Roadways with minimal or no traffic volumes are involved;
- Ambient noise consists of multiple sources, including traffic noise; or
- A detailed analysis of amendments due to the traffic components that influence the overall ambient noise levels is required.

The desktop analysis, using the logarithmic equations provided in the *CEQR Technical Manual*, was employed for the mobile source analysis of the Expansion Project. This method predicts future noise levels in areas where traffic is the primary noise source by taking current noise measurements and anticipated changes in traffic volumes into account. These predictions help determine noise levels for both the No-Action and With-Action conditions. Traffic volumes are converted into Noise Passenger Car Equivalent (PCE) values. Specifically, one medium-duty truck (i.e., vehicles with two axels and six tires) is equivalent to the noise of 13 cars, one heavy-duty truck (i.e., cargo vehicles with three or

more axels) is equivalent to the noise of 47 cars, and one bus (i.e., vehicles having two or three axels and designed to carry more than nine passengers) is equivalent to the noise of 18 cars. The future noise levels are then calculated using this conversion and the following equation:

- 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

Once the noise PCEs are calculated at each receptor site, the No-Action noise levels are calculated using the following equations:

$$No\ Action\ L_{eq}\ Increase = 10 * \log\left(\frac{No\ Action\ PCE}{Existing\ PCE}\right) + Existing\ Noise\ Level$$

In the With-Action condition, the mobile source analysis is one of multiple Project-related noise sources, therefore, logarithmically subtracting the No-Action noise level from the With-Action noise level determines the project-generated traffic noise levels.

$$With\ Action\ L_{eq}\ Increase = 10 * \log\left(\frac{With\ Action\ PCE}{No\ Action\ PCE}\right)$$

Stationary Noise Analysis

Stationary noise sources proposed for the Project Site include the CUP Building, parking garages, and multipurpose arena. This assessment, however, includes a quantitative analysis for the CUP Building only. Therefore, this section of the report focuses exclusively on the CUP Building.

The stationary noise analysis evaluates the emission levels produced by equipment within and on the roof of the CUP building, located in the southwest section of the Project Site. The CUP building is designed to address the mechanical, electrical, and plumbing needs of the Project Site, and would operate 24 hours per day. Due to the potential for sleep disturbances, the analysis focuses particularly on nighttime periods, which are more sensitive.

To predict the noise impact from the CUP building, the 3D noise modeling software CadnaA, developed by DataKustik, is employed. This software calculates sound pressure levels from multiple pieces of equipment, both internal and external, and determines the sound propagation and the resulting sound pressure levels at the nearest NSRs. The procedures followed align with ISO 9613-2024, which is widely regarded as the industry standard for sound propagation from industrial and commercial facilities.

For internal noise sources, it is assumed that the building envelope of the CUP building would be designed to attenuate noise emissions to levels compliant with the criteria detailed in the Impact Significance Criteria section and the NYC Noise Code. However, openings for ventilation purposes would be integrated into certain floors of the CUP building facade to provide air inlets and outlets, creating the potential for noise breakout into the outdoor environment. Therefore, the noise predictions factor in noise breakout through these facade openings to calculate the overall noise emission levels from the CUP building.

Sound pressure levels for the proposed equipment were supplied by Vanderweil Engineers in August 2024. **Table 13-5** below enumerates the equipment included in the stationary noise prediction

model, detailing the type of equipment and the assumed operating hours, and the 1/1 octave band sound power levels.

Certain equipment is designated to operate only under standby conditions, defined as periods when additional power is required to maintain the continuous operation of the casino and associated facilities during emergency conditions. This includes gas boilers and generators.

As this equipment does not operate under typical conditions, it has been excluded from the assessment. However, sound-attenuating measures would be incorporated into the design of the standby equipment to minimize noise impacts during routine testing and power outages.

Table 13-5 CUP Building Mechanical Plant Noise Level Assumptions

Equipment Type	Qty	Operating Hours	Sound Power Level (dB(A))	1/1 Octave Band Sound Power Level (dB)							
				63	125	250	500	1k	2k	4k	8k
Cooling Tower – Air Inlet	8	24/7	101	109	105	98	100	96	92	84	73
Cooling Tower – Cased Face	8	24/7	99	108	103	99	97	95	88	82	72
Cooling Tower – Fan	8	24/7	105	106	107	107	103	100	96	94	86
Air Source Heat Pumps	34	24/7	103	106	107	107	103	100	96	94	86
Chillers*	11	24/7	97	87	89	88	94	93	90	84	78
Pumps**	21	24/7	92	81	82	84	84	87	84	80	74

*The octave band sound power levels were predicted using the Bies and Hanson[1] estimation approach for compressors.
** The octave band sound power levels were predicted using the Bies and Hanson[2] estimation approach for pumps.

As part of the noise assessment for the CUP building, several incorporated noise reduction measures have been assumed to maintain noise emissions below the significant noise impact criteria established by the *CEQR Technical Manual*. These measures include:

- Installing acoustic louvres on the building facade where ventilation openings are required.
- Installing acoustical silencers on the cooling towers fan discharges.
- The mechanical design team has been consulted, and a formal commitment has been established to incorporate noise reduction measures into the design. These measures would meet or exceed the performance standards outlined in **Table 13-6.**

[1] Bies, D.A. and Hansen, C.H., 2009. *Engineering Noise Control: Theory and Practice*. 4th ed. London: Spon Press.

Table 13-6 CUP Building Mechanical Plant Noise Level Assumptions

Equipment Type	Description	1/1 Octave Band Insertion loss (dB)							
		63	125	250	500	1k	2k	4k	8k
Acoustic Louvres	Louvre with airfoil blade and 24-inch depth.	-6	-12	-15	-21	-24	-27	-25	-20
Acoustical Silencer	Galvanized steel baffle with skin filled with acoustic insulation material	-5	-6	-8	-10	-13	-12	-11	-8

Source: VHB, 2024.

In addition to the previously outlined measures, a 29-foot-high screening wall above the rooftop is proposed. This wall is intended to provide both visual and acoustic insulation from the cooling towers, generator stacks, and ASHP to the benefit of the surrounding community. Given that the design is currently in preliminary stages, specific construction details for the screening wall have yet to be determined. Accordingly, an estimate has been adopted, assigning the wall an absorption coefficient of 0.6 across the entire frequency spectrum.

Existing Conditions

Mobile Source Analysis

The study area for the Mobile Source Analysis is based on the detailed traffic analysis in **Chapter 11, Transportation**, where 31 intersections have been evaluated for Existing, No-Action and With-Action traffic volumes during weekday PM, Saturday PM and Saturday nighttime periods. The intersections include the following:

- Rockaway Boulevard at 94th Street
- Cross Bay Boulevard/Woodhaven Boulevard at Rockaway Boulevard
- Liberty Avenue at Rockaway Boulevard
- Rockaway Boulevard/Liberty Avenue at 96th Street
- Cross Bay Boulevard Northbound Service Road at Liberty Avenue
- Cross Bay Boulevard at Liberty Avenue
- Liberty Avenue at 94th Street
- Rockaway Boulevard at Centreville Street/109th Avenue
- Rockaway Boulevard at 107th Street
- Rockaway Boulevard at Aqueduct Road/108th Street
- Rockaway Boulevard at 109th Street
- Rockaway Boulevard at 111th Street/Home Depot Parking Lot
- Rockaway Boulevard at 113th Street/Linden Boulevard/Home Depot Parking Lot
- Rockaway Boulevard at 114th Street
- Rockaway Boulevard at Lefferts Boulevard
- Cross Bay Boulevard at North Conduit Avenue

- Cross Bay Boulevard at Shore Parkway/Eastbound Nassau Expressway On-Ramp
- North Conduit Avenue at Cohancy Street/Albert Road
- North Conduit Avenue at Aqueduct Road
- North Conduit Avenue at 114th Street
- North Conduit Avenue at Lefferts Boulevard/Old South Road
- Lefferts Boulevard at Eastbound Nassau Expressway Off-Ramp
- Lefferts Boulevard at Aqueduct Toad
- Linden Boulevard at Southbound Van Wyck Service Road
- Linden Boulevard at Northbound Van Wyck Service Road
- North Conduit Avenue at Westbound Belt Parkway Off-Ramp
- 15th Avenue at Belt Parkway On-Ramp
- 155th Avenue at Cohancy Street
- North Conduit Avenue at 130th Street
- South Conduit Avenue at 130th Street
- Southbound Van Wyck Off-Ramps at North Conduit Avenue

Stationary Source Analysis

The study area designated for the stationary source analysis adheres to guidelines outlined in the *CEQR Technical Manual*, which stipulates that receptors situated within a 1,500-foot radius of the Project Site and within direct line of sight should be considered for analysis. Identification of NSRs within this radius, particularly those with direct line of sight to the proposed CUP building, was accomplished through the utilization of various tools such as GIS, satellite imagery, and Google Street View. Furthermore, a noise survey was conducted on October 28th and 29th, 2022, during which an evaluation of existing receptors, including potential line of sight considerations, was completed.

Based on the CEQR guidance described above, approximately 950 receptors were identified within the 1,500-foot radius. Land uses found surrounding the Project Site are predominantly residential. However, a small portion of the study area directly south of Belt Parkway and South Conduit Avenue is zoned for light industrial uses. Of the residential receptors within the 1,500-foot screening distance, 19 have been identified as having a direct line of sight to the proposed stationary source at the CUP building and are listed below. Additionally, as the Expansion Project would introduce a new receptor with the proposed hotel use, the proposed hotel use is also included in the list of NSRs and is listed below as R19. **Figure 13-2** shows the receptor locations.

Figure 13-2 Noise Sensitive Receptor Map for Stationary Noise Analysis and Noise Monitoring Locations

Source: VHB Technical Noise Analysis, MapPLUTO, NYC Parks

Noise sensitive receptors and the local street they are representing:

- R01 – 107th Street
- R02 – 108th Street
- R03 – Sutter Avenue
- R04 – 106th Street
- R05 – Sutter Avenue
- R06 – 105th Street
- R07 – Centerville Street
- R08 – Project Property Plan
- R09 – Boss Street
- R10 – Centerville Street
- R11 – Centerville Street
- R12 – Peconic Street
- R13 – Hawtree Street
- R14 – Hawtree Street
- R15 – Linden Boulevard
- R16 – 135th Road
- R17 – Pitkin Avenue
- R18 – 135th Drive
- R19 – New Hotel Receptor

Noise Measurement

Measurements were conducted using Type I sound level meters at ground level and followed the procedures outlined in the *CEQR Technical Manual*, which include documenting dominant sources of sound. The noise monitors were placed with a minimum of ten 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_{10}), (L_{50}) and (L_{90}), 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 13-7 presents the measured L_{eq}, L_{10}, L_{50}, and L_{90} sound levels at each of the measurement locations and each time period. Existing sound levels ranged from 53 to 72 dB(A) (L_{eq}) and from 55 to 75 dB(A) (L_{10}).

Table 13-7 Noise Measurement Results

ID	Monitoring Location	Time Period	Date and Time	Duration	L_{eq}	L_{max}	L_{10}	L_{90}	L_{min}
M1	114-03 North Conduit Avenue	Fri Evening	18:20:00	20 min	71	85	74	60	58
		Sat Midday	12:00:00	20 min	72	90	75	60	57
		Sat Evening	17:00:00	20 min	71	87	74	60	57
		Sat Night*	3:00:00	1 hour	60	79	62	52	49
M2	South of 132-16 106th Street	Fri Evening	19:10:00	20 min	53	70	55	47	45
		Sat Midday	12:50:00	20 min	58	74	61	45	43
		Sat Evening	18:40:00	20 min	58	78	60	48	47
		Sat Night**	3:00:00	1 hour	55	74	57	47	44
M3	Aqueduct Road	Fri Evening	19:45:00	20 min	66	78	69	54	50
		Sat Midday	13:30:00	20 min	66	85	70	49	44
		Sat Evening	17:50:00	20 min	66	79	70	56	49
		Sat Night***	3:00:00	1 hour	57	76	59	49	46
M4	Aqueduct Road/ Pitkin Avenue	Fri Evening	19:00:00	20 min	57	69	60	53	50
		Sat Midday	12:00:00	20 min	60	77	60	51	48
		Sat Evening	18:00:00	20 min	61	83	61	53	50
		Sat Night	3:00:00	1 hour	57	76	59	49	46

*Nighttime noise levels are based on Measurement ID 4. A +3 dB(A) correction has been applied to account for increased noise levels due to the proximity to Belt Parkway, assuming a 50% decrease in traffic between 3 AM and 4 AM.
**Nighttime noise levels are based on Measurement ID 4. A -2 dB(A) correction has been applied as measurement ID 2 being further away from the MTA subway A-trains.
***Nighttime noise levels are based on Measurement ID 4. No correction has been applied, as noise levels are expected to be consistent across both sites.

No-Action Condition

As outlined in **Chapter 1, Project Description**, absent the Expansion Project, the Project Site would be redeveloped with the full program as approved in the Approved 2017 Plan (No-Action condition). The No-Action condition includes general background growth, with a rate of 0.5 percent per year for the first five years (2022 to 2027) and a growth rate of 0.25 percent per year for the subsequent three years (2027 to 2030). In addition, the Resorts World Casino Expanded EAS (2017) includes an increase in the number of casino gaming positions from 6,500 to 6,650, and on-site hotel capacity would increase from 400 rooms to 600 rooms. The No-Action condition conservatively reflects projected trips for the full allotment of this space. Refer to **Chapter 11, Transportation** for further information.

Using the prediction methodology described in Section 'Noise Prediction Methodology', the No-Action condition noise levels were calculated for the 2030 analysis year. **Table 13-8** presents the No-Action mobile source screening analysis at each intersection within the defined study area.

Compared to existing conditions, the results in **Table 13-8** show that No-Action noise levels would not result in an exceedance above 3 dB(A) at any of the 31 identified intersections. According to

CEQR Technical Manual guidance, increases less than 3.0 dB(A) would not be perceptible and therefore, would not be significant.

Table 13-8 No-Action Mobile Source Screening Analysis

Intersection	Period	Existing PCEs	No-Action PCEs	No-Action Sound Increment (dB(A))
1 - Rockaway Boulevard at 94th Street	Friday PM	1,392	1,442	0.2
	Saturday PM	1,074	1,111	0.1
	Saturday Night	849	880	0.2
2 - Cross Bay Boulevard/Woodhaven Boulevard at Rockaway Boulevard	Friday PM	6,421	6,628	0.1
	Saturday PM	4,124	4,226	0.1
	Saturday Night	3,663	3,789	0.1
3 - Liberty Avenue at Rockaway Boulevard	Friday PM	1,108	1,149	0.2
	Saturday PM	758	782	0.1
	Saturday Night	638	663	0.2
4 - Rockaway Boulevard/Liberty Avenue at 96th Street	Friday PM	2,346	2,421	0.1
	Saturday PM	1,764	1,784	0.0
	Saturday Night	1,571	1,631	0.2
5 - Cross Bay Boulevard Northbound Service Road at Liberty Avenue	Friday PM	918	950	0.2
	Saturday PM	546	564	0.1
	Saturday Night	510	527	0.1
6 - Cross Bay Boulevard at Liberty Avenue	Friday PM	4,299	4,440	0.1
	Saturday PM	2,561	2,645	0.1
	Saturday Night	2,376	2,453	0.1
7 - Liberty Avenue at 94th Street	Friday PM	377	389	0.1
	Saturday PM	326	338	0.2
	Saturday Night	273	282	0.1
8 - Rockaway Boulevard at Centreville Street/109th Avenue	Friday PM	3,195	3,297	0.1
	Saturday PM	2,297	2,334	0.1
	Saturday Night	1,829	1,896	0.2
9 - Rockaway Boulevard at 107th Street	Friday PM	2,358	2,434	0.1
	Saturday PM	1,818	1,841	0.1
	Saturday Night	1,435	1,493	0.2
10 - Rockaway Boulevard at Aqueduct Road/108th Street	Friday PM	2,848	2,924	0.1
	Saturday PM	2,502	2,461	-0.1
	Saturday Night	2,074	2,174	0.2
11 - Rockaway Boulevard at 109th Street	Friday PM	2,431	2,492	0.1
	Saturday PM	2,036	2,010	-0.1
	Saturday Night	1,655	1,728	0.2

Table 13-8 No-Action Mobile Source Screening Analysis

Intersection	Period	Existing PCEs	No-Action PCEs	No-Action Sound Increment (dB(A))
12 - Rockaway Boulevard at 111th Street	Friday PM	2,795	2,867	0.1
	Saturday PM	2,217	2,198	0.0
	Saturday Night	1,798	1,876	0.2
13 - Rockaway Boulevard at 113th Street/Linden Boulevard	Friday PM	2,893	2,970	0.1
	Saturday PM	2,222	2,219	0.0
	Saturday Night	1,773	1,840	0.2
14 - Rockaway Boulevard at 114th Street	Friday PM	2,265	2,370	0.2
	Saturday PM	1,760	1,825	0.2
	Saturday Night	1,487	1,540	0.2
15 - Rockaway Boulevard at Lefferts Boulevard	Friday PM	2,856	2,956	0.1
	Saturday PM	2,317	2,389	0.1
	Saturday Night	2,029	2,101	0.2
16 - Cross Bay Boulevard at North Conduit Avenue	Friday PM	8,583	8,857	0.1
	Saturday PM	5,751	5,906	0.1
	Saturday Night	4,870	5,040	0.1
17 - Cross Bay Boulevard at Shore Parkway	Friday PM	8,369	8,637	0.1
	Saturday PM	5,901	6,059	0.1
	Saturday Night	4,363	4,515	0.1
18 - North Conduit Avenue at Cohancy Street/Albert Road	Friday PM	5,566	5,719	0.1
	Saturday PM	4,345	4,395	0.0
	Saturday Night	3,688	3,817	0.1
19 - North Conduit Avenue at Aqueduct Road	Friday PM	4,821	4,954	0.1
	Saturday PM	3,894	3,930	0.0
	Saturday Night	3,383	3,513	0.2
20 - North Conduit Avenue at 114th Street	Friday PM	4,620	4,778	0.1
	Saturday PM	3,803	3,931	0.1
	Saturday Night	3,237	3,351	0.2
21 - North Conduit Avenue at Lefferts Boulevard/Old South Road	Friday PM	7,048	7,280	0.1
	Saturday PM	5,876	6,057	0.1
	Saturday Night	5,031	5,206	0.1
22 - Lefferts Boulevard at Nassau Expressway Eastbound Off-Ramp	Friday PM	2,607	2,683	0.1
	Saturday PM	2,257	2,269	0.0
	Saturday Night	1,801	1,873	0.2
23 - Lefferts Boulevard at Aqueduct Road	Friday PM	1,859	1,915	0.1
	Saturday PM	1,871	1,868	0.0

Table 13-8 No-Action Mobile Source Screening Analysis

Intersection	Period	Existing PCEs	No-Action PCEs	No-Action Sound Increment (dB(A))
	Saturday Night	1,387	1,449	0.2
24 - Linden Boulevard at Southbound Van Wyck Service Road	Friday PM	3,222	3,307	0.1
	Saturday PM	2,451	2,458	0.0
	Saturday Night	2,119	2,194	0.2
25 - Liden Boulevard at Northbound Van Wyck Service Road	Friday PM	4,353	4,474	0.1
	Saturday PM	2,637	2,655	0.0
	Saturday Night	2,721	2,815	0.1
26 - North Conduit Avenue at Belt Parkway Westbound Off-Ramp	Friday PM	4,888	5,056	0.1
	Saturday PM	3,876	4,006	0.1
	Saturday Night	3,516	3,640	0.2
27 - 155th Avenue at Belt Parkway On-ramp	Friday PM	674	697	0.1
	Saturday PM	902	933	0.1
	Saturday Night	546	566	0.2
28 - 155th Avenue at Cohancy Street	Friday PM	1,332	1,379	0.1
	Saturday PM	943	975	0.1
	Saturday Night	756	782	0.1
29 - North Conduit Avenue at 130th Street	Friday PM	5,767	5,961	0.1
	Saturday PM	4,870	5,030	0.1
	Saturday Night	3,234	3,343	0.1
30 - South Conduit Avenue at 130th Street	Friday PM	3,700	3,808	0.1
	Saturday PM	2,625	2,644	0.0
	Saturday Night	1,746	1,810	0.2
31 - Southbound Van Wyck Off-ramp at North Conduit Avenue	Friday PM	6,170	6,374	0.1
	Saturday PM	4,622	4,775	0.1
	Saturday Night	3,757	3,881	0.1

The results in **Table 13-8** show minimal increase in the No-Action noise levels due to the increase in road traffic on the local road network. For this reason, the existing noise levels measured are considered to be representative of the No-Action noise condition in the 2030 analysis year.

With-Action Condition

The With-Action condition is based on the proposed program of the Expansion Project detailed in **Chapter 1, Project Description** (see **Table 1-2**) and summarized above. This section considers the potential noise impacts under the With-Action condition, considering both existing and future NSRs. For existing NSRs, a mobile source screening analysis was completed, comparing the No-Action and With-Action PCEs to determine whether the CEQR impact threshold of 3 dB(A) is exceeded.

In addition to this, a separate analysis of stationary noise sources was completed to determine whether the Expansion Project would result in significant adverse noise impacts on existing NSRs surrounding the Project Site. For the project-generated NSRs (i.e., the proposed hotel) introduced by the Expansion Project, a mobile source screening assessment is not warranted, as the proposed location of project-generated NSRs would not be within a distance where noise generated by vehicular traffic would be dominant on any of the facades containing sensitive receptors. The representative No-Action noise levels, which were measured at Measurement Location 4, are dominated by train noise from the MTA subway A-Train, which is located west of the Project Site.

Existing Receptors

Mobile Source Analysis

Using the methodology described in the 'Noise Prediction Methodology' section above, future PCEs and incremental noise levels were calculated for the Expansion Project's analysis year of 2030. **Table 13-9** presents the No-Action and With Action PCE values at study area intersections and the resulting sound increments between No-Action and With-Action conditions at each identified intersection.

The highest increase in noise would be along Rockaway Boulevard at Aqueduct Road/108th Street and Lefferts Boulevard at Aqueduct Road during the Saturday PM period where noise levels are expected to increase by 1.9 dB(A) under the With-Action condition compared to the No-Action condition. As stated above, in accordance with *CEQR Technical Manual* guidance, increases in noise levels below 3 dB(A) would be barely perceptible. Further, as incremental noise levels at each of the identified intersections are not expected to exceed the CEQR impact threshold of 3 dB(A), no significant adverse mobile source noise impacts are anticipated as a result of the Expansion Project and no further analysis is warranted.

Table 13-9 Mobile Source Screening Analysis for With-Action Condition

Intersection	Period	No-Action PCEs	With-Action PCEs	With-Action/ No-Action Sound Increment (dB(A))
1 - Rockaway Boulevard at 94th Street	Friday PM	1,442	1,639	0.6
	Saturday PM	1,111	1,301	0.7
	Saturday Night	880	1,015	0.6
2 - Cross Bay Boulevard/ Woodhaven Boulevard at Rockaway Boulevard	Friday PM	6,628	6,967	0.2
	Saturday PM	4,226	4,538	0.3
	Saturday Night	3,789	4,145	0.4
3 - Liberty Avenue at Rockaway Boulevard	Friday PM	1,149	1,439	1.0
	Saturday PM	782	1,039	1.2
	Saturday Night	663	779	0.7
4 - Rockaway Boulevard/ Liberty Avenue at 96th Street	Friday PM	2,421	2,807	0.6
	Saturday PM	1,784	2,155	0.8

Table 13-9 Mobile Source Screening Analysis for With-Action Condition

Intersection	Period	No-Action PCEs	With-Action PCEs	With-Action/ No-Action Sound Increment (dB(A))
	Saturday Night	1,631	2,039	1.0
5 - Cross Bay Boulevard Northbound Service Road at Liberty Avenue	Friday PM	950	970	0.1
	Saturday PM	564	581	0.1
	Saturday Night	527	546	0.2
6 - Cross Bay Boulevard at Liberty Avenue	Friday PM	4,440	4,440	0.0
	Saturday PM	2,645	2,645	0.0
	Saturday Night	2,453	2,453	0.0
7 - Liberty Avenue at 94th Street	Friday PM	389	389	0.0
	Saturday PM	338	338	0.0
	Saturday Night	282	282	0.0
8 = Rockaway Boulevard at Centreville Street/109th Avenue	Friday PM	3,297	3,791	0.6
	Saturday PM	2,334	2,789	0.8
	Saturday Night	1,896	2,347	0.9
9 - Rockaway Boulevard 107th Street	Friday PM	2,434	3,022	0.9
	Saturday PM	1,841	2,367	1.1
	Saturday Night	1,493	1,952	1.2
10 - Rockaway Boulevard at Aqueduct Road/108th Street	Friday PM	2,924	4,201	1.6
	Saturday PM	2,461	3,710	1.8
	Saturday Night	2,174	3,403	1.9
11 - Rockaway Boulevard at 109th Street	Friday PM	2,492	3,172	1.0
	Saturday PM	2,010	2,705	1.3
	Saturday Night	1,728	2,455	1.5
12 - Rockaway Boulevard at 111th Street	Friday PM	2,867	3,518	0.9
	Saturday PM	2,198	2,836	1.1
	Saturday Night	1,876	2,582	1.4
13 - Rockaway Boulevard at 113th Street/Linden Boulevard	Friday PM	2,970	3,409	0.6
	Saturday PM	2,219	2,656	0.8
	Saturday Night	1,840	2,300	1.0
14 - Rockaway Boulevard at 114th Street	Friday PM	2,370	2,482	0.2
	Saturday PM	1,825	1,951	0.3
	Saturday Night	1,540	1,762	0.6
15 - Rockaway Boulevard at Lefferts Boulevard	Friday PM	2,956	3,055	0.1
	Saturday PM	2,389	2,481	0.2
	Saturday Night	2,101	2,193	0.2

Table 13-9 Mobile Source Screening Analysis for With-Action Condition

Intersection	Period	No-Action PCEs	With-Action PCEs	With-Action/ No-Action Sound Increment (dB(A))
16 - Cross Bay Boulevard at North Conduit Avenue	Friday PM	8,857	9,007	0.1
	Saturday PM	5,906	6,063	0.1
	Saturday Night	5,040	5,477	0.4
17 - Cross Bay Boulevard at Shore Parkway	Friday PM	8,637	8,784	0.1
	Saturday PM	6,059	6,215	0.1
	Saturday Night	4,515	4,930	0.4
18 - North Conduit Avenue at Cohancy Street/Albert Road	Friday PM	5,719	5,919	0.1
	Saturday PM	4,395	4,625	0.2
	Saturday Night	3,817	4,795	1.0
19 - North Conduit Avenue at Aqueduct Road	Friday PM	4,954	6,136	0.9
	Saturday PM	3,930	4,974	1.0
	Saturday Night	3,513	4,752	1.3
20 - North Conduit Avenue at 114th Street	Friday PM	4,778	5,785	0.8
	Saturday PM	3,931	4,748	0.8
	Saturday Night	3,351	3,615	0.3
21 - North Conduit Avenue at Lefferts Boulevard/Old South Road	Friday PM	7,280	8,262	0.5
	Saturday PM	6,057	6,892	0.6
	Saturday Night	5,206	5,560	0.3
22 - Lefferts Boulevard at Nassau Expressway Eastbound Off-Ramp	Friday PM	2,683	3,572	1.2
	Saturday PM	2,269	3,160	1.4
	Saturday Night	1,873	2,521	1.3
23 - Lefferts Boulevard at Aqueduct Road	Friday PM	1,915	2,791	1.6
	Saturday PM	1,868	2,729	1.6
	Saturday Night	1,449	2,246	1.9
24 - Linden Boulevard at Southbound Van Wyck Service Road	Friday PM	3,307	3,663	0.4
	Saturday PM	2,458	2,794	0.6
	Saturday Night	2,194	2,513	0.6
25 - Liden Boulevard at Northbound Van Wyck Service Road	Friday PM	4,474	4,542	0.1
	Saturday PM	2,655	2,749	0.2
	Saturday Night	2,815	3,068	0.4
26 - North Conduit Avenue at Belt Parkway Westbound Off-Ramp	Friday PM	5,056	5,839	0.6
	Saturday PM	4,006	4,610	0.6
	Saturday Night	3,640	3,825	0.2
27 - 155th Avenue at	Friday PM	697	737	0.2

Table 13-9 Mobile Source Screening Analysis for With-Action Condition

Intersection	Period	No-Action PCEs	With-Action PCEs	With-Action/ No-Action Sound Increment (dB(A))
Belt Parkway On-Ramp	Saturday PM	933	985	0.2
	Saturday Night	566	776	1.4
28 - 155th Avenue at Cohancy Street	Friday PM	1,379	1,426	0.1
	Saturday PM	975	1,020	0.2
	Saturday Night	782	1,010	1.1
29 - North Conduit Avenue at 130th Street	Friday PM	5,961	6,363	0.3
	Saturday PM	5,030	5,372	0.3
	Saturday Night	3,343	3,397	0.1
30 - South Conduit Avenue at 130th Street	Friday PM	3,808	3,890	0.1
	Saturday PM	2,644	2,764	0.2
	Saturday Night	1,810	2,055	0.6
31 - SB Van Wyck Off-Ramp at North Conduit Avenue	Friday PM	6,374	6,760	0.3
	Saturday PM	4,775	5,080	0.3
	Saturday Night	3,881	3,931	0.1

Stationary Source Analysis

CUP Building Noise

As described above, the Expansion Project includes the CUP Building, the parking garage, and the multipurpose arena which are all considered stationary noise sources. For this assessment, noise has been predicted for the CUP Building only using the methodologies described in the 'Noise Prediction Methodology' section above. For both the proposed parking garage and multipurpose arena, a qualitative noise assessment is provided.

As per the *CEQR Technical Manual*, during daytime hours, when No-Action noise levels are 62 dB(A) L_{eq1hr} or higher, a significant adverse impact occurs with an increase of 3 dB(A) L_{eq1hr} or more in the With-Action condition. For No-Action levels below 62 dB(A) L_{eq1hr}, the significance threshold varies, ranging from a 5 dB(A) L_{eq1hr} increase when No-Action levels are 60 dB(A) L_{eq1hr} or lower, to progressively stricter thresholds as No-Action levels approach 62 dB(A) L_{eq1hr}, with the overall objective of preventing total noise levels from exceeding 65 dB(A) L_{eq1hr}.

Additionally, the *CEQR Technical Manual* defines a significant adverse impact during nighttime hours when the No-Action levels are exceeded by 3 dB(A) in the With-Action condition.

The results in **Table 13-10** indicate that during daytime hours, no significant adverse impacts are identified at any of the identified NSRs, as none exceed the incremental CEQR impact criteria specified above. Although exceedances of over 3 dB(A) are calculated at R6 and R8, the No-Action noise levels at these locations are below 60 dB(A) L_{eq1hr}. Furthermore, **Table 13-10** shows that exceedances above 65 dB(A) will likely occur at R2, R3, R5, and R7 however, noise from the proposed

CUP building does not exceed or increase the No-Action noise levels in these locations, hence no significant impact is identified.

Table 13-10 also shows that during nighttime hours, no noise levels exceed the *CEQR Technical Manual* threshold of a 3 dB(A) L_{eq1hr} increase. Therefore, no significant adverse noise impacts due to stationary sources are anticipated during nighttime hours.

The above impact determination is based on the assumption that the CUP building would incorporate the measures outlined in the above sections. Specifically, these measures include (i) the installation of louvres on the building facades where ventilation openings are required; and (ii) the installation of silencers on the cooling tower fan discharges to reduce noise emissions. These measures and the others outlined throughout this chapter would be outlined within the Gaming Facility license from the New York State Gaming Commission and would be a condition of the awarded license. With the provision of these measures, no significant adverse noise impacts due to stationary sources from the CUP building are anticipated.

Table 13-10 With-Action Stationary Noise Analysis

Receptor ID	Time	Representative Noise Monitoring ID	No-Action Noise Levels dB(A) L_{eq1hr}	Predicted CUP Building Noise Levels dB(A) L_{eq1hr}	With-Action Noise Levels dB(A) L_{eq1hr}	No-Action to With-Action Increase dB(A)	Potential for Significant Impact
R1	Daytime	M2	53	48	54	1	No Impact
	Nighttime		55	48	56	1	No Impact
R2	Daytime	M3	66	49	66	0	No Impact
	Nighttime		57	49	57	1	No Impact
R3	Daytime	M3	66	48	66	0	No Impact
	Nighttime		57	48	57	0	No Impact
R4	Daytime	M2	53	51	55	2	No Impact
	Nighttime		55	51	56	1	No Impact
R5	Daytime	M3	66	51	66	0	No Impact
	Nighttime		57	51	58	1	No Impact
R6	Daytime	M2	53	53	56	3	No Impact
	Nighttime		55	53	57	2	No Impact
R7	Daytime	M3	66	49	66	0	No Impact
	Nighttime		57	49	57	1	No Impact
R8	Daytime	M2	53	54	56	3	No Impact
	Nighttime		55	54	57	2	No Impact
R9	Daytime	M2	53	50	55	2	No Impact
	Nighttime		55	50	56	1	No Impact
R10	Daytime	M4	57	50	58	1	No Impact
	Nighttime		57	50	58	1	No Impact
R11	Daytime	M4	57	52	59	1	No Impact
	Nighttime		57	52	58	1	No Impact
R12	Daytime	M4	57	51	58	1	No Impact
	Nighttime		57	51	58	1	No Impact

Table 13-10 With-Action Stationary Noise Analysis

Receptor ID	Time	Representative Noise Monitoring ID	No-Action Noise Levels dB(A) L_{eq1hr}	Predicted CUP Building Noise Levels dB(A) L_{eq1hr}	With-Action Noise Levels dB(A) L_{eq1hr}	No-Action to With-Action Increase dB(A)	Potential for Significant Impact
R13	Daytime	M4	57	45	57	0	No Impact
	Nighttime		57	47	58	0	No Impact
R14	Daytime	M4	57	47	57	0	No Impact
	Nighttime		57	43	58	0	No Impact
R15	Daytime	M4	57	43	57	0	No Impact
	Nighttime		57	43	58	0	No Impact
R16	Daytime	M4	57	43	57	0	No Impact
	Nighttime		57	40	58	0	No Impact
R17	Daytime	M4	57	40	57	0	No Impact
	Nighttime		57	38	57	0	No Impact
R18	Daytime	M4	57	38	57	0	No Impact
	Nighttime		57	53	59	1	No Impact
R19	Daytime	M4	57	53	58	1	No Impact
	Nighttime		53	48	54	1	No Impact

In addition to the noise assessment based on the criteria outlined in the *CEQR Technical Manual*, Noise Chapter, an evaluation was conducted in accordance with the NYC Noise Code. According to §24-227 (Circulation Devices), the cumulative sound from all circulation devices installed on a building must not exceed 45 dB(A) when measured inside a receiving property dwelling with windows or terrace doors open.

The results presented in **Table 13-10** indicate that the predicted external noise levels from the CUP building would not exceed 55 dB(A). To assess compliance with the NYC Noise Code, Federal Highway Administration (FHWA) guidance[3] suggests that an external-to-internal noise reduction of 10 dB can be achieved under open-window conditions. Applying this reduction, the highest predicted noise level inside a receiving property dwelling falls below the 45 dB(A) threshold specified in the NYC Noise Code.

Furthermore, compliance with the octave band criteria outlined in **Table 13-4** of the NYC Noise Code would be achieved. The mechanical equipment within and on the rooftop of the CUP building would be designed to maintain noise levels below the allowable limits for all relevant octave bands.

Arena Noise

As part of the Expansion Project, a new 7,000-seat multipurpose arena would be constructed just north of the existing Hyatt Regency hotel and adjacent to the existing parking garage. The current plan for the multipurpose arena is to host various concerts, comedy shows, sporting and other events. During such events, noise sources are generated primarily through cheering, shouting and applause from the crowd and amplified sound systems used for announcements, music and performance contributions.

The proposal for the Expansion Project's multipurpose arena construction includes a fully enclosed design. This enclosure will be designed to sufficiently attenuate to prevent noise breakout into the surrounding environment. To achieve this, the building envelope, including the roof, would use materials with a high STC and would tightly seal all joints to attenuate noise breakout. Additionally, the internal acoustic design would limit sound energy and reverberation with acoustic panels being distributed across the arena.

These design measures will sufficiently attenuate noise, ensuring compliance with the *CEQR Technical Manual*, so that no existing NSRs experience incremental noise increases exceeding 3 dB(A) compared to No-Action noise levels. Additionally, the arena would be designed such that noise levels at proposed NSRs on the Project Site would not exceed 65 dB(A) L10 during the day or 55 dB(A) L10 at night, in order to meet 'Acceptable General External Exposure' levels. Given that these requirements are met, the noise generated by the multipurpose arena is not anticipated to result in a significant adverse noise impact.

Parking Garage Noise

With the Expansion Project, the parking capacity on the Project Site would increase to approximately 7,309 spaces, including approximately 1,217 surface parking spaces and 6,092 structured parking spaces, the latter of which would be located in a new parking garage to be built on the western

[3] Federal Highway Administration. Highway Traffic Noise: Analysis and Abatement Guidance. Updated June 29, 2023. Available at: https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/polguide02.cfm.

portion of the Project Site, connected to the CUP Building. This parking garage is shown in **Figure 13-1**.

Parking garages typically generate intermittent noise from vehicle engines, door slams, tire squeals, and alarms. These noise sources are generally low in intensity and short in duration. The noise is usually confined within the structure of the garage, with external noise transmission being limited by the building's design and materials. Additionally, modern parking garages often include noise-mitigating features such as sound-absorbing walls and barriers.

During the detailed design phase of the parking garage, the following noise reduction measures would be implemented:

- Incorporate sound absorbing materials in the construction of the parking garage walls ceilings and floors. This would help reduce the reflection and transmission of noise both within and outside the parking garage.
- The structure would be designed to be a semi-enclosed and would include a 'green wall' on the external façade to help absorb sound emissions from the parking garage.
- Enforce a No 'Tailgating' or No 'Partying' Policy: Provide designated areas for fans to congregate before and after events.
- Enforce low-speed limits within the parking garage to reduce noise from vehicle acceleration, braking and tire friction.
- Allocate parking spaces for larger or nosier vehicles, such as trucks or SUVs, in areas of the parking garage that are farther from NSRs.

By incorporating these noise reduction measures, the proposed parking garage can significantly minimize its noise impact on surrounding NSRs. The combination of structural design improvements and operational controls would likely result in acceptable noise limits not being exceeded at nearby NSRs. As such, no significant adverse noise impacts on nearby receptors are anticipated as a result of the proposed parking garage.

Future Receptors due to the With-Action Condition

As described in **Chapter 1, Project Description**, the Expansion Project would expand the existing hotel at the RWNYC facility to include a total of 1,963 hotel keys, with a new ten-story building to accommodate guest rooms, to be located just south of the existing casino entrance marked as "8" in **Figure 13-1**. A 19,300-gsf ballroom and other smaller meeting rooms would be constructed on the first floor of the building to support a variety of events and meetings. For this reason, an assessment of potential significant adverse noise impacts on project-generated NSRs has been undertaken.

The No-Action noise level for the proposed hotel has been determined based on the noise measurement results at monitoring location M4. This monitoring location is representative of likely noise exposure on each of the hotel's facades. Observation taken during the noise monitoring determined that rail noise from the MTA subway A-Train was dominant. At this time, there are no planned changes to MTA subway operations as a result of the Expansion Project. The skywalk used by pedestrians to access the station would be modified to accommodate the hotel and event space that is planned. However, no additional train movements would occur, and no additional train stops at the station are expected. Since subway operations are not expected to change, the No-Action noise levels are not expected to change and would remain as under existing conditions.

As project-generated NSRs would be subject to rail noise from the MTA subway operations, the following assessment has been based on the L_{dn} rather than the L_{eq1hr}.

Table 13-11 provides the results from the noise assessment on project-generated NSRs. The results of the assessment show that in accordance with *CEQR Technical Manual* guidance, the anticipated incident noise levels on the proposed hotel façade fall under the 'Acceptable General External Exposure' category. Therefore, no significant adverse noise impacts on project-generated NSRs are anticipated and no further analyses are warranted.

Table 13-11 With-Action Noise Analysis

Receptor ID	Time	Representative Noise Monitoring ID	No-Action Noise Levels dB(A) L_{dn}	Predicted CUP Building Noise Levels dB(A) L_{dn}	With-Action Noise Levels dB(A) L_{dn}	Significant Impact
R19	24-hour	M4	59*	59	62	Acceptable General External Exposure

*The No-Action noise level has been corrected to reflect the incident noise level on the proposed With-Action NSR. As the hotel is approximately 50 meters set back from the MTA subway line, a distance correction, assuming line source propagation has been applied to the L_{dn} level to take into account the sound propagation from the subway at the proposed NSR.

Environmental Justice Analysis

An analysis of environmental justice (EJ) considers whether a proposed project would cause or increase an inequitable burden on disadvantaged communities. The assessment of environmental justice for the Expansion Project involves three steps:

- Identify potential environmental justice areas (PEJAs) and disadvantaged communities (DACs) within the Expansion Project's area of potential effect, based on the criteria set forth by the New York State Department of Environmental Conservation and New York State Climate Leadership and Community Protection Act;
- Identify the Expansion Project's potential adverse effects on these communities; and,
- Evaluate the Expansion Project's potential adverse effects on disadvantaged communities relative to its overall effects, in order to determine whether any potential adverse impacts on those communities would be disproportionate.

The study area includes both the PEJAs and the DACs intersecting the 1/4-mile radius of the Project Site. As shown in **Figure 8-1** of **Chapter 8, Hazardous Materials**, the study area includes 19 Census Block Groups (corresponding to the PEJAs) and six Census Tracts (corresponding to the DACs). **Chapter 8, Hazardous Materials** contains more information on EJ analysis guidance and existing conditions within the EJ study area.

As detailed above, the Expansion Project would not result in any significant adverse impacts related to noise. Therefore, the Expansion Project would not affect disadvantaged communities or cause an inequitable burden within the EJ study area, and therefore, no significant adverse environmental justice impacts are anticipated.

14

Public Health

This chapter addresses the Expansion 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, identify measures to mitigate such effects.

Introduction

The *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.

Principal Conclusions

The Expansion Project would not result in any significant adverse public health impacts as defined by CEQR. Nor would the Expansion Project result in unmitigated significant adverse impacts in the areas of air quality, noise, water quality, or hazardous materials. In addition, through the implementation of a comprehensive Responsible Gaming/Problem Gambling Prevention Plan, the Proposed Actions

would advance the goals of the New York State Responsible Play Partnership to reduce harm associated with problem gambling and promote general public health and welfare.

Project Commitments

The project commitments discussed in the chapter include:

› The Applicant will continue to maintain a Responsible Gaming/Problem Gambling Prevention Plan.

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.

In addition, though not outlined in the *CEQR Technical Manual,* given that the nature of the Expansion Project is to expand an existing gaming facility on the Project Site, the Proposed Action's potential for broader impacts to public health beyond the CEQR technical areas is also considered, specifically as they relate to issues of problem gambling.

Assessment

As discussed in **Chapters 8, Hazardous Materials**; **9, Water and Sewer Infrastructure**; **12, Air Quality**; **13, Noise**; and **16, Construction**, the Expansion Project would not result in significant adverse impacts in these technical areas and no mitigation is warranted. As such, the Expansion Project would not have the potential to result in public health impacts as defined by CEQR.

However, there are certain public health risks beyond those CEQR technical areas outlined above that can be associated with gaming activities. The analysis below assesses the potential for public health impacts specifically related to the health risk of problem gambling.

Health Promotion and Problem Gambling

In New York State, the Office of Addiction Services and Supports (OASAS) oversees problem gambling prevention, treatment, harm reduction and recovery services. OASAS certifies problem gambling treatment providers and directly funds seven regional Problem Gambling Resource Centers that provide education and training, referrals, assessment, treatment, and recovery support programs. According to data collected by OASAS in 2020, approximately 4.4 percent of New York adults (ages 18 and older) are considered at-risk gamblers, and 0.7 percent are problem or pathological gamblers.[1] Problem gamblers are people who exhibit gambling behavior that results in harmful effects to the gambler or their family, and pathological gamblers are people who exhibit behaviors such as loss of control or irrational thinking related to gambling. At-risk gamblers are people who exhibited

[1] New York State Office of Addiction Services, 2020 OASAS Problem Gambling Prevalence Survey Summary. Accessed October 2024 at https://oasas.ny.gov/system/files/documents/2024/03/oasas_gambling_survey_2020.pdf.

potentially problematic gambling behaviors but did not meet the criteria for problem or pathological gambling.

Together with OASAS, the New York State Gaming Commission and the New York Council on Problem Gambling formed the Responsible Play Partnership (RPP) to coordinate and raise awareness of problem gambling treatment services across New York State. Together, the RPP organizations promote responsible gaming, including coordinating with gaming entities in New York State to provide access to help for individuals in need.

In furtherance of the RPP's responsible gaming goals, the Applicant has developed and continues to maintain a Responsible Gaming/Problem Gambling Prevention Plan (the Plan), which is implemented throughout all aspects of the facility operations to deliver a safe gaming experience for all users. The following are key aspects of the Plan that are currently implemented at the Project Site and would be enhanced as part of the Expansion Project:

- The Applicant's Responsible Gaming/Problem Gambling Committee prioritizes the well-being and safety of all patrons by promoting responsible gaming practices and addressing problem gambling proactively. The core objectives of the committee are as follows:
  - Patron Protection: To create a safe and responsible gaming environment where patrons can enjoy the offerings without experiencing harm from excessive or problematic gambling.
  - Education and Awareness: To educate patrons about responsible gaming principles, including setting limits, recognizing signs of problem gambling, and the availability of support services.
  - Training and Staff Engagement: To ensure that staff is well trained in recognizing signs of problem gambling and can offer assistance or referrals to patrons in need.
  - Community Partnership: To collaborate with local organizations, government agencies, and nonprofits to support problem gambling prevention efforts and raise awareness in the broader community.
  - Responsible Marketing: To advertise and promote services in a responsible manner, avoiding tactics that may encourage excessive gambling.
  - Continuous Improvement: To continually assess and enhance responsible gaming measures based on evolving best practices and feedback from patrons and stakeholders.
  - Ethical Business Practices: To uphold ethical business practices in the gambling industry by actively contributing to problem gambling prevention efforts.
- The Applicant collaborates with the RPP as part of its New Hire Orientation, during which all team members are trained in accordance with programs developed by the New York Council on Problem Gambling. Team members are trained to recognize some of the characteristics that may indicate that a patron may have a gambling problem.
- The Applicant provides a Responsible Gaming Resource Center, which is a discreet space for guests to privately access informational resources related to problem gambling. Trained Security team members are available 24 hours a day upon request for any person in need. In addition, informational pamphlets and signage are placed throughout the building with directions to the center, and every gaming position has problem gambling informational placards displayed.
- The Applicant participates in the New York State Gaming Commission's Voluntary Self-Exclusion Program in which guests can voluntarily ban themselves from coming on property and using the gaming facility.

› Through partnership with OASAS, the Applicant will recommend to players in need of help services in the areas of prevention, treatment, and recovery.

With the comprehensive measures outlined in the Applicant's Responsible Gaming/Problem Gambling Prevention Plan, the Proposed Actions would be implemented in support of New York State's responsible gaming goals. Therefore, no significant adverse public health impacts related to problem gambling are anticipated.

15

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 in the manual, neighborhood character is an amalgam of various elements that give neighborhoods a distinct "personality," including land use, socioeconomic conditions, community services and solid waste, 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. 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 the Expansion 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 Environmental Impact Statement (EIS).

As described in **Chapter 1, Project Description**, the Expansion Project would consist of the construction of an approximately 3.4-million-square-foot (sf) addition to the existing facilities on a 62-acre portion of Queens Block 11543, Lot 2 (the Project Site).

The Expansion Project would result in a total of approximately 5,331,200 gross square feet (gsf) (existing gsf, plus the Expansion Project) comprising the following elements:

- Up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;
- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to 11,000 gaming positions;
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,300 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and,
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

Principal Conclusions

The Expansion Project would not result in a significant adverse impact to neighborhood character. As outlined in the *CEQR Technical Manual*, the assessment of neighborhood character is based on the analyses of other technical areas. The Expansion Project would not result in significant adverse impacts in the technical areas of land use, zoning, and public policy; community services and solid waste; socioeconomic conditions; open space; urban design, and visual resources; shadows; or noise. The Expansion Project would result in traffic impacts. Therefore, a preliminary assessment of neighborhood character is provided. The assessment concludes that, while there would be increased transportation activity because of the Expansion Project, the resulting traffic conditions would be similar to those seen in the urban neighborhoods defining the study area and would not result in density of activity or service conditions that would be out of character with the surrounding neighborhood.

Project Commitments

While there are no project commitments specific to the neighborhood character chapter, certain project commitments would be implemented, including new visual buffers from neighboring properties in the form of an enhanced berm and landscaping (as described in **Chapter 2, Land Use, Zoning, and Public Policy** and **Chapter 7, Urban Design and Visual Resources**), to better integrate the Expansion Project into the existing neighborhood character context.

Methodology

As indicated above, a neighborhood character assessment is generally needed, per the *CEQR Technical Manual*, when a project has the potential to result in significant adverse impacts in certain technical areas (land use, zoning, and public policy; socioeconomic conditions; community services and solid waste; 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 the Expansion 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 Services and Solid Waste:** 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 action would cast an incremental shadow on sun-sensitive resources, neighborhood character could be affected.
- **Transportation:** If a proposed action 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 the Expansion 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 Expansion Project would not result in significant adverse impacts in the technical areas of land use, zoning, and public policy; socioeconomic conditions; open space; urban design and visual resources; shadows; or noise. Per the Final Scope of Work for this EIS dated October 9, 2024, the Proposed Actions would not have the potential to result in significant adverse impacts to historic and cultural resources, and so that technical area is not discussed in this chapter. The Expansion Project would result in impacts to traffic. Therefore, a preliminary assessment of neighborhood character is provided below. The analysis begins with the identification of the defining features of the neighborhood and then assesses whether the Expansion Project would adversely affect those defining features within the framework of the above technical areas.

Preliminary Assessment

Defining Features of the Neighborhood

Overall, the neighborhood is defined by the following features:

Area Entertainment Uses

While the study area is largely mixed-use, two key uses are the Aqueduct Racetrack and the Resorts World New York City (RWNYC) casino that serve as entertainment venues. These uses are located on a 172-acre site, which is the largest lot in the study area.

The Aqueduct Racetrack and the horse stables occupy an area of approximately 100 acres. The racetrack is located immediately to the south and east of the Project Site and includes three horse racetracks (main, inner, and turf courses), 14 barns, and grandstand areas. The other predominate entertainment use is the Project Site itself. Located along the west side of the Aqueduct Racetrack, the existing RWNYC facility is currently a total of 1,888,535 gsf and contains the casino building; the

400-key Hyatt Regency JFK Airport hotel; and on-site surface and structured parking to serve the hotel and casino.

Given the significant land area occupied by these two uses, they are defining features of the study area.

Commercial Corridor

Rockaway Boulevard is an east-west thoroughfare located to the north of the Project Site. It is a 100-foot-wide, four-lane road that forms a commercial corridor. The commercial uses that line this road range from big-box retail such as the Home Depot located to the northwest of the Project Site, to smaller neighborhood retail stores, to mixed residential and commercial buildings. Rockaway Boulevard's prominence as an access roadway within the study area makes it a defining feature of the neighborhood.

Low-Density Residences

In contrast to the entertainment uses and commercial corridor along Rockaway Boulevard, the study area is also heavily defined by low-density residential neighborhoods that surround the Project Site, including South Ozone Park to the north and east, and Ozone Park to the west. These areas feature smaller lot sizes with single- or two-family houses oriented around a typical street grid. Generally, these uses are buffered from the uses on the Project Site by Rockaway Boulevard to the north, the racetrack to the east, and the A subway line to the west.

Potential to Affect the Defining Features of the Neighborhood

Overall, the Expansion Project would not adversely affect the defining features of the neighborhood and in fact, would enhance one of these features by expanding the entertainment uses currently on the Project Site. The Expansion Project would solidify RWNYC as a destination for entertainment, dining, and shopping in New York City and support new workforce development opportunities and economic activity in the region. The Expansion Project would also introduce new publicly accessible open spaces to the Project Site, including multi-use paths and passive open spaces.

While the Expansion Project is expected to increase activity and building bulk on the Project Site, the existing buffers between the site and the surrounding residential neighborhoods would be maintained as part of the Proposed Actions and new buffers, in the form of an enhanced berm and landscaping, would be introduced. Thus, the development facilitated by the Proposed Actions would enhance the existing uses on the site and would implement measures to maintain the conditions of the surrounding residential uses that define the existing character of the area.

Potential to Affect the Contributing Elements of Neighborhood Character

Land Use, Zoning, Public Policy

As described in **Chapter 2, Land Use, Zoning, and Public Policy**, the Expansion Project would not result in significant adverse impacts on land use, zoning, or public policy in the quarter-mile study area. The uses would be compatible with the existing and historic use of the Project Site as a citywide and regional recreational and entertainment facility. The surrounding residential land uses are

buffered from the Project Site, as detailed above. While the Proposed Actions would facilitate greater building bulk on the Project Site, the proposed buildings have been designed to be comparable in height and massing to the existing development. In addition, as detailed above, the Applicant is committing to implementing new measures including an enhanced berm adjacent to the nearby residences as well as additional landscaping to further buffer the Expansion Project from the surrounding properties. The requested discretionary actions are not subject to local zoning regulations. Thus, the Proposed Actions would facilitate development that is well integrated with current built conditions and the existing uses on the Project Site. Additionally, the Expansion Project would be consistent with many of the high-level goals and objectives set forth by the City in its citywide policy documents. Therefore, the defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on land use, zoning, and public policy, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Socioeconomic Conditions

As discussed in **Chapter 3, Socioeconomic Conditions**, the Expansion Project would not introduce new economic trends to the study area that would substantially alter existing economic patterns. The Expansion Project would not result in direct displacement and would, thus, not result in displacement of any uses that may directly or indirectly support businesses in the study area. Therefore, the Expansion Project would not result in significant adverse impacts due to indirect business displacement. Rather, the Expansion Project is expected to provide multiple fiscal and community benefits that will further activate the Project Site and solidify RWNYC as a destination for dining, shopping, and entertainment in New York City. Therefore, the defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on socioeconomic conditions, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Community Services and Solid Waste

As described in **Chapter 4, Community Services and Solid Waste**, the Expansion Project would not result in significant adverse impacts on community services and solid waste. The Expansion Project would expand upon an existing use and would not introduce a sizable new population to the neighborhood, nor would it displace the functions or facilities related to health care, police, and emergency services within the neighborhood. Additionally, development of the Expansion Project would not overburden the city's solid waste and sanitation systems. Therefore, the defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on community services and solid waste, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Open Space

As described in **Chapter 5, Open Space**, there are three parks and playgrounds located within a quarter mile of the Project Site. Any additional demand for open space resources that may be generated by the future visitors and worker population on the Project Site could be accommodated by the proposed open space facilities that would be incorporated into the Expansion Project, including a plaza, multi-use path, and private spaces such as the track side plaza and hotel amenities, such as the pool deck. Therefore, the 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.

Shadows

As discussed in **Chapter 6, Shadows,** the Expansion Project would result in new development that would cast incremental shadows within the study area. Based on a detailed analysis, it was concluded that the Expansion Project would not result in significant adverse shadows impacts to sunlight-sensitive resources. Therefore, significant adverse impacts on neighborhood character due to shadows are not expected, and defining features of neighborhood character would not be adversely affected due to potential shadows-related effects of the Expansion Project, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Urban Design and Visual Resources

As discussed in **Chapter 7, Urban Design and Visual Resources**, the Expansion Project would not result in significant adverse impacts to urban design or visual resources within the study area. The introduction of new amenities by the Expansion Project would further the use of the Project Site as a recreational entertainment facility. The uses currently found on the Project Site would continue and are limited to within the Project Site boundaries. The elements introduced by the Expansion Project, other than slightly adjusted views into the Project Site, are unlikely to be observed by pedestrians, or where observed, would not be significantly altered in urban design character. Pedestrian views into the Project Site from Rockaway Boulevard at the main entrance would be similar to what is seen today and would be buffered by the enhancement of the existing berm, which would provide a more densely vegetated border at the Project Site perimeter. Additionally, pedestrian views to the Project Site from the residential neighborhood located adjacent to the northern and western boundary of the Project Site would also be buffered by proposed berm's dense vegetation. The increased height and bulk of the proposed buildings overall is consistent with the higher density buildings that exist within the Project Site. The proposed buildings would be of a similar scale to the existing buildings and structures within the complex. The proposed buildings would be located closer to the existing residential uses compared with the existing buildings on the Project Site, but with the landscaping measures detailed above, visibility of these buildings is anticipated to be minimized. In addition to scale, the proposed buildings would include features to integrate with the existing environment. Although the changes introduced by the Expansion Project would be limited to the Project Site, some of the proposed open spaces would provide needed community benefits in the form of publicly accessible open space and would allow more access into the Project Site than under existing conditions. Therefore, defining features of the neighborhood would not be adversely affected due to potential effects of the Expansion Project on urban design and visual resources, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Transportation

As discussed in **Chapter 11, Transportation**, the Expansion Project is projected to result in significant adverse traffic impacts at area intersections. Of the 31 intersections analyzed, the Expansion Project would result in significant adverse traffic impacts at ten intersections (at 18 movements) during the Friday PM peak hour, nine intersections (at 13 movements) during the Saturday PM peak hour, and nine intersections (at ten movements) during the Saturday night peak hour. Standard traffic capacity improvements typically implemented by NYC Department of

Transportation, such as signal timing modifications, installation of a traffic signal, and permitting right turns on red could potentially provide full or partial mitigation at some of the significantly impacted intersections. These mitigation measures are described in **Chapter 17, Mitigation**.

Of the traffic intersections that would remain unmitigated, most would include lane groups near or over capacity in the future without the Expansion Project (the No-Action condition). While there would be increased transportation activity as a result of the Expansion Project, the majority of trips would be along commonly used highways and arterials bordering the urban neighborhoods around the Project Site. At major intersections along local corridors (e.g., Rockaway Boulevard and Cross Bay Boulevard), the resulting conditions would not result in density of activity or service conditions that would be out of character with the surrounding neighborhoods. At intersections along major arterials connecting to highways, (e.g., North Conduit Avenue connecting to the Belt Parkway and Linden Boulevard to Van Wyck Expressway), the transportation impacts would not be expected to result in substantial changes to neighborhood character as these access points already exhibit congestion. Therefore, the defining features of neighborhood character would not be adversely affected because of the Expansion Project's impact on traffic, either alone, or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Noise

As discussed in **Chapter 13, Noise**, the Expansion Project would not result in significant adverse noise impacts within the study area. To assess current noise conditions, measurements were conducted at four locations throughout the Project Site. The dominant sources of noise identified were traffic from Rockaway Boulevard to the north and Belt Parkway to the south, with additional noise from the A subway line running along the western portion of the Project Site.

A detailed noise analysis was performed for both mobile sources (from highways) and stationary sources (from the Central Utility Plant Building). For mobile sources, a screening analysis was conducted according to guidelines set forth in the *CEQR Technical Manual*. Since no roadway was found to have an increase of 3 A-weighted decibels or more due to the Expansion Project, a full analysis was not required, and a significant adverse noise impact was not identified.

For stationary noise sources, predictions of mechanical noise from within and on top of the Central Utility Plant were made. Noise mitigation design elements have been incorporated to ensure noise levels remain within acceptable limits, preventing significant adverse noise impacts.

Overall, the Expansion Project would not adversely affect noise-sensitive receptors or alter the neighborhood's noise characteristics. Therefore, noise generated as a result of the Expansion Project would not impact defining features of the neighborhood's character, either on its own or in combination with other potential effects discussed in this chapter.

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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 Expansion Project to result in significant adverse impacts during construction.

Introduction

Construction activities, although temporary in nature, can sometimes result in significant adverse environmental impacts. Consideration of several factors, including the location and setting of the project in relation to other uses, and the intensity and duration of the construction activities, may indicate that a project's construction activities warrant analysis.

The Expansion Project involves the expansion of the existing RWNYC facility by approximately 3,442,665 gsf, resulting in a total of approximately 5,331,200 gsf (existing square footage, plus the proposed expansion. The Expansion Project) would be comprised of the following elements:

- An up to approximately 2,000-key hotel within approximately 1,376,900 gsf of hotel space;
- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to approximately 11,000 gaming positions, which would include a mix of live gaming and would continue to include video lottery terminals (VLTs) and electronic table games (ETGs);
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,300 gsf of pool deck area;

- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical/utility space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and,
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

The Expansion Project would also include a variety of new open space amenities and infrastructure improvements. Construction of the proposed expansion would occur over a period of 60 months within an approximately 72.6-acre portion of the larger, 174-acre, State-owned property on Block 11543, Lot 2—which includes the Aqueduct Racetrack, New York State Racing Association (NYRA) Building, and Port Authority of New York and New Jersey (PANYNJ) parking area. Therefore, an assessment of construction-period impacts is provided in this section.

This chapter includes a discussion of construction regulations and general practices, a description of the construction schedule for the Expansion Project, and an assessment of the potential for the Expansion Project to result in significant adverse construction-period impacts.

Principal Conclusions

Governmental oversight of construction in New York City is extensive and typically involves a number of City, State, and Federal agencies, each with specific areas of responsibility. However, as this project is being constructed on State land, it would follow State guidance with close coordination and review by the New York State Office of General Services (NYSOGS), on behalf of the New York State Gaming Commission (the Gaming Commission). The Expansion Project would also comply with the requirements of the New York City Noise Code.

This chapter includes a discussion of construction regulations and general practices, a description of the development construction schedule, and an assessment of the potential for the Expansion Project to result in temporary significant adverse construction-period impacts.

Transportation

Traffic

Activities related to construction would generate construction worker and delivery trips. Although construction-related vehicle traffic would be less than the vehicle trips generated by the Expansion Project, peak construction travel occurs during different times of the day and, as such, needs to be evaluated for its potential to result in significant traffic impacts. To assess the potential for construction traffic impacts, 11 intersections were analyzed during the weekday AM and PM construction peak hours. These intersections include all nine intersections with unmitigated traffic impacts identified in **Chapter 17, Mitigation**, as well as the north entrance to the Project Site where operational improvements are proposed and at the intersection of North Conduit Avenue and the Belt Parkway Westbound Off-Ramp where a new traffic signal is proposed to mitigate a project-related traffic impact.

Construction activities are expected to peak during the second quarter of 2029 (Q2 2029). It is anticipated that construction of the Expansion Project would generate approximately 330

construction worker auto trips and 38 construction truck trips during the AM construction peak hour; and 329 construction worker auto trips and 8 construction truck trips during the PM construction peak hour. Construction trucks would be required to use the New York City Department of Transportation (NYCDOT)-designated truck routes to travel to the project area and would then use local streets to access the construction site entrances.

Of the 11 intersections analyzed, significant construction traffic impacts were identified at one intersection during the AM construction peak hour and four intersections during the PM construction peak hour. Standard traffic capacity improvements typically implemented by NYCDOT, such as signal timing modifications, could fully mitigate traffic impacts at the one significantly impacted intersection during the AM construction peak hour and two of the four significantly impacted intersections during the PM construction peak hour. Significant traffic impacts to the intersections listed below would remain unmitigated during the PM construction peak hour.

- Linden Boulevard and Southbound Van Wyck Service Road
- Linden Boulevard and Northbound Van Wyck Service Road

Parking

Construction workers would generate an estimated maximum daily parking demand of 412 spaces during the Q2 2029 peak quarter. Parking for construction workers would be provided in the approximately 1,109 on-site surface spaces in the north lot (Lot C) of the Aqueduct Racetrack property, which would be able to accommodate this demand. Construction workers would not be allowed to park at the remaining parking facilities, which would remain open during construction for use by RWNYC staff and visitors. The new 3,309-space parking garage would be opened in Q3 2027, during the second phase of construction, providing additional parking supply for visitors. Parking provided would, therefore, be sufficient to accommodate the construction worker parking demand.

Transit and Pedestrians

It is anticipated that approximately 26 percent of construction workers would travel to the Project Site by subway or bus. Construction-related transit trips would be significantly lower than transit trips generated during the operational peak hours and, as these trips would occur outside of the commuter peak hours, significant construction transit impacts are not expected. While the total number of pedestrian trips would exceed the *2021 CEQR Technical Manual* threshold of 200 or more pedestrians, no public sidewalk, corner or crosswalk space would attract 200 or more pedestrian trips, as the majority of walk trips to and from subway stations or bus stops would be confined within the Project Site. Therefore, the Expansion Project would not result in pedestrian impacts during the construction period.

Air Quality

Potential construction air quality impacts on surrounding sensitive uses were assessed using the NYSDOT's Transportation Environmental Manual (TEM) guidance and the consideration of pollutant emission control measures. The NYSDOT TEM requires further analysis for construction that would cause detours/diversions for more than 5 years in any one location. The construction of the project would not result in traffic diversions or detours. Therefore, further analysis of construction air quality from mobile sources is not required. Furthermore, emission control measures would be implemented that include but are not limited to the suppression of fugitive dust through watering at the construction site, use of

on-site equipment meeting U.S. Environmental Protection Agency's (EPA's) tier 3 with diesel particulate filters or tier 4 standards, and truck idling restrictions. Considering the temporary nature of construction and the commitment to pollutant emission control measures, further analysis of construction air quality was not required, and adverse impacts are not expected.

Noise

The construction activities for the Expansion Project would temporarily increase noise levels for nearby sensitive receptors, with peak levels anticipated during the construction of the parking garage and Central Utility Plant (CUP) Building through Q2 2026.

Construction activities would be limited to 7:00 AM to 3:00 PM, avoiding noise-sensitive evening and nighttime periods. Construction-related vehicle trips would result in a maximum noise level increase of 1.0 dBA at nearby intersections, which is below the 3 dBA *CEQR Technical Manual* significant adverse impact threshold.

While construction noise levels exceed the *CEQR Technical Manual* screening thresholds at multiple receptors, no temporary significant adverse impacts are identified, as the duration of these exceedances are unlikely to last longer than two years or more. For the existing hotel, building characteristics and mechanical ventilation systems help maintain internal noise levels below applicable thresholds during construction. Additionally, the construction contractor will implement the noise reduction measures listed below to further reduce noise levels for those receptors.

A noise abatement plan would be implemented throughout construction, including equipment maintenance and noise reduction requirements, operational controls, restricted work hours, and site management practices. Additional case-specific measures, such as sound screens or berms, will be implemented where necessary.

Vibration

Construction activities can generate ground-borne vibrations, potentially causing structural or architectural damage, or annoyance to nearby residents. However, **Table 16-9** shows that the proposed construction methods would not produce high vibration levels, as no impulsive equipment like pile drivers or drill rigs would be used.

Additionally, there are no buildings within 90 feet of the Project Site listed by the New York City Landmarks Preservation Commission (LPC) or the State and/or National Register of Historic Places (S/NR) that would require special protections from potential damage due to vibration. There is the potential for construction vibration from some construction equipment to cause annoyance in nearby residences. However, these construction activities would only occur for limited periods of time at any particular location and are considered standard for construction sites. The Applicant would follow all applicable regulations regarding required notifications to surrounding property owners. Therefore, there would be no significant adverse impact as a result of construction vibration.

Other Technical Areas

In terms of construction effects on land use, historic resources, neighborhood character, socioeconomic conditions, community facilities, and open space, preliminary analyses found that no significant adverse impacts would occur due to construction of the Expansion Project.

With respect to hazardous materials, the completion of a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP) would be a condition of the awarded Gaming Facility license from the New York State Gaming Commission to ensure investigation, mitigation, and remediation of any hazardous materials would be completed in a safe and comprehensive manner. Compliance with the conditions set forth in the agreement made with NYS would preclude the potential for significant adverse hazardous materials impacts to occur during construction and operation of the Expansion Project.

With respect to Water and Sewer Infrastructure, the Expansion Project would require a State Pollutant Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. In addition, the Applicant would be required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that meets criteria set forth by New York State Department of Environmental Conservation (NYSDEC). With the implementation of a SWPPP, there would be no significant adverse impacts to water resources due to construction of the Expansion Project.

Project Commitments

The project commitments discussed in the chapter include:

Traffic

- Construction trucks would be required to use NYCDOT-designated truck routes and service the construction site at the designated loading zones.
- Modifications to the signal timing at specific intersections are recommended to mitigate traffic impacts.

Noise

- A 16-foot-tall perimeter sound wall will be installed prior to the commencement of construction works. The sound wall will follow the existing boundary fence line and will be in-situ for the duration of the construction. To ensure a sufficient sound transmission class (STC)[1] rating, the sound wall should be constructed to meet the following criteria:
  - A surface density of at least 10 kg/m^2;
  - A fully closed surface with no large cracks or gaps; and
  - Sufficient width and height to minimize sound diffraction around or over the barrier.

  Additionally, the noise reduction coefficient (NRC)[2] of the sound wall facing the construction site should be at least 0.7 to minimize reflections.
- Temporary acoustic barriers approximately 2 meters high will be installed around construction areas, combining solid fencing with noise-absorbing curtains.
- Equipment that meets the sound level standards specified in Subchapter 5 of the NYC Noise Code would be utilized from the start of construction. **Table 16-10** shows the noise levels for

[1] Sound Transmission Class (STC) is a rating that measures how well a material or structure, such as a wall or partition, reduces airborne sound transmission. A higher STC rating indicates better sound insulation, meaning less sound passes through a sound wall.

[2] Noise Reduction Coefficient (NRC) is a rating that measures how much sound a material absorbs rather than reflecting it back into a space. It is expressed as a value between 0 and 1, where 0 means no absorption (total reflection) and 1 means complete absorption (no reflection). The NRC is determined by averaging a material's absorption coefficients at four key mid-range frequencies (250, 500, 1000, and 2000 Hz). Higher NRC values indicate better sound absorption.

construction equipment and the mandated noise levels for the equipment that would be used for construction of the Expansion Project.

- As early in the construction period as logistics allow, diesel- or gas-powered equipment would be replaced, to the extent feasible and practicable, with electrical-powered equipment such as welders and water pumps (i.e., early electrification). Where electrical equipment cannot be used, diesel or gas-powered generators and pumps would be located within buildings to the extent feasible and practicable and in accordance with all applicable statutes, rules, regulations and executive orders, including but not limited to Executive Order 22.
- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, trucks would not be allowed to idle more than 3 minutes at the construction site, per Title 24, Chapter 1, Subchapter 7, Section 24-163 of the New York City Administrative Code.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.
- Additional measures specified within the **Additional Noise Reduction Measures** section will be implemented where practicable.

Air Quality

Emission control measures would be implemented—including, but not limited to, the suppression of fugitive dust through watering at the construction site, use of on-site equipment meeting U.S. Environmental Protection Agency's (EPA's) tier 3 with diesel particulate filters or tier 4 standards, and truck idling restrictions.

Methodology

This construction assessment follows the guidelines set forth in the *CEQR Technical Manual* NYSDOT's TEM guidance, the consideration of pollutant emission control measures, and the Final Scope of Work. As discussed in **Chapter 1, Project Description**, and above, there would be a two-stage conversion and expansion of the existing facilities at the Project Site to construct a world-class integrated resort and casino. Construction is projected to last up to 60 months, with the first phase conversion of the existing casino facilities for live gaming operations expected to be complete in 2026 and the second phase of the Expansion Project to expand the existing RWNYC facility as part of an integrated resort expected to be complete in 2030. 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 transportation, air quality, and noise and vibration.

Construction Regulations and General Practices

Governmental Oversight

Governmental oversight of construction in New York City is extensive and typically involves a number of City, State, and Federal agencies, each with specific areas of responsibility. However, as this project is being constructed on State land, it would follow State guidance with close coordination and review by NYSOGS, on behalf of the Gaming Commission, 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 NYC Noise Code, reviews and approves certain RAPs and associated 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. A Community Air Monitoring Program (CMP) may be established in conjunction with other remedial and regulatory programs.[3]
- 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.
- The NYC LPC approves studies and testing to prevent loss of archaeological resources and to prevent damage to architectural resources.
- The 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. NYSDOT also reviews any modifications of pedestrian and vehicular crossings over active rail lines.
- 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.

[3] As discussed later in this chapter, depending on the site, the NYSDEC may have regulatory oversight as it relates to air quality for sites with subsurface contamination and for sites that have entered the Brownfield Cleanup Program (BCP).

Construction Oversight

Construction Hours

While the Expansion Project would be constructed on State-owned land, it would comply with New York City regulations in terms of construction hours. New York City regulates the hours of construction work through the NYC Noise 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. Although the DOB typically issues these work permits, OGS would take on this role as this site is State owned. Further, in some instances, approval of a noise mitigation plan from the DEP under the NYC 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 typically ends at 3:30 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. Any extended workdays generally last until approximately 5:30 PM or 6:00 PM and do not include all construction workers on-site, but only those involved in the specific task requiring additional work time. For work outside of normal construction hours, work permits would be obtained from OGS prior to such work commencing. The numbers of workers and pieces of equipment in operation for work outside normal hours is generally limited to those needed to complete the particular authorized task. Overall, the level of activity for any work outside of normal construction hours is less than a normal workday.

Noise Reduction Measures

While the Expansion Project would be constructed on State-owned land, it would comply with New York City noise reduction measures. The NYC Noise Code includes requirements to implement certain controls to reduce construction-period noise at the source:

- Equipment must meet the sound level standards specified in Subchapter 5 of the NYC Noise Code.
- Construction equipment is required to be equipped with necessary noise reduction equipment, including mufflers. All equipment with internal combustion engines is required to be operated with the doors closed, including noise-insulating materials and at the lowest engine speed allowable.
- The use of back-up alarms is required to be minimized to the extent feasible, practical, and safe, and/or quieter back-up alarms are to be installed in accordance with OSHA standards.
- Vehicles are not allowed to idle more than three minutes in accordance with New York City Administrative Code Section 24-163.
- Contractors must implement training programs to inform workers on methods that can minimize construction noise.

The NYC Noise Code also includes path noise control requirements:

› 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 NYC Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid 8-foot wall made from wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.

Construction Practices

Access, Deliveries, and Staging Areas

Access to construction sites is controlled. Work areas are fenced off, and limited access points for workers and construction-related trucks are provided. After work hours, the gates are 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 are controlled and scheduled.

Lane and Walkway Closures

Temporary curb lane and sidewalk closures are typical for construction projects located along a public right-of-way 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 is also coordinated with DOT OCMC. In general, construction managers for major projects on adjacent sites also coordinate their activities to avoid delays and inefficiencies. All construction activity, including staging and loading, would occur within the Project Site. Therefore, roadway detours and closure of parking lanes, travel lanes, or sidewalk spaces are not expected to be needed.

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.

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 would be posted, and coordination would be conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides would be permitted, and the contractor would be required to implement the rodent control program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

Construction Schedule and Activities

Construction Schedule

The anticipated construction sequence and schedule for the Expansion Project is shown in **Figure 16-1** and **Figure 16-2**, and reflects a reasonable assumption for construction activities on the Project Site. The initial phase would involve renovation of casino space to provide an increase of approximately 1,005 gaming positions, including electronic and live table gaming. This renovation is anticipated to be completed and in operation in mid-2026.

It is assumed that full build-out of the Expansion Project would be sequenced over a period of approximately 60 months, with the bulk of the new construction occurring in three phases: Phase 2A would involve construction of the outer Ring Road, parking garage, open space plaza, and central plant; Phase 2B would include construction of the casino and hotel expansion, arena, and ballroom; and Phase 2C would include construction of the conservatory (see **Figure 16-1**). Associated improvements within the Project Site include infrastructure improvements and construction of the publicly accessible trail and linear passive open space that is planned at the perimeter of the site.

The construction activities typically associated with higher potential levels of environmental disturbance (i.e., demolition, excavation, foundation, superstructure, and exterior closure phases) would be phased across the Project Site over a period of approximately 60 months. The four phases of construction are discussed in more detail in the following section.

Figure 16-1 Construction Sequencing

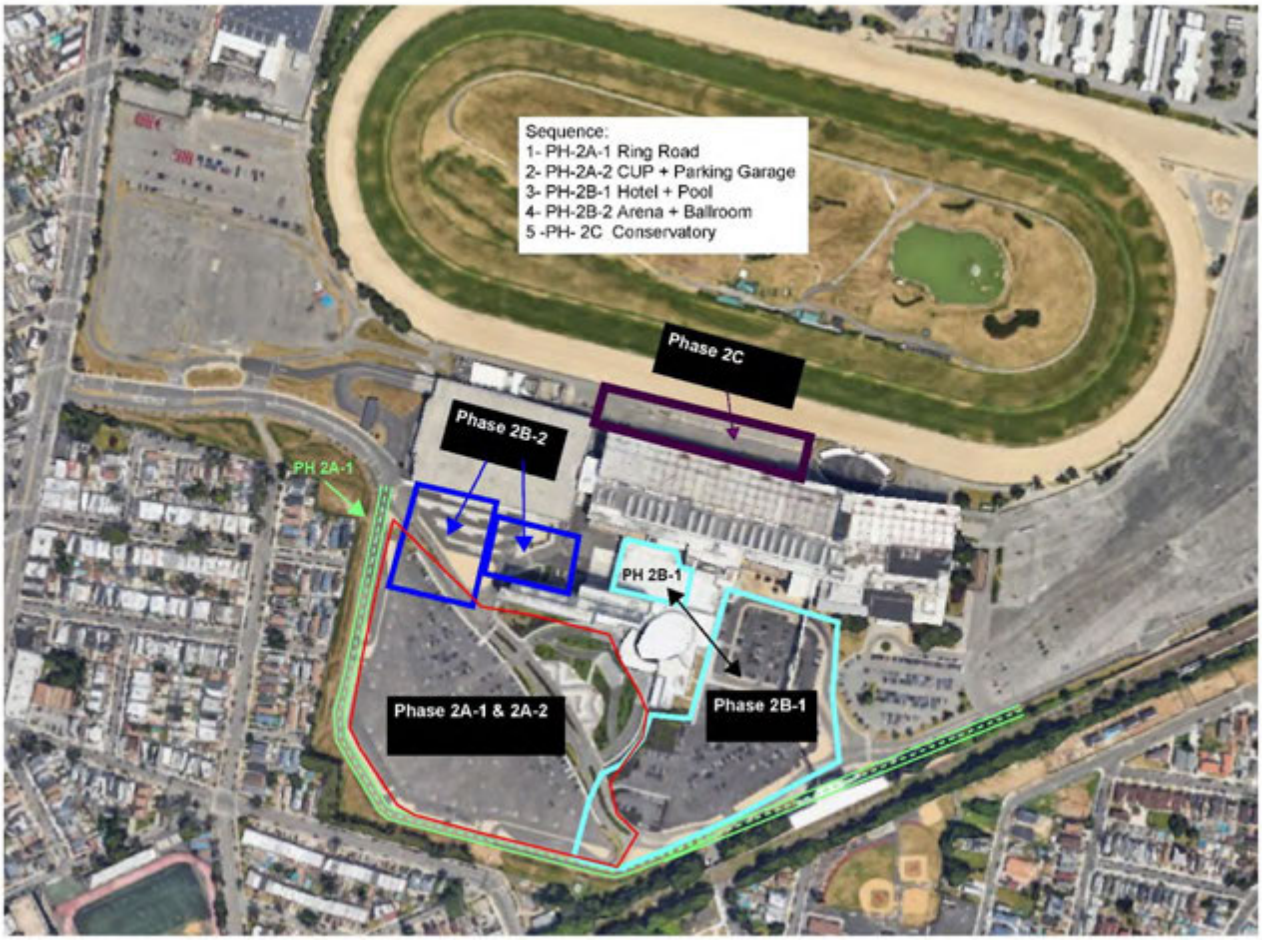
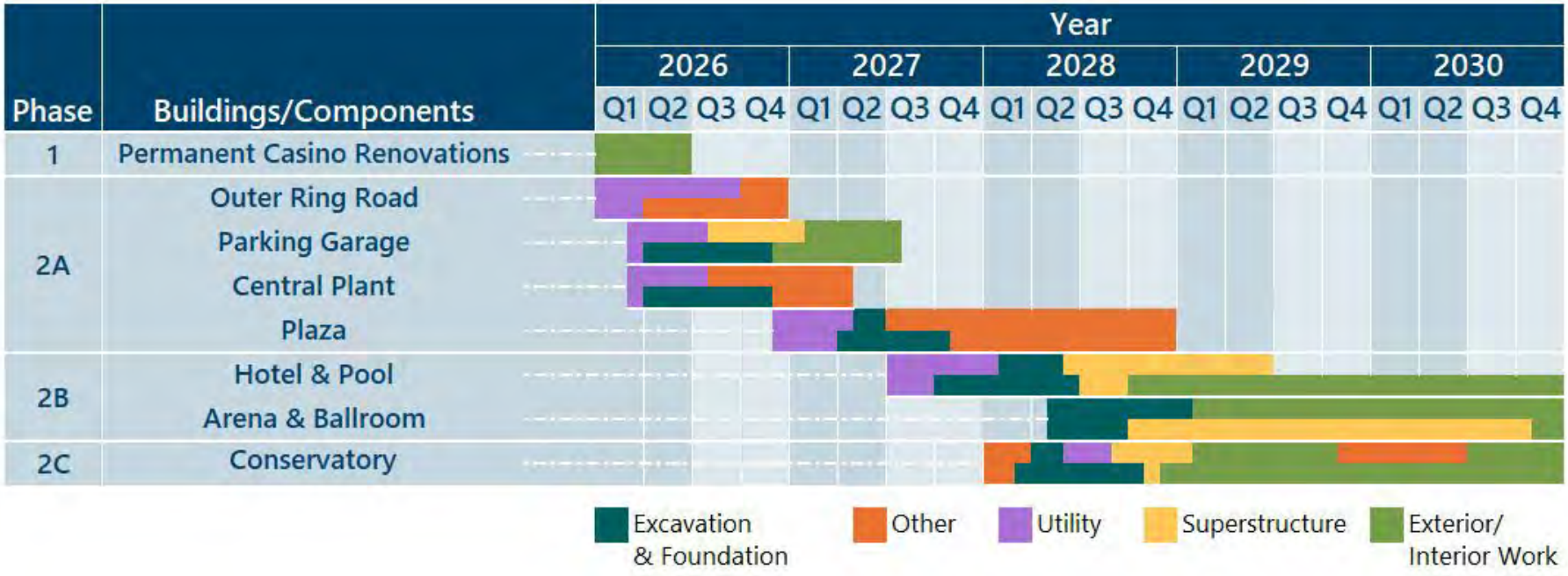


Figure 16-2 Anticipated Construction Schedule



Source: Plaza Construction

Phase 1

As shown in the anticipated construction schedule (**Figure 16-2**), Phase 1 includes interior work associated with renovations of the existing casino. This phase is expected to begin in Q1 2026 and be completed by the end of Q2 2026. The construction would occur wholly within the existing buildings and would not result in disruptions to adjacent uses.

Phase 2A

Phase 2A would occur over a period of 36 months, beginning in Q1 2026 and completing in Q4 2028. It would consist of the construction of the outer ring road, parking garage, central plant, and public plaza.

Outer Ring Road

Construction of the outer Ring Road would begin with utility relocation work in Q1 2026 and would last until the end of Q2 2026. Concurrently, other construction activities would take place from Q2 2026 and be completed in Q4 2026.

Parking Garage and Central Plant

Construction of the parking garage and central plant would begin with utility work in Q1 2026 and would last until Q3 2026. Concurrently with utility work would be excavation and foundation work from Q2 2026 to Q4 2026. For the parking garage, superstructure work would be from Q3 2026 to Q1 2027. Finally, exterior and interior work would commence in Q4 2026 and last until Q3 2027. After excavation and foundation work concludes, the central plant would have other construction activities associated with the central plant's construction from Q3 2026 to Q2 2027.

Plaza

Construction of the plaza would begin with utility work in Q4 2026 and would last until Q2 2027. Concurrently with utility work would be excavation and foundation work from Q2 2027 to Q4 2027. Finally, other construction activities would commence in Q3 2027 and last until Q4 2028.

Phase 2B

Phase 2B would begin in Q3 2027 and be complete by the conclusion of the Expansion Project's construction in Q4 2030. It would consist of the construction of the hotel and pool, and the arena and ballroom facilities.

Hotel and Pool

Construction of the hotel and pool would begin with utility work in Q3 2027 and would last until Q1 2028. Concurrently with utility work would be excavation and foundation work from Q4 2027 to Q2 2028, and superstructure work from Q2 2028 to Q2 2029. Finally, exterior and interior work would commence in Q4 2028 and last until the conclusion of the Expansion Project's construction in Q4 2030.

Arena and Ballroom

Construction of the arena and ballroom would begin with excavation and foundation work in Q2 2028 and would last until Q1 2029. Concurrently with excavation and foundation work would be

superstructure work from Q4 2027 to Q2 2028, and exterior and interior work from Q1 2029 and which would last until the conclusion of the Expansion Project's construction in Q4 2030.

Phase 2C

Phase 2C would consist of the construction of the conservatory and would begin with other construction activities during Q1 2028, consisting of the demolition of the rear of the building; excavation and foundation work from Q1 2028 until Q4 2028, occurring concurrently with utility work from Q2 2028 to Q3 2028; and superstructure work from Q3 2028 to Q1 2029. Exterior and interior work would occur beginning in Q4 2028 to the conclusion of the Expansion Project's construction in Q4 2030. Other construction activities occurring from Q4 2029 to Q2 2030 consist of the construction of the conservatory's trackside plaza.

Construction Activities

Construction of the Expansion Project would be subject to the government regulations and oversight detailed above and would employ the general construction practices described above.

Site Preparation and Demolition

Initial work within the Project Site would begin with a number of activities to prepare for construction activities. Early activities would involve the installation of public safety measures, such as fencing and Jersey barriers which would occur in Month 1. Trailers for the construction engineers and managers would be transported to the site and installed. Also, portable toilets, dumpsters for trash, and water and fuel tankers would be delivered to the site. Temporary utilities would be connected to the construction trailers. Interior access roads and turnarounds would be established for use by construction equipment and workers.

Equipment typically used during the demolition period would include jackhammers, hoe rams, excavators, dump trucks, front end loaders, and concrete saws. This equipment would also be used for environmental remediation efforts across the site. Equipment for this work would not include pile drivers, blasting, vacuum excavators, hydro break rams, rock drills, sandblasting equipment, and auger drill rigs.

Demolition materials would be transported off-site to appropriate receiving facilities or reused on site consistent with all environmental regulations and the anticipated RAWP or RAP for the Project Site. To reduce the potential for public exposure to contaminants during demolition activities, work would be performed in accordance with all applicable regulatory requirements, as described in **Chapter 8, Hazardous Materials**.

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. Any soil to be excavated from the Project Site would be loaded onto dump trucks for transport to a licensed disposal facility or reused on site consistent with all environmental regulations and RAWP/RAP or the SMP. To reduce the potential for public exposure to contaminants during excavation activities, excavation and foundation work would be performed in accordance with all applicable regulatory requirements, as described in **Chapter 8, Hazardous Materials**.

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 would include shallow foundations 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.

Superstructure and Exterior Closure (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).

Equipment during this construction phase would include articulating boom cranes, mobile cranes, hoists, telehandlers, skidsteers, concrete pumps, concrete trucks, portable concrete/grout mixers, concrete placing booms, rebar benders, delivery trucks, dump trucks, fuel trucks, tractor trailers, generators, compressors, compactors, welders, impact wrenches, and various power tools.

Interior Buildout and Site Work

Interior buildout activities include the construction of interior partitions, installation of lighting fixtures and interior finishes (i.e., flooring, painting, etc.), and mechanical and electrical work such as the installation of elevators, and finishes. In addition, final cleanup and touchup of the proposed buildings and final building systems testing (i.e., electrical system, fire alarm, plumbing, etc.) and inspections would be part of this stage of construction.

Interior buildout is typically the quietest work type and does not generate fugitive dust since it occurs within the building interiors after the building facades have been substantially completed. This phase of construction would also include site work for the final finishing of the building and grounds, including landscaping activities and other exterior finishing work. Additionally, the removal of construction protection measures (fencing, sidewalk enclosures, bridges, remaining scaffolding, etc.) from the construction site would occur. 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 removal generate truck trips, and the number also varies depending on the task and/or the building size. **Table 16-1** shows the estimated number of daily workers and trucks expected to be generated to/from the Project 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 303 workers per day, with a peak of 882 workers per day

occurring in the second quarter of 2029. An average of 44 trucks per day is anticipated and a maximum of 100 trucks per day is anticipated during the third quarter of 2026.

Table 16-1 Average Number of Daily Construction Workers and Trucks by Quarter

Year	2026				2027				2028			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4
Workers	260	352	216	223	170	137	100	207	329	343	423	447
Trucks	16	68	100	96	32	20	26	52	81	66	79	97
Year	**2029**				**2030**							
Quarter	1	2	3	4	1	2	3	4				
Workers	706	**882**	849	522	275	220	191	114				
Trucks	86	**80**	52	30	14	8	5	2				

Assessment of Project Construction

The *CEQR Technical Manual* provides guidance to assist in evaluating whether a construction assessment is warranted. In accordance with the guidelines of the *CEQR Technical Manual*, this preliminary assessment evaluates the effects associated with the Expansion Project's construction related activities—including historic and cultural resources, air quality, and noise—on sensitive receptors located near the area of construction.

Historic Resources

Construction would involve subsurface disturbance on the Project Site. However, a findings statement issued by SHPO on January 26, 2023 stated that there was no historical or archaeological significance related to the Project Site (see **Appendix E**). Therefore, there would be no significant adverse impacts to archaeological resources.

No other architectural resources occur on the Project Site. Protective measures for the existing Aqueduct Racetrack grandstand would include the installation of barricades to prevent accidental impacts from construction activities and possible monitoring during subsurface demolition for the proposed buildings.

Open Space

There is no publicly accessible open space located within close proximity to the portion of the Project Site that would undergo active construction. The Al Stabile Playground, the Ozone Howard Little League Fields, Centreville Playground, and the Southern Fields either have intervening buildings or the elevated A Subway line separating the construction area from the open spaces, so there would not be direct line-of-sight and indirect effects would be reduced. Construction of the Expansion Project would include the completion of new publicly accessible open space on the Project Site.

During construction, air and noise emissions would be controlled consistent with the requirements of the New York City Air Pollutant Control Code and the NYC Noise Code described above. However, at times over the course of the construction period, construction activities may generate noise that could impair the enjoyment of portions of the park. Peak usage of the park typically occurs in the late afternoon or

midday period as well as during the weekends. Outside of these times, there are limited visitors throughout the weekdays with an increase in visitors starting in the late afternoon and on weekends.

Construction activities within the Project Site would generally occur during non-peak hours of park usage time and, thus, would have minimal effects on visitor experience. To further minimize the effect of noise on visitor experience, subsurface demolition would be minimized. Furthermore, site surveys conducted by an engineer found that soils onsite were suitable for shallow foundations, and. therefore, pile-driving (one of the noisiest construction activities) would not be employed. As a result, extensive use of noisy equipment such as pile drivers, blasting, vacuum excavators, hydro break rams, rock drills, sandblasting equipment, and auger drill rigs would be avoided. These measures would limit noise generation from construction activities.

As discussed above, construction activities would be temporary and transient; construction of the Expansion Project would occur for different periods within different portions of the Project Site, such that noise levels would vary depending on the location of construction activities and the location of visitors in the park. Further, the open space uses nearest to the Project Site include a soccer field and a baseball field, both of which are considered active open spaces uses and are therefore not noise sensitive receptors. Visitors seeking passive open spaces would have the option to relocate to quieter portions of the park or other area open space resources during periods of noisy construction within the Project Site.

Hazardous Materials

Based on the RECs described in **Chapter 8, Hazardous Materials**, a Remedial Investigation Work Plan (RIWP) would be prepared to reduce the potential for exposure to hazardous materials during construction. If determined to be necessary, a RAP and CHASP would be prepared and implemented to address contaminants of concern identified in the Remedial Investigation Report. The above-referenced measures would be implemented to ensure no significant adverse impacts would occur related to hazardous materials.

Transportation

Construction activity would extend from the beginning of 2026 through the year 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. Construction-related trip projections were developed, as well as operational trips, during the different phases of construction. Although construction-related vehicle traffic would be less than the vehicle trips generated by the Expansion Project, construction activities may result in significant traffic impacts. To assess the potential for construction traffic impacts, 11 intersections were analyzed during the weekday AM and PM construction peak hours. These intersections include all intersections with unmitigated traffic impacts identified in **Chapter 17, Mitigation,** as well as the north entrance to the Project Site where operational improvements are proposed and at the intersection of North Conduit Avenue and the Belt Parkway Westbound Off-Ramp where a new traffic signal is proposed to mitigate a project-related traffic impact.

Construction-related transit and pedestrian trips would be significantly lower than transit and pedestrian trips generated during the operational peak hours. Also, as these transit trips would generally occur outside the commuter peak hours and the majority of pedestrian trips would take place within the Project Site, significant transit and pedestrian construction impacts are not expected, similar to the operational analysis findings.

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 Queens Community District 10. Based on this information, it is anticipated that construction workers would primarily drive to the Project Site (approximately 70 percent with an average auto occupancy of 1.5 workers per auto), with a smaller percentage of construction workers traveling via bus, subway, or on foot (approximately 26 percent by transit and 4 percent walk only).

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 16-2**, the peak quarter of construction activity would occur during the second quarter of 2029 and construction activities would generate approximately 492 daily vehicles (572 daily PCEs).[4] During this quarter, the first two phases of construction would be expected to be completed, which includes renovation of the existing casino spaces and development of the new parking garage, central plant, and plaza. Therefore, operational trips from these new uses, related to increase casino gaming positions, were also developed to assess the total vehicle trips expected during the peak quarter of construction.

Table 16-2 Average Daily Number of Construction PCEs by Quarter

Year	2026				2027				2028			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4
Autos	121	164	101	104	79	64	47	97	153	160	197	209
Trucks	16	68	100	96	32	20	26	52	81	66	79	97
Vehicles	137	232	201	200	111	84	73	149	234	226	276	306
PCEs	153	301	302	295	142	103	99	202	315	292	354	402

Year	2029				2030			
Quarter	1	2	3	4	1	2	3	4
Autos	329	**412**	396	244	128	103	89	53
Trucks	86	**80**	52	30	14	8	5	2
Vehicles	415	**492**	448	274	142	111	94	55
PCEs	500	**572**	501	303	157	118	100	57

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 3:30 PM. Auto trips by construction workers would typically occur during the one-hour periods 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

[4] 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.

trucks would remain in the area for short durations. Each worker vehicle would arrive in the morning and depart in the afternoon, 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 Expansion 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 3 PM to 4 PM hour). For trucks, deliveries are usually distributed throughout the day, but the peak activity (approximately 25 percent) is anticipated to occur during the 6 AM to 7 AM hour.

These assumptions were applied to the peak quarter of construction trips to determine the intensity of construction vehicle trips during the construction peak hours. The estimated number of vehicle trips generated by construction activities during the Q2 2029 peak quarter would be 368 vehicle trips (406 PCE trips) during the AM peak hour (6 AM to 7 AM) and 337 vehicle trips (345 PCE trips) during the PM peak hour (3 PM to 4 PM). The peak construction hourly trip projections for this peak quarter are summarized in **Table 16-3**.

Table 16-3 Construction Vehicle Trips by Hour (Q2 2029)

	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	**330**	**0**	**19**	**19**	**349**	**19**	**368**	**368**	**38**	**406**
7 AM – 8 AM	82	0	9	9	91	9	100	100	18	118
8 AM – 9 AM	0	0	8	8	8	8	16	16	16	32
9 AM – 10 AM	0	0	8	8	8	8	16	16	16	32
10 AM – 11 AM	0	0	8	8	8	8	16	16	16	32
11 AM – 12 PM	0	0	8	8	8	8	16	16	16	32
12 PM – 1 PM	0	0	8	8	8	8	16	16	16	32
1 PM – 2 PM	0	0	4	4	4	4	8	8	8	16
2 PM – 3 PM	0	21	4	4	4	25	29	8	29	37
3 PM – 4 PM	**0**	**329**	**4**	**4**	**4**	**333**	**337**	**8**	**337**	**345**
4 PM – 5 PM	0	62	0	0	0	62	62	0	62	62

Construction Trip Comparison

The weekday AM construction peak hour increment of 368 vehicle trips (406 PCE trips) and the weekday PM construction peak hour of 337 vehicle trips (345 PCE trips) would be substantially lower as compared to the operational peak hour trips. Each of the analysis peak hours (Friday PM, Saturday PM, and Saturday Night peak hours) would generate over 2,000 more peak hour vehicle trips than during the construction peak hours. **Table 16-4** shows the comparison of vehicle trip increments during the construction peak quarter's peak hours and the Expansion Project's operational peak hours.

Table 16-4 Table Vehicle Trips Comparison – Construction vs. Operational Conditions

	Construction Peak Hour Trips		Operational Peak Hour Trips		
	Weekday AM Peak Hour (6 AM – 7 AM)	Weekday PM Peak Hour (3 PM – 4PM)	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
Autos	330	329	2,081	2,136	2,161
Taxi[1]	-	-	356	366	362
Shuttle[1, 2]	-	-	16	20	20
Charter Bus [2]	-	-	5	5	5
Trucks	38	8	0	6	0
Total Vehicle Trips	**368**	**337**	**2,458**	**2,533**	**2,548**
PCE Trips	**406**	**345**	**2,469**	**2,552**	**2,561**

[1] As the Expansion Project is a high trip generator, a taxi overlap of 25 percent was assumed. For the casino and hotel shuttles an overlap of 100 percent was assumed as these vehicles would be conducting round trips.
[2] A PCE factor of 1.5 was assumed for shuttle and charter buses (assumed to be buses with two axles).

Construction Period Traffic Analysis Framework

As shown in **Table 16-4**, construction-related activities would be expected to generate 368 vehicle trips during the AM construction peak hour and 337 vehicle trips during the PM construction peak hour during the peak quarter of construction. In addition, by Q2 2029 it is expected that the existing casino space would be renovated, resulting in an increase of approximately 1,005 gaming positions including electronic and live table games. As part of the renovation, the existing on-site conference center space would be replaced by casino gaming uses. This change would generate new operational trips during the AM and PM construction peak hours, respectively. In total, the combined construction-related trips and operational trips would generate approximately 400 and 508 vehicle trips during the AM and PM construction peak hours, respectively.

As the construction-related trips would be substantially lower than the Expansion Project's operational trips the potential for temporary traffic impacts would be lower. However, as unmitigated traffic impacts were identified under the full build-out condition, key intersections were identified for construction period analysis to determine their potential for temporary significant impacts during construction. The intersections selected for further analysis include the nine intersections that were identified as unmitigable in at least one analyzed peak hour under the full build-out 2030 condition (see **Chapter 17, Mitigation**). The Project Site's northern entrance at Rockaway Boulevard and Aqueduct Road/108th Street was also selected to determine if implementation of the proposed operational improvements would be needed before the peak construction period. Lastly, the intersection of North Conduit Avenue and Belt Parkway Westbound Off-Ramp was also included to determine if installation of a new traffic signal - proposed as a mitigation measure - would be needed prior to the peak construction period. These 11 intersections are listed below:

- Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard
- Rockaway Boulevard and Aqueduct Road/108th Street
- Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot
- North Conduit Avenue and Cohancy Street/Albert Road
- North Conduit Avenue and Aqueduct Road

- North Conduit Avenue and Lefferts Boulevard/Old South Road
- Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp
- Lefferts Boulevard and Aqueduct Road
- Linden Boulevard and Southbound Van Wyck Service Road
- Linden Boulevard and Northbound Van Wyck Service Road
- North Conduit Avenue and Belt Parkway Westbound Off-Ramp

Existing Conditions

The existing conditions traffic volumes for the weekday AM and PM construction peak hours were based on turning movement counts collected in 2022 and 2024 during a typical weekday (Tuesday, Wednesday, or Thursday) when background traffic is highest due to commuter activities. Detailed traffic levels of service for the analyzed intersections are provided in **Table 16-5**.

Of the 11 intersections analyzed under the peak construction condition, none would operate at unacceptable levels of service during the AM or PM construction peak hours. Of the 55 movements analyzed, five would operate at unacceptable levels of service during the AM construction peak hour. During the PM construction peak hour, five movements would operate at unacceptable levels of service out of the 53 movements analyzed.

Table 16-5 Existing Construction Intersection Traffic Levels of Service

		Weekday 6-7 AM Peak Hour				Weekday 3-4 PM Peak Hour			
Intersection and Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
1. Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard									
Rockaway Boulevard	EB	TR	0.12	6.1	A	TR	0.40	11.1	B
	WB	L	0.23	44.1	D	L	0.35	33.7	C
		T	0.64	54.9	D	TR	0.54	35.0	C
		defR	0.90	81.7	F	-	-	-	-
Woodhaven Boulevard SB Service Road	SB	TR	0.28	11.8	B	T	0.54	19.5	B
		-	-	-	-	R	0.04	12.0	B
Woodhaven Boulevard Mainline	NB	T	0.95	8.5	A	T	0.66	6.5	A
	SB	L	0.27	62.8	E	L	1.05	145.6	F
		T	0.42	13.0	B	T	0.62	20.2	C
Cross Bay Boulevard NB Service Road	NB	TR	0.61	4.7	A	TR	0.45	6.1	A
Overall Intersection[2]		-	-	**19.4**	**B**	-	-	**22.7**	**C**

Table 16-5 Existing Construction Intersection Traffic Levels of Service

Intersection and Approach		Weekday 6-7 AM Peak Hour				Weekday 3-4 PM Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
2. Rockaway Boulevard and Aqueduct Road/108th Street									
Rockaway Boulevard	EB	L	-	9.5	A	L	-	9.1	A
		T	0.12	10.2	B	T	0.42	7.6	A
		R	0.05	10.0	A	R	0.27	7.3	A
	WB	L	0.09	0.9	A	L	0.40	13.6	B
		T	0.46	2.5	A	T	0.30	7.0	A
Aqueduct Road	NB	LR	0.04	30.6	C	LR	0.26	23.9	C
		R	0.04	30.6	C	R	0.30	25.5	C
Overall Intersection[2]		-	-	**5.0**	**A**	-	-	**11.3**	**B**
3. Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot									
Rockaway Boulevard	EB	L	0.14	18.0	B	L	0.77	35.7	D
		TR	0.17	16.9	B	TR	0.61	12.5	B
	WB	L	0.09	6.0	A	L	0.31	17.8	B
		TR	0.62	11.2	B	TR	0.57	16.8	B
Home Depot Parking Lot	NB	LTR	0.32	47.1	D	LTR	0.79	56.8	E
Linden Boulevard	SB	LTR	0.44	44.2	D	LTR	0.44	35.3	D
		R	0.41	43.3	D	R	0.41	34.2	C
Overall Intersection[2]		-	-	**19.0**	**B**	-	-	**22.5**	**C**
4. North Conduit Avenue and Cohancy Street/Albert Road									
North Conduit Avenue	WB	L	0.19	5.9	A	L	0.45	9.2	A
		T	0.92	19.7	B	T	0.74	14.5	B
		R	0.20	5.9	A	R	0.22	7.2	A
Cohancy Street	NB	L	0.37	28.1	C	L	0.67	47.5	D
		T	0.13	24.1	C	T	0.13	26.7	C
	SB	TR	0.46	45.9	D	TR	0.94	79.6	E
Overall Intersection[2]		-	-	**20.1**	**C**	-	-	**22.6**	**C**
5. North Conduit Avenue and Aqueduct Road (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Aqueduct Road	SB	R	-	10.4	B	R	-	10.4	B
Overall Intersection[2]		-	-	**0.7**	**A**	-	-	**1.0**	**A**

Table 16-5 Existing Construction Intersection Traffic Levels of Service

Intersection and Approach		Weekday 6-7 AM Peak Hour				Weekday 3-4 PM Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
6. North Conduit Avenue and Lefferts Boulevard/Old South Road									
North Conduit Avenue	WB	T	1.00	27.5	C	T	0.79	9.5	A
		R	0.04	5.5	A	R	0.09	5.5	A
Lefferts Boulevard	NB	L	0.71	34.8	C	L	1.04	96.2	F
		T	0.37	27.6	C	LT	1.03	75.0	E
	SB	T	0.50	44.0	D	TR	0.74	49.0	D
		defR	0.67	51.4	D	-	-	-	-
Overall Intersection[2]		-	-	**30.5**	**C**	-	-	**35.1**	**D**
7. Lefferts Boulevard and Eastbound Nassau Expressway Off-Ramp									
Eastbound Nassau Expressway Off-Ramp	EB	LTR	0.38	20.7	C	defL	0.92	46.4	D
		-	-	-	-	TR	0.37	21.3	C
Lefferts Boulevard	NB	TR	0.44	9.5	A	TR	0.58	12.2	B
	SB	LT	0.15	12.5	B	LT	0.19	12.9	B
Overall Intersection[2]		-	-	**13.6**	**B**	-	-	**24.0**	**C**
8. Lefferts Boulevard and Aqueduct Road									
Aqueduct Road	EB	L	0.09	24.5	C	L	0.46	29.8	C
		R	0.02	7.4	A	R	0.02	7.3	A
Lefferts Boulevard	NB	L	0.46	32.6	C	L	0.18	27.9	C
		T	0.66	14.2	B	T	0.66	14.2	B
	SB	TR	0.27	36.5	D	TR	0.23	43.0	D
Overall Intersection[2]		-	-	**21.7**	**C**	-	-	**22.2**	**C**
9. Linden Boulevard and Southbound Van Wyck Service Road									
Linden Boulevard	EB	TR	0.68	33.5	C	TR	0.74	36.5	D
	WB	defL	0.98	34.2	C	LT	0.59	8.8	A
		T	0.36	6.5	A	-	-	-	-
Southbound Van Wyck Service Road	SB	LTR	0.72	23.1	C	LTR	0.96	40.5	D
Overall Intersection[2]		-	-	**24.7**	**C**	-	-	**32.4**	**C**

Table 16-5 Existing Construction Intersection Traffic Levels of Service

Intersection and Approach		Weekday 6-7 AM Peak Hour Mvt	V/C	Ctrl Delay[1]	LOS	Weekday 3-4 PM Peak Hour Mvt	V/C	Ctrl Delay[1]	LOS
10. Linden Boulevard and Northbound Van Wyck Service Road									
Linden Boulevard	EB	defL	1.04	93.9	F	LT	0.88	25.3	C
		LT	1.03	70.5	E	-	-	-	-
	WB	TR	1.05	83.4	F	TR	0.88	48.1	D
Northbound Van Wyck Service Road	NB	LTR	0.82	25.1	C	LTR	0.83	25.5	C
Overall Intersection[2]		**-**	**-**	**48.1**	**D**	**-**	**-**	**29.0**	**C**
11. North Conduit Avenue and Westbound Belt Parkway Off-Ramp (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Westbound Belt Parkway Off-Ramp	WB	T	-	19.2	C	T	-	19.1	C
Overall Intersection[2]		**-**	**-**	**0.8**	**A**	**-**	**-**	**2.0**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

No-Action Without Construction Conditions

In order to estimate the background volumes for the 2029 No-Action without construction condition, No-Action condition traffic volumes were established by applying a background growth rate of 0.5 percent per year for the first five years (years 2022 to 2027) and a growth rate of 0.25 percent per year for the subsequent two years (year 2027 to 2029), in accordance with *CEQR Technical Manual* guidelines for Queens projects.

The No-Action background development sites discussed in **Chapter 11, Transportation,** remain the same. Approximately 150 gaming positions would be allowable under the No-Action without construction condition. In addition, similar to the operational condition analysis, the No-Action condition analysis included an estimate of trips associated with the existing conference center space. Vehicle trips associated with these uses were therefore reflected in the No-Action condition traffic volume network. Additionally, the relocation of Aqueduct Racetrack to Belmont Park would be expected to occur under the No-Action condition. However, as the construction peak hours would not be correlated with the peak hours of racing activities, a reduction in trips was not assumed.

Detailed traffic levels of service tables are provided in **Table 16-6.** Under the future No-Action condition, no intersections would operate at unacceptable levels of service during the AM or PM construction peak hours. The number of intersections that would operate at unacceptable levels of service would be the same as in the existing conditions. Of the 55 movements analyzed during the AM construction peak hour, six would operate at unacceptable levels of service, compared to five in the existing conditions. Of the 55 movements analyzed in the PM construction peak hour, six would operate at unacceptable levels of service, compared to five in the existing conditions.

Table 16-6 Year 2029 No-Action Construction Intersection Traffic Levels of Service

Intersection and Approach		Weekday 6-7 AM Peak Hour Mvt	V/C	Ctrl Delay[1]	LOS	Weekday 3-4 PM Peak Hour Mvt	V/C	Ctrl Delay[1]	LOS
1. Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard									
Rockaway Boulevard	EB	TR	0.13	5.7	A	TR	0.41	11.0	B
	WB	L	0.23	44.2	D	L	0.37	33.6	C
		T	0.66	55.7	E	TR	0.57	35.0	C
		defR	0.92	85.5	F	-	-	-	-
Woodhaven Boulevard SB Service Road	SB	TR	0.29	11.9	B	T	0.55	19.8	B
		-	-	-	-	R	0.04	12.0	B
Woodhaven Boulevard Mainline	NB	T	0.97	7.2	A	T	0.67	6.6	A
	SB	L	0.29	63.3	E	L	1.10	160.1	F
		T	0.43	13.2	B	T	0.64	20.6	C
Cross Bay Boulevard NB Service Road	NB	TR	0.62	4.8	A	TR	0.46	6.2	A
Overall Intersection[2]		**-**	**-**	**19.3**	**B**	**-**	**-**	**23.7**	**C**
2. Rockaway Boulevard and Aqueduct Road/108th Street									
Rockaway Boulevard	EB	L	-	9.6	A	L	-	9.3	A
		T	0.12	10.2	B	T	0.43	7.6	A
		R	0.06	9.9	A	R	0.30	7.4	A
	WB	L	0.10	1.0	A	L	0.45	14.8	B
		T	0.47	2.5	A	T	0.31	6.9	A
Aqueduct Road	NB	LR	0.04	30.6	C	LR	0.30	24.3	C
		R	0.04	30.7	C	R	0.35	26.3	C
Overall Intersection[2]		**-**	**-**	**5.0**	**A**	**-**	**-**	**11.8**	**B**
3. Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot									
Rockaway Boulevard	EB	L	0.15	18.1	B	L	0.88	50.9	D
		TR	0.18	16.9	B	TR	0.64	12.4	B
	WB	L	0.09	6.1	A	L	0.34	18.7	B
		TR	0.64	11.4	B	TR	0.58	16.9	B
Home Depot Parking Lot	NB	LTR	0.33	47.5	D	LTR	0.81	59.0	E
Linden Boulevard	SB	LTR	0.46	44.8	D	LTR	0.47	36.1	D
		R	0.43	43.7	D	R	0.44	34.9	C
Overall Intersection[2]		**-**	**-**	**19.2**	**B**	**-**	**-**	**24.0**	**C**

Table 16-6 Year 2029 No-Action Construction Intersection Traffic Levels of Service

Intersection and Approach		Weekday 6-7 AM Peak Hour Mvt	V/C	Ctrl Delay[1]	LOS	Weekday 3-4 PM Peak Hour Mvt	V/C	Ctrl Delay[1]	LOS
4. North Conduit Avenue and Cohancy Street/Albert Road									
North Conduit Avenue	WB	L	0.20	5.8	A	L	0.46	9.4	A
		T	0.94	21.8	C	T	0.77	15.4	B
		R	0.20	5.8	A	R	0.22	7.3	A
Cohancy Street	NB	L	0.39	28.4	C	L	0.68	48.3	D
		T	0.13	24.2	C	T	0.14	26.7	C
	SB	TR	0.48	46.2	D	TR	0.96	84.0	F
Overall Intersection[2]		-	-	**21.7**	**C**	-	-	**23.7**	**C**
5. North Conduit Avenue and Aqueduct Road (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Aqueduct Road	SB	R	-	10.6	B	R	-	10.9	B
Overall Intersection[2]		-	-	**0.7**	**A**	-	-	**1.2**	**A**
6. North Conduit Avenue and Lefferts Boulevard/Old South Road									
North Conduit Avenue	WB	T	1.02	34.0	C	T	0.81	9.9	A
		R	0.04	5.5	A	R	0.09	5.6	A
Lefferts Boulevard	NB	L	0.74	36.0	D	L	1.06	103.9	F
		T	0.38	27.8	C	LT	1.07	89.3	F
	SB	T	0.52	44.4	D	TR	0.75	49.9	D
		defR	0.70	52.8	D	-	-	-	-
Overall Intersection[2]		-	-	**35.3**	**D**	-	-	**39.1**	**D**
7. Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp									
Eastbound Nassau	EB	LTR	0.40	20.9	C	defL	0.95	50.6	D
Expressway Off-Ramp		-	-	-	-	TR	0.40	21.9	C
Lefferts Boulevard	NB	TR	0.45	9.7	A	TR	0.61	12.6	B
	SB	LT	0.16	12.5	B	LT	0.19	13.0	B
Overall Intersection[2]		-	-	**13.8**	**B**	-	-	**25.5**	**C**

Table 16-6 Year 2029 No-Action Construction Intersection Traffic Levels of Service

Intersection and Approach		Weekday 6-7 AM Peak Hour Mvt	V/C	Ctrl Delay[1]	LOS	Weekday 3-4 PM Peak Hour Mvt	V/C	Ctrl Delay[1]	LOS
8. Lefferts Boulevard and Aqueduct Road									
Aqueduct Road	EB	L	0.09	24.8	C	L	0.51	31.3	C
		R	0.02	7.5	A	R	0.02	7.4	A
Lefferts Boulevard	NB	L	0.47	32.9	C	L	0.19	28.1	C
		T	0.67	14.4	B	T	0.67	14.3	B
	SB	TR	0.28	36.1	D	TR	0.24	45.0	D
Overall Intersection[2]		-	-	**21.9**	**C**	-	-	**23.1**	**C**
9. Linden Boulevard and Southbound Van Wyck Service Road									
Linden Boulevard	EB	TR	0.70	34.3	C	TR	0.80	39.8	D
	WB	-	-	-	-	LT	(a)	20.2	C
		defL	1.03	37.0	D	defL	0.89	34.6	C
		T	0.36	6.2	A	T	0.38	7.5	A
Southbound Van Wyck Service Road	SB	LTR	0.74	23.8	C	LTR	0.99	47.9	D
Overall Intersection[2]		-	-	**25.7**	**C**	-	-	**36.3**	**D**
10. Linden Boulevard and Northbound Van Wyck Service Road									
Linden Boulevard	EB	defL	1.09	106.8	F	defL	1.03	70.7	E
		LT	1.09	88.8	F	T	0.74	18.3	B
	WB	TR	1.08	91.5	F	TR	0.91	51.6	D
Northbound Van Wyck Service Road	NB	LTR	0.84	25.9	C	LTR	0.85	26.5	C
Overall Intersection[2]		-	-	**53.5**	**D**	-	-	**32.9**	**C**
11. North Conduit Avenue and Belt Parkway Westbound Off-Ramp (unsignalized)									
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A
Westbound Belt Parkway Off-Ramp	WB	T	-	20.1	C	T	-	20.4	C
Overall Intersection[2]		-	-	**0.9**	**A**	-	-	**2.2**	**A**

[1] Control delay is measured in seconds per vehicle.

[2] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

(a) Under the No-Action construction condition, this approach operates as separate de facto left and through movements. The delay for the entire approach is shown for comparison purposes.

With-Action with Construction Conditions

Construction activities would be expected to generate approximately 330 construction worker auto trips and 38 construction truck trips during the AM construction peak hour, and 329 construction worker auto trips and 8 construction truck trips during the PM construction peak hour. Construction trucks would be required to use NYCDOT-designated truck routes, such as Woodhaven Boulevard, Cross Bay Boulevard, and Rockaway Boulevard, in order to travel to the project area and would access the construction site via the site entrance at Rockaway Boulevard and Aqueduct Road. Interim incremental operational trips associated with the partial build-out and operation of the Expansion Project would total 32 and 171 vehicle trips during the AM and PM construction peak hours, respectively.

The projected construction-generated vehicle trips during the AM and PM construction peak hours are shown in **Figure 16-3** through **Figure 16-10**. As indicated in **Table 16-7** and **Table 16-8**, one of the 11 analysis intersections would be significantly impacted during the AM construction peak hour, and four of the 11 intersections would be significantly impacted during the PM construction peak hour. The following intersections would be significantly impacted:

- Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot (PM construction peak hour only)
- North Conduit Avenue and Lefferts Boulevard/Old South Road (PM construction peak hour only)
- Linden Boulevard and Southbound Van Wyck Service Road (PM construction peak hour only)
- Linden Boulevard and Northbound Van Wyck Service Road (AM and PM construction peak hours)

As indicated in **Table 16-7** and **Table 16-8,** there would be no potential for significant traffic impacts at the intersection of Rockaway Boulevard and Aqueduct Road/108th Street nor at the intersection of North Conduit Avenue and the Belt Parkway Westbound Off-Ramp during the peak construction period. Therefore, implementation of the proposed project improvements (lane restriping and signal timing changes – see **Chapter 11, Transportation**) at Rockaway Boulevard and Aqueduct Road/108th Street, and the proposed mitigation measure (new traffic signal - **Chapter 17, Mitigation**) at North Conduit Avenue and the Belt Parkway Westbound Off-Ramp are not necessary during the construction period.

Detailed descriptions of the No-Action and With-Action with Construction conditions traffic levels of service and traffic mitigation measures are presented in **Table 16-7** and **Table 16-8**, for the AM and PM construction peak hours, respectively. Standard traffic capacity improvements implemented by NYCDOT, such as signal timing modifications, could potentially provide full or partial mitigation at some of the significantly impacted intersections.

Significant impacts at the one identified intersection during the AM construction peak hour (Linden Boulevard and the Northbound Van Wyck Service Road) could be fully mitigated with signal timing modifications. During the PM construction peak hour, significant impacts at two intersections (Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot and North Conduit Avenue and Lefferts Boulevard/Old South Road) could also be fully mitigated with signal timing modifications. These mitigation measures would be similar to measures identified in **Chapter 17, Mitigation**. However, significant traffic impacts at the two intersections listed below would remain unmitigated during the PM construction peak hours.

- Linden Boulevard and Southbound Van Wyck Service Road
- Linden Boulevard and Northbound Van Wyck Service Road

Figure 16-3 Construction-Generated Traffic Volumes – 6-7 AM Peak Hour – Section 1

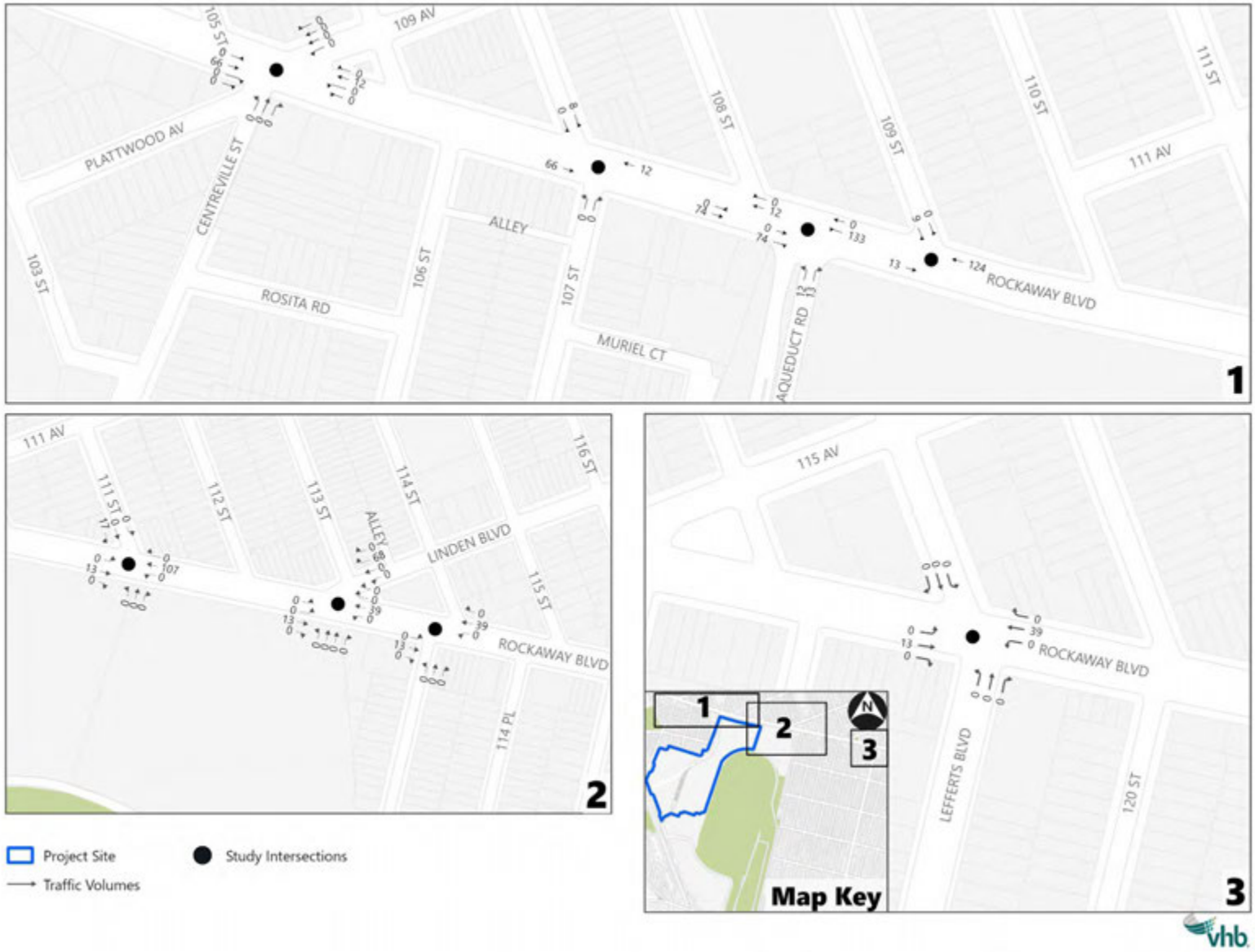


Figure 16-4 Construction-Generated Traffic Volumes – 6-7 AM Peak Hour – Section 2

Figure 16-5 Construction-Generated Traffic Volumes – 6-7 AM Peak Hour – Section 3

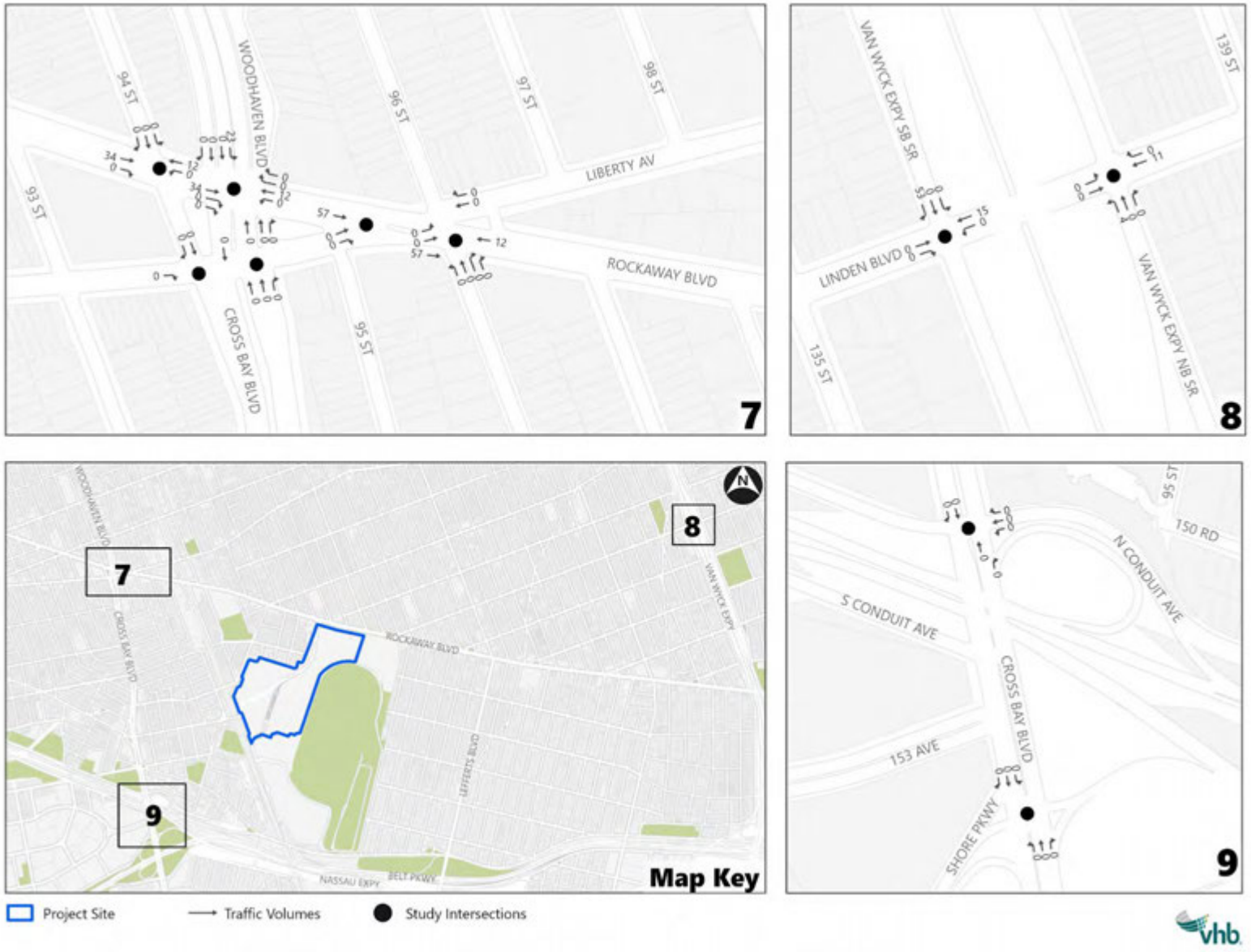


Figure 16-6 Construction-Generated Traffic Volumes – 6-7 AM Peak Hour – Section 4

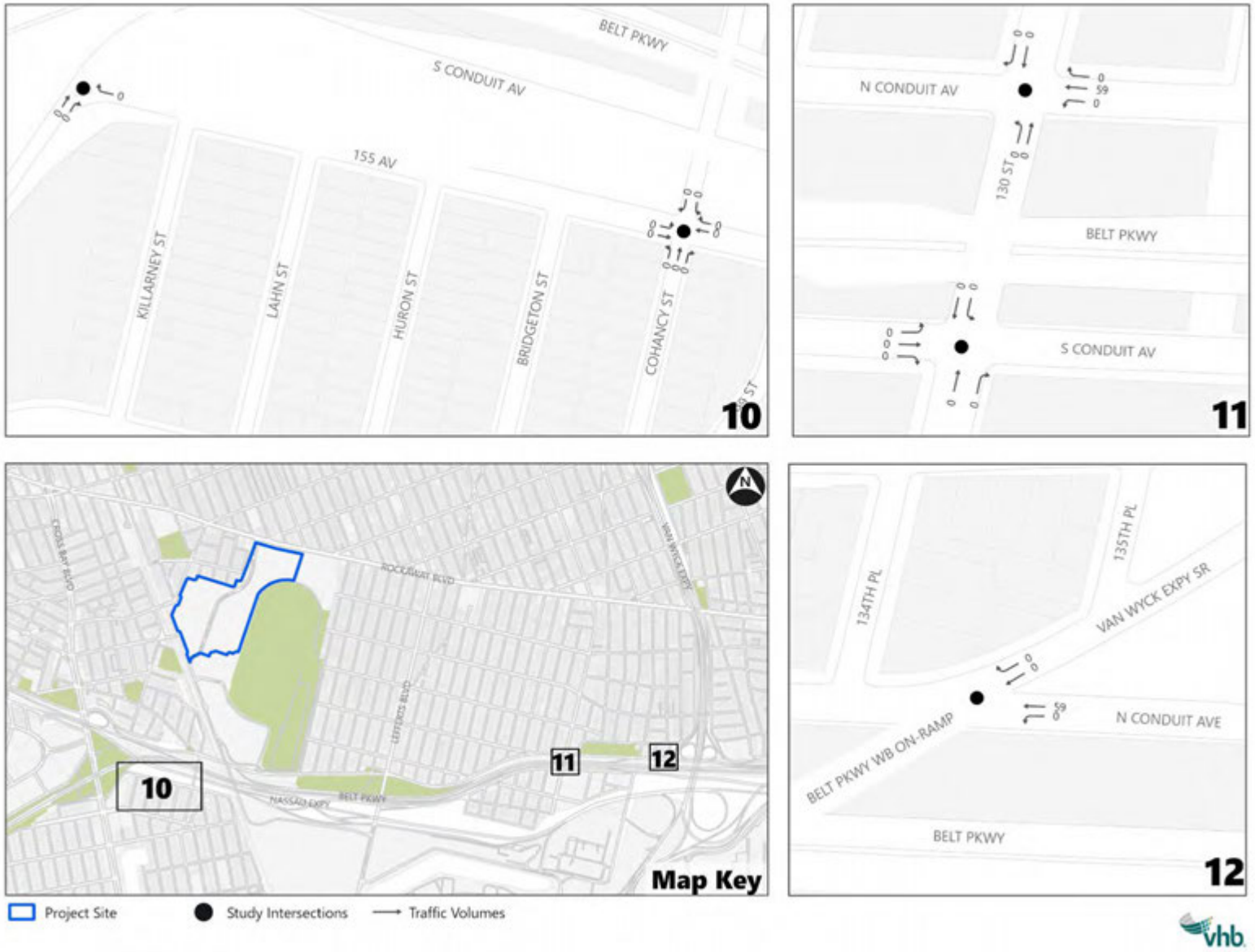


Figure 16-7 Construction-Generated Traffic Volumes – 3-4 PM Peak Hour – Section 1

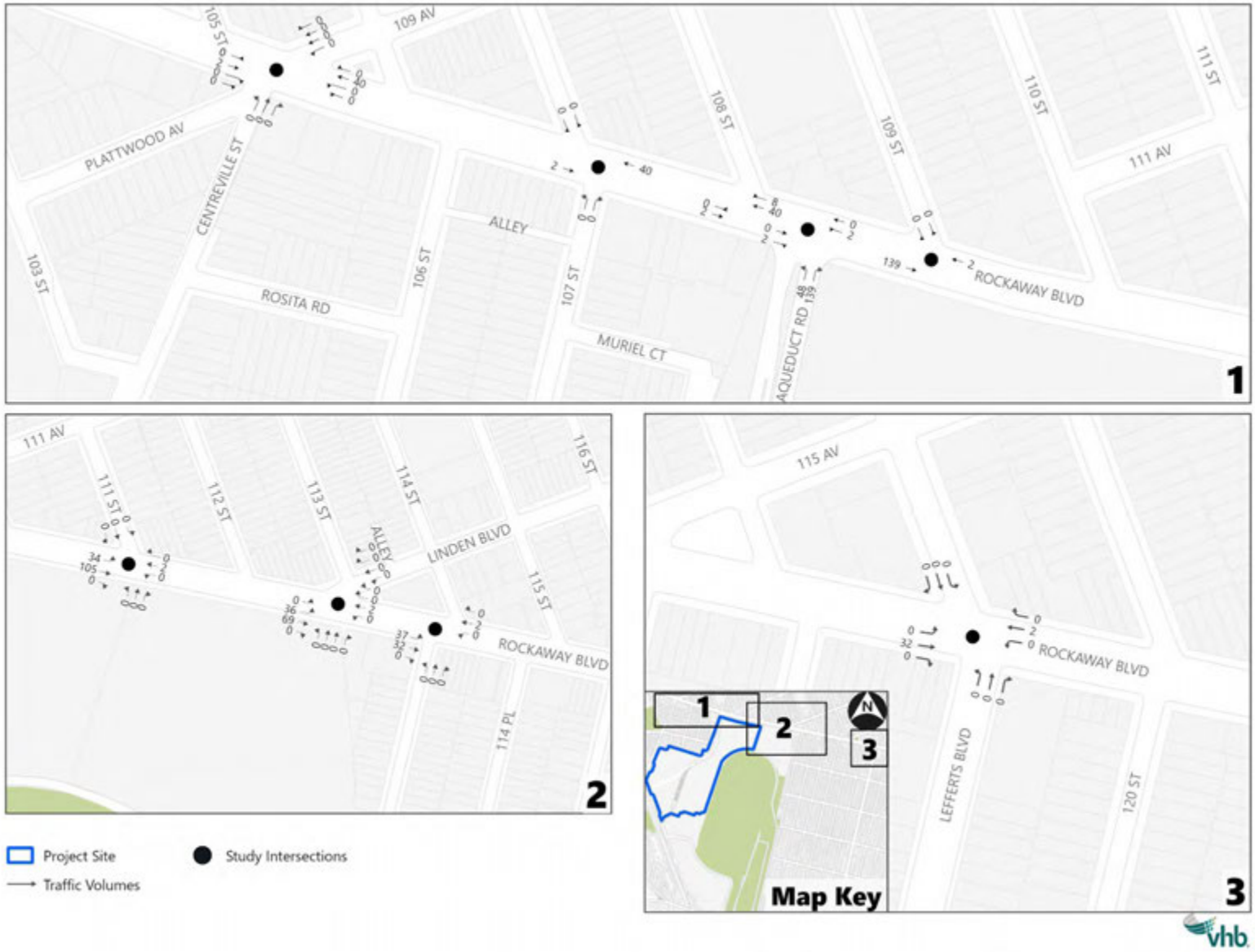


Figure 16-8 Construction-Generated Traffic Volumes – 3-4 PM Peak Hour – Section 2

Figure 16-9 Construction-Generated Traffic Volumes – 3-4 PM Peak Hour – Section 3

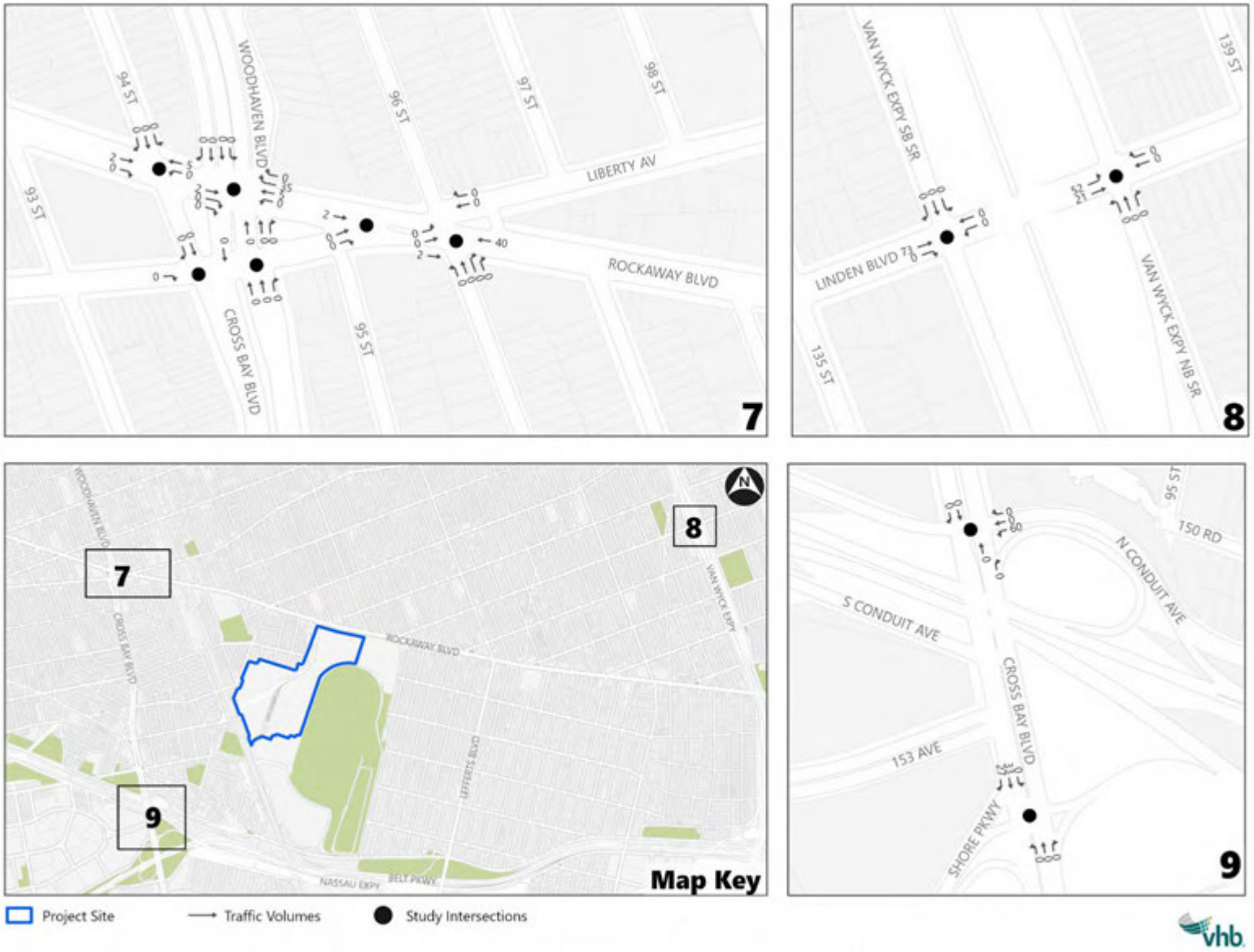


Figure 16-10 Construction-Generated Traffic Volumes – 3-4 PM Peak Hour – Section 4

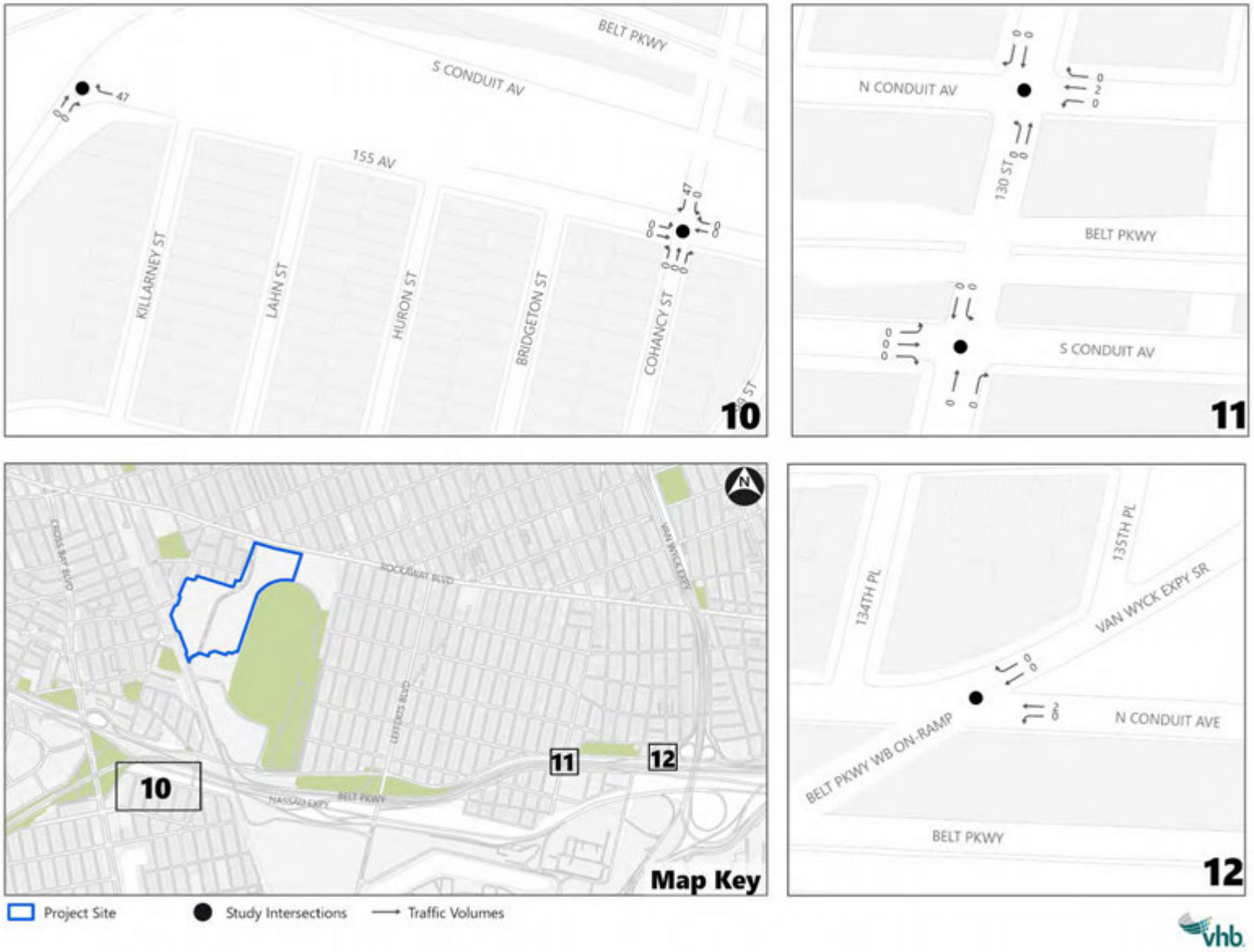


Table 16-7 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Weekday 6-7 AM Peak Hour

Intersection and Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
1. Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard														
Rockaway Boulevard	EB	TR	0.13	5.7	A	TR	0.17	5.0	A	TR	0.17	5.0	A	Mitigation not needed.
	WB	L	0.23	44.2	D	L	0.24	44.5	D	L	0.24	44.5	D	
		T	0.66	55.7	E	T	0.70	57.5	E	T	0.70	57.5	E	
		defR	0.92	85.5	F	defR	0.92	85.5	F	defR	0.92	85.5	F	
Woodhaven Boulevard	SB	TR	0.29	11.9	B	TR	0.29	11.9	B	TR	0.29	11.9	B	
SB Service Road		-	-	-	-	-	-	-	-	-	-	-	-	
Woodhaven Boulevard	NB	T	0.97	7.2	A	T	0.97	7.2	A	T	0.97	7.2	A	
Main Line	SB	L	0.29	63.3	E	L	0.44	68.1	E	L	0.44	68.1	E	
		T	0.43	13.2	B	T	0.43	13.2	B	T	0.43	13.2	B	
Cross Bay Boulevard NB Service Road	NB	TR	0.62	4.8	A	TR	0.62	4.8	A	TR	0.62	4.8	A	
Overall Intersection[3]		**-**	**-**	**19.3**	**B**	**-**	**-**	**19.8**	**B**	**-**	**-**	**19.8**	**B**	
2. Rockaway Boulevard and Aqueduct Road/108th Street														
Rockaway Boulevard	EB	L	-	9.6	A	L	-	9.6	A	L	-	9.6	A	Mitigation not needed.
		T	0.12	10.2	B	T	0.12	10.0	A	T	0.12	10.0	A	
		R	0.06	9.9	A	R	0.18	10.5	B	R	0.18	10.5	B	
	WB	L	0.10	1.0	A	L	0.34	2.4	A	L	0.34	2.4	A	
		T	0.47	2.5	A	T	0.47	2.4	A	T	0.47	2.4	A	
Aqueduct Road	NB	LR	0.04	30.6	C	LR	0.07	30.9	C	LR	0.07	30.9	C	
		R	0.04	30.7	C	R	0.09	31.4	C	R	0.09	31.4	C	
Overall Intersection[3]		**-**	**-**	**5.0**	**A**	**-**	**-**	**5.8**	**A**	**-**	**-**	**5.8**	**A**	

Table 16-7 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Weekday 6-7 AM Peak Hour

Intersection and Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
3. Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot														
Rockaway Boulevard	EB	L	0.15	18.1	B	L	0.17	20.2	C	L	0.17	20.2	C	Mitigation not needed.
		TR	0.18	16.9	B	TR	0.19	18.3	B	TR	0.19	18.3	B	
	WB	L	0.09	6.1	A	L	0.09	5.8	A	L	0.09	5.8	A	
		TR	0.64	11.4	B	TR	0.67	11.5	B	TR	0.67	11.5	B	
Home Depot Parking Lot	NB	LTR	0.33	47.5	D	LTR	0.33	47.5	D	LTR	0.33	47.5	D	
Linden Boulevard	SB	LTR	0.46	44.8	D	LTR	0.61	50.5	D	LTR	0.61	50.5	D	
		R	0.43	43.7	D	R	0.58	49.0	D	R	0.58	49.0	D	
Overall Intersection[3]		-	-	**19.2**	**B**	-	-	**21.7**	**C**	-	-	**21.7**	**C**	
4. North Conduit Avenue and Cohancy Street/Albert Road														
North Conduit Avenue	WB	L	0.20	5.8	A	L	0.20	5.7	A	L	0.20	5.7	A	Mitigation not needed.
		T	0.94	21.8	C	T	0.95	21.6	C	T	0.95	21.6	C	
		R	0.20	5.8	A	R	0.20	5.7	A	R	0.20	5.7	A	
Cohancy Street	NB	L	0.39	28.4	C	L	0.39	28.4	C	L	0.39	28.4	C	
		T	0.13	24.2	C	T	0.13	24.2	C	T	0.13	24.2	C	
	SB	TR	0.48	46.2	D	TR	0.48	46.2	D	TR	0.48	46.2	D	
Overall Intersection[3]		-	-	**21.7**	**C**	-	-	**21.5**	**C**	-	-	**21.5**	**C**	
5. North Conduit Avenue and Aqueduct Road (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A	Mitigation not needed.
Aqueduct Road	SB	R	-	10.6	B	R	-	11.1	B	R	-	11.1	B	
Overall Intersection[3]		-	-	**0.7**	**A**	-	-	**0.8**	**A**	-	-	**0.8**	**A**	

Table 16-7 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Weekday 6-7 AM Peak Hour

Intersection and Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
6. North Conduit Avenue and Lefferts Boulevard/Old South Road														
North Conduit Avenue	WB	T	1.02	34.0	C	T	1.07	49.9	D	T	1.07	49.9	D	Mitigation not needed.
		R	0.04	5.5	A	R	0.04	5.7	A	R	0.04	5.7	A	
Lefferts Boulevard	NB	L	0.74	36.0	D	L	0.77	37.7	D	L	0.77	37.7	D	
		T	0.38	27.8	C	T	0.38	27.8	C	T	0.38	27.8	C	
	SB	T	0.52	44.4	D	T	0.52	44.4	D	T	0.52	44.4	D	
		defR	0.70	52.8	D	defR	0.70	52.8	D	defR	0.70	52.8	D	
Overall Intersection[3]		-	-	**35.3**	**D**	-	-	**46.6**	**D**	-	-	**46.6**	**D**	
7. Lefferts Boulevard and Eastbound Nassau Expressway Off-Ramp														
Eastbound Nassau Expressway Off-Ramp	EB	LTR	0.40	20.9	C	LTR	0.45	21.6	C	LTR	0.45	21.6	C	Mitigation not needed.
		-	-	-	-	-	-	-	-	-	-	-	-	
Lefferts Boulevard	NB	TR	0.45	9.7	A	TR	0.45	9.7	A	TR	0.45	9.7	A	
	SB	LT	0.16	12.5	B	LT	0.16	12.5	B	LT	0.16	12.5	B	
Overall Intersection[3]		-	-	**13.8**	**B**	-	-	**14.3**	**B**	-	-	**14.3**	**B**	
8. Lefferts Boulevard and Aqueduct Road														
Aqueduct Road	EB	L	0.09	24.8	C	L	0.10	24.9	C	L	0.10	24.9	C	Mitigation not needed.
		R	0.02	7.5	A	R	0.02	7.5	A	R	0.02	7.5	A	
Lefferts Boulevard	NB	L	0.47	32.9	C	L	0.48	33.1	C	L	0.48	33.1	C	
		T	0.67	14.4	B	T	0.67	14.4	B	T	0.67	14.4	B	
	SB	TR	0.28	36.1	D	TR	0.30	41.6	D	TR	0.30	41.6	D	
Overall Intersection[3]		-	-	**21.9**	**C**	-	-	**23.1**	**C**	-	-	**23.1**	**C**	

Table 16-7 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Weekday 6-7 AM Peak Hour

Intersection and Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
9. Linden Boulevard and Southbound Van Wyck Service Road														
Linden Boulevard	EB	TR	0.70	34.3	C	TR	0.70	34.5	C	TR	0.70	34.5	C	Mitigation not needed.[2]
	WB	defL	1.03	37.0	D	defL	1.04	39.3	D	defL	1.04	39.8	D	
		T	0.36	6.2	A	T	0.39	6.3	A	T	0.39	6.3	A	
Southbound Van Wyck Service Road	SB	LTR	0.74	23.8	C	LTR	0.79	25.9	C	LTR	0.79	25.9	C	
Overall Intersection[3]		-	-	**25.7**	**C**	-	-	**26.9**	**C**	-	-	**27.0**	**C**	
10. Linden Boulevard and Northbound Van Wyck Service Road														
Linden Boulevard	EB	defL	1.09	106.8	F	defL	1.11	113.7	F	defL	1.08	101.7	F	Shift 1 second of green time from NB phase to EB/WB phase. [EB/WB phase shifts from 33 seconds to 34 seconds; NB phase shifts from 46 seconds to 45 seconds].
		LT	1.09	88.8	F	LT	1.12	99.2	F	LT	1.10	91.5	F	
	WB	TR	1.08	91.5	F	TR	1.11	100.7	F	TR	1.07	86.6	F	
Northbound Van Wyck Service Road	NB	LTR	0.84	25.9	C	LTR	0.84	26.0	C	LTR	0.86	27.7	C	
Overall Intersection[3]		-	-	**53.5**	**D**	-	-	**57.5**	**E**	-	-	**53.6**	**D**	
11. North Conduit Avenue and Westbound Belt Parkway Off-Ramp (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A	Mitigation not needed.
Westbound Belt Parkway Off-Ramp	WB	T	-	20.1	C	T	-	27.3	D	T	-	27.3	D	
Overall Intersection[3]		-	-	**0.9**	**A**	-	-	**1.8**	**A**	-	-	**1.8**	**A**	

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

[3] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Denotes a significantly impacted movement.

Table 16-8 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Weekday 3-4 PM Peak Hour

Intersection and Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
1. Cross Bay Boulevard/Woodhaven Boulevard and Rockaway Boulevard														
Rockaway Boulevard	EB	TR	0.41	11.0	B	TR	0.42	10.8	B	TR	0.42	10.8	B	Mitigation not needed.
	WB	L	0.37	33.6	C	L	0.38	32.0	C	L	0.38	32.0	C	
		TR	0.57	35.0	C	TR	0.63	34.4	C	TR	0.63	34.4	C	
Woodhaven Boulevard SB Service Road	SB	T	0.55	19.8	B	T	0.55	19.8	B	T	0.55	19.8	B	
		R	0.04	12.0	B	R	0.04	12.0	B	R	0.04	12.0	B	
Woodhaven Boulevard Main Line	NB	T	0.67	6.6	A	T	0.67	6.6	A	T	0.67	6.6	A	
	SB	L	1.10	160.1	F	L	1.10	161.8	F	L	1.10	161.8	F	
		T	0.64	20.6	C	T	0.64	20.6	C	T	0.64	20.6	C	
Cross Bay Boulevard NB Service Road	NB	TR	0.46	6.2	A	TR	0.46	6.2	A	TR	0.46	6.2	A	
Overall Intersection[3]		-	-	**23.7**	**C**	-	-	**23.8**	**C**	-	-	**23.8**	**C**	
2. Rockaway Boulevard and Aqueduct Road/108th Street														
Rockaway Boulevard	EB	L	-	9.3	A	L	-	9.5	A	L	-	9.5	A	Mitigation not needed.[2]
		T	0.43	7.6	A	T	0.43	7.6	A	T	0.43	7.6	A	
		R	0.30	7.4	A	R	0.33	7.7	A	R	0.33	7.7	A	
	WB	L	0.45	14.8	B	L	0.49	15.7	B	L	0.49	15.5	B	
		T	0.31	6.9	A	T	0.31	6.7	A	T	0.31	6.5	A	
Aqueduct Road	NB	LR	0.30	24.3	C	LR	0.45	26.4	C	LR	0.45	26.4	C	
		R	0.35	26.3	C	R	0.52	30.4	C	R	0.52	30.4	C	
Overall Intersection[3]		-	-	**11.8**	**B**	-	-	**13.9**	**B**	-	-	**13.9**	**B**	

Table 16-8 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Weekday 3-4 PM Peak Hour

Intersection and Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
3. Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot														
Rockaway Boulevard	EB	L	0.88	50.9	D	L	1.09	99.4	F	L	0.94	54.8	D	Shift 3 second of green time from SB phase to EB/WB phase. [SB phase shifts from 25 seconds to 22 seconds; EB/WB phase shifts from 38 seconds to 41 seconds].
		TR	0.64	12.4	B	TR	0.70	11.9	B	TR	0.64	9.9	A	
	WB	L	0.34	18.7	B	L	0.39	21.3	C	L	0.33	17.1	B	
		TR	0.58	16.9	B	TR	0.58	17.0	B	TR	0.54	14.9	B	
Home Depot Parking Lot	NB	LTR	0.81	59.0	E	LTR	0.81	59.0	E	LTR	0.81	59.0	E	
Linden Boulevard	SB	LTR	0.47	36.1	D	LTR	0.48	36.4	D	LTR	0.57	43.1	D	
		R	0.44	34.9	C	R	0.45	35.2	D	R	0.52	40.7	D	
Overall Intersection[3]		-	-	**24.0**	**C**	-	-	**28.5**	**C**	-	-	**23.7**	**C**	
4. North Conduit Avenue and Cohancy Street/Albert Road														
North Conduit Avenue	WB	L	0.46	9.4	A	L	0.52	11.0	B	L	0.52	10.8	B	Mitigation not needed.[2]
		T	0.77	15.4	B	T	0.80	17.2	B	T	0.80	17.0	B	
		R	0.22	7.3	A	R	0.22	7.6	A	R	0.22	7.5	A	
Cohancy Street	NB	L	0.68	48.3	D	L	0.68	48.2	D	L	0.68	48.2	D	
		T	0.14	26.7	C	T	0.14	26.8	C	T	0.14	26.8	C	
	SB	TR	0.96	84.0	F	TR	0.96	84.0	F	TR	0.96	84.0	F	
Overall Intersection[3]		-	-	**23.7**	**C**	-	-	**24.5**	**C**	-	-	**24.4**	**C**	
5. North Conduit Avenue and Aqueduct Road (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A	Mitigation not needed.
Aqueduct Road	SB	R	-	10.9	B	R	-	13.1	B	R	-	13.1	B	
Overall Intersection[3]		-	-	**1.2**	**A**	-	-	**2.2**	**A**	-	-	**2.2**	**A**	

Table 16-8 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Weekday 3-4 PM Peak Hour

Intersection and Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
6. North Conduit Avenue and Lefferts Boulevard/Old South Road														
North Conduit Avenue	WB	T	0.81	9.9	A	T	0.82	10.2	B	T	0.84	11.3	B	Shift 1 second of green time from WB phase to NB/NBL phase. [WB phase shifts from 66 seconds to 65 seconds; NB/NBL phase shifts from 18 seconds to 19 seconds].
		R	0.09	5.6	A	R	0.09	5.6	A	R	0.09	6.2	A	
Lefferts Boulevard	NB	L	1.06	103.9	F	L	1.09	111.6	F	L	1.04	95.0	F	
		LT	1.07	89.3	F	LT	1.08	91.8	F	LT	1.05	80.3	F	
	SB	TR	0.75	49.9	D	TR	0.75	49.9	D	TR	0.75	49.8	D	
Overall Intersection[3]		-	-	**39.1**	**D**	-	-	**40.5**	**D**	-	-	**37.3**	**D**	
7. Lefferts Boulevard and Eastbound Nassau Expressway Off-Ramp														
Eastbound Nassau Expressway Off-Ramp	EB	defL	0.95	50.6	D	defL	0.95	51.1	D	defL	0.95	51.1	D	Mitigation not needed.
		TR	0.40	21.9	C	TR	0.42	22.3	C	TR	0.42	22.3	C	
Lefferts Boulevard	NB	TR	0.61	12.6	B	TR	0.62	12.8	B	TR	0.62	12.8	B	
	SB	LT	0.19	13.0	B	LT	0.19	13.0	B	LT	0.19	13.0	B	
Overall Intersection[3]		-	-	**25.5**	**C**	-	-	**25.7**	**C**	-	-	**25.7**	**C**	
8. Lefferts Boulevard and Aqueduct Road														
Aqueduct Road	EB	L	0.51	31.3	C	L	0.55	32.2	C	L	0.55	32.2	C	Mitigation not needed.
		R	0.02	7.4	A	R	0.02	7.4	A	R	0.02	7.4	A	
Lefferts Boulevard	NB	L	0.19	28.1	C	L	0.23	28.6	C	L	0.23	28.6	C	
		T	0.67	14.3	B	T	0.67	14.3	B	T	0.67	14.3	B	
	SB	TR	0.24	45.0	D	TR	0.25	48.0	D	TR	0.25	48.0	D	
Overall Intersection[3]		-	-	**23.1**	**C**	-	-	**24.0**	**C**	-	-	**24.0**	**C**	

Table 16-8 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Weekday 3-4 PM Peak Hour

Intersection and Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
9. Linden Boulevard and Southbound Van Wyck Service Road														
Linden Boulevard	EB	TR	0.80	39.8	D	TR	0.93	53.7	D	TR	0.93	53.7	D	**Unmitigable.**
	WB	defL	0.89	34.6	C	defL	1.10	91.7	F	defL	1.10	91.7	F	
		T	0.38	7.5	A	T	0.39	7.5	A	T	0.39	7.5	A	
Southbound Van Wyck Service Road	SB	LTR	0.99	47.9	D	LTR	1.00	48.1	D	LTR	1.00	48.1	D	
Overall Intersection[3]		-	-	**36.3**	**D**	-	-	**48.5**	**D**	-	-	**48.5**	**D**	
10. Linden Boulevard and Northbound Van Wyck Service Road														
Linden Boulevard	EB	defL	1.03	70.7	E	defL	1.21	131.5	F	defL	1.21	131.5	F	**Unmitigable.**
		T	0.74	18.3	B	T	0.78	16.7	B	T	0.78	16.7	B	
	WB	TR	0.91	51.6	D	TR	0.92	52.7	D	TR	0.92	52.7	D	
Northbound Van Wyck Service Road	NB	LTR	0.85	26.5	C	LTR	0.85	26.5	C	LTR	0.85	26.5	C	
Overall Intersection[3]		-	-	**32.9**	**C**	-	-	**39.3**	**D**	-	-	**39.3**	**D**	
11. North Conduit Avenue and Belt Parkway Westbound Off-Ramp (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A	Mitigation not needed.
Belt Parkway Westbound Off-Ramp	WB	T	-	20.4	C	T	-	21.3	C	T	-	21.3	C	
Overall Intersection[3]		-	-	**2.2**	**A**	-	-	**2.4**	**A**	-	-	**2.4**	**A**	

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

[3] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

Denotes a significantly impacted movement.

Delivery Routing

Construction trucks would be required to use NYCDOT-designated truck routes and service the construction site at the designated loading zones. The location of the loading zones is dependent on the locations of the buildings under construction; loading is expected to occur within the site to where construction activities would be happening.

There are several truck routes within the vicinity of the Project Site, and trucks would access the Project Site through the Rockaway Boulevard entrance. Available NYCDOT-designated truck routes in the traffic study area include Rockaway Boulevard, Cross Bay Boulevard and Linden Boulevard. Trucks and commercial vehicles are prohibited on the Belt Parkway.

Curb Lane Closure and Staging

It is common that parking lanes, travel lanes, or sidewalk spaces may need to be temporarily closed in order to facilitate construction activity. All such closures require OCMC's approval. MPT plans showing the proposed closures and necessary safety protection measures are provided to OCMC for review and approval. However, as all construction activity, including staging and loading, would occur within the Project Site, no closure of parking lanes, travel lanes, or sidewalk spaces are expected to be needed.

Parking

Construction workers would generate an estimated maximum daily parking demand of 412 spaces during the Q2 2029 peak quarter. Parking for construction workers would be provided in the approximately 1,109 on-site surface spaces in the north lot (Lot C) of the Aqueduct Racetrack property, which would be able to accommodate this demand. Construction workers would not be allowed to park at the remaining parking facilities that would remain open during construction for use by RWNYC staff and visitors. The new convention center's 3,309-space parking garage would be opened in Q3 2027, during the second phase of construction, providing additional parking supply for visitors. Therefore, construction for the Expansion Project would not result in a parking shortfall.

Transit and Pedestrians

It is anticipated that approximately 26 percent of construction workers would travel to the Project Site by subway or bus. During Q2 2029, when the number of daily construction workers would be highest, construction activity would generate 882 daily construction workers (229 workers by subway or bus and 35 by walking). 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. During the two construction peak hours, construction activities would generate approximately 183 construction worker trips by subway or bus and 28 walk-only trips. The total of transit trips plus walk-only would be 211 pedestrian trips during both the AM and PM construction peak hours.

Construction-related transit trips would be significantly lower than transit trips generated during the operational peak hours and, as these trips would occur outside of the commuter peak hours, significant construction transit impacts are not expected. While the total number of pedestrian trips would exceed the *CEQR Technical Manual* threshold of 200 or more pedestrians, no public sidewalk, corner, or crosswalk space would attract 200 or more pedestrian trips, as the majority of walk trips to and from subway stations or bus stops would be confined within the Project Site. Therefore, the Expansion Project would not result in pedestrian impacts during the construction period.

Air Quality

Construction activities associated with the Expansion Project would result in a temporary increase in air quality impacts. Construction activity generally affects air quality as a result of particulate matter (fugitive dust) created by demolition, excavation, transfer of debris into trucks, emissions from on-site diesel equipment, and emissions from increased truck traffic to and from the construction site.

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 has small engines, resulting in lower emissions. Additionally, the latter stages of construction do not involve soil disturbance activities and therefore result in significantly lower fugitive dust emissions.

The construction-related air quality assessment was based on the NYSDOT's TEM guidance, construction phasing sequence and logistics plans shown above, construction transportation information and pollutant emission control measures. The sequencing information presented above indicates that each of the four construction phases (phase 1, 2A, 2B and C) would not occur for more than five years at any one area. Furthermore, detailed below are the three sources of air pollutant emissions from construction: construction-related traffic, fugitive dust from the storage and transfer of construction materials, and on-site construction equipment.

Construction-Related Traffic

Construction vehicles would enter and exit the Project Site through 2 locations—Rockaway Boulevard and Aqueduct Road to the north of the site and North Conduit Avenue and Aqueduct Road to the south of the site. Construction trucks would travel along NYCDOT-designated truck routes and would not use local minor streets other than Aqueduct Road. Furthermore, roadway detours or traffic diversions would not be needed for the project's construction phases Therefore, street network access in the surrounding communities would not be obstructed. Therefore, per the NYSDOT TEM guidance, a detailed quantitative analysis of construction air quality impacts is not warranted.

Additional emission control measures would include ensuring that construction vehicles and equipment would include and properly maintain their emission control equipment. This would include, but is not limited to, maintenance of all motor vehicles, machinery, and equipment associated with construction activities and proper fitting of equipment with mufflers or other regulatory-required emissions control devices. Where appropriate, vehicles would reduce idling on site in conformance with New York State requirements. Idling at off-site locations would be subject to New York City regulations, which are more stringent than state requirements (3 minutes versus 5 minutes).[5]

[5] "You're The Key to Being Idle Free." https://dec.ny.gov/environmental-protection/air-quality/controlling-motor-vehicle-pollution/youre-the-key-to-being-idle-free#:~:text=Idling%20Regulations,-Here%20are%20some&text=The%20idling%20regulation%20is%20enforced,or%20local%20laws%20may%20apply.

Fugitive Dust

Fugitive dust consists of soil particles that become airborne when disturbed by heavy equipment operation or through wind erosion of exposed soil after groundcover (e.g., lawn, pavement) is removed. Fugitive dust emissions would primarily result from the demolition and excavation/foundation phases of the Expansion Project's construction. Demolition activities would not occur for more than 3 months in phase C of construction, and excavation/foundation activities would not occur for more than 9 months in any phase of construction. Furthermore, the contractor would be responsible for protective measures around the demolition and excavation/foundation work to protect pedestrians and prevent dust and debris from leaving the site or entering the surrounding community. To minimize fugitive dust emissions, a water truck would be utilized (as needed) during construction activities where land surfaces would be disturbed. This construction–related air quality impact (i.e., fugitive dust) would be of relatively short duration.

On-site Construction Equipment

Construction specifications would require that all diesel equipment used on-site would be fitted with their original manufacturer's engine emission controls such as oxidation catalysts or diesel particulate filters. Federal standards for nonroad diesel engines have become more stringent over time. Federal standards for nonroad diesel engines were first adopted in 1994 for engines over 50 hp and were phased in from 1996 to 2000 (Tier 1 standards). Subsequently, more stringent regulations were adopted (Tier 1-3 standards) and phased in from 2000 to 2008 and most recently, Tier 4 standards were adopted and phased in from 2008 to 2015. These regulations address emissions of particulate matter (PM) and nitrogen oxide (NO_x). It is expected that air emissions associated with such engines would be reduced. Given the construction timeframe (2025-2029), 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) would be implemented. Tier 3 with DPF achieves the same 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.

The following measures would be implemented with respect to air quality impacts during the construction period, as follows:

- Emission controls for construction vehicles emissions would include, as appropriate, proper maintenance of all motor vehicles, machinery, and equipment associated with construction activities, such as, the maintenance of manufacturer's muffler equipment or other regulatory required emissions control devices.
- Construction vehicles and equipment would include and properly maintain their emission control equipment and, where appropriate, vehicles would reduce idling on site.
- The Expansion Project is committed to reducing emissions from diesel equipment through the use of equipment that meets EPA's tier 3 with diesel particulate filters and/or tier 4 emissions standards. This commitment would be memorialized through an amended lease agreement with New York State Franchise Oversight Board or through the license agreement with the Gaming Commission.
- Appropriate methods of dust control would be determined by the surfaces affected (i.e., roadways or disturbed areas) and would include, as necessary, the application of water, the use

of stone in construction entrances and roads, and regular sweeping of the pavement and adjacent roadway surfaces during construction.

- As previously discussed, a tracking pad, or stabilized construction entrance/exit would be provided to reduce the tracking of sediment onto surrounding public roadways and streets. Such tracking pad, as well as other erosion control measures would be installed in accordance with applicable criteria set forth in the *New York State Standards and Specifications for Erosion and Sediment Control* (2016 Blue Book).

Overall, air quality in the area of the property would not be expected to be substantially affected by redevelopment activities because of commitment to the above-mentioned emission control procedures.

Noise

Introduction

Construction activities associated with the Expansion Project would result in temporary increase in nearby sound levels due to the use of heavy machinery during construction. Construction noise can vary significantly based on the phase of construction (e.g., site preparation, demolition, land clearing and excavations, foundation, superstructure and exterior closure, and interior buildout), the specific task, equipment, and methods being used at the site. A description of the construction activities is described in the **Construction Schedule and Activities** section.

As described in the Construction chapter of the *CEQR Technical Manual*, the need to conduct either a qualitative or quantitative analysis of construction noise emissions is determined based on factors such as the Expansion Project's location relative to existing residential areas or other sensitive receptors, the intensity of the construction activity, and the project's commitments to appropriate noise control measures. Given the duration and scale of the Expansion Project, a quantitative construction noise analysis is conducted to assess the impact of construction activities on nearby sensitive receptors.

Construction Noise Analysis Fundamentals

Construction activities increase noise levels as a result of the operation of construction equipment on site and the movement of construction-related vehicles (i.e., worker trips, and material and equipment trips) on the roadways to and from the construction site. The combined effect of each of these noise sources are evaluated.

The noise generated by construction equipment at a specific receptor location near a construction site is generally calculated by summing the noise produced by all operating equipment. For each piece of equipment, the noise level at the receptor location depends on the following factors:

- The noise emission level of the equipment.
- A usage factor, which accounts for the percentage of time the equipment is operating at full power.
- The distance between the piece of equipment and the receptor.
- Topography and ground effects; and
- Shielding.

Similarly, noise levels due to construction-related traffic are a function of the following:

- The noise emission levels of the type of vehicle (e.g., auto, light-duty truck, heavy-duty truck, etc.).
- Volume of vehicular traffic on each roadway segment.
- Vehicular speed.
- The distance between the roadway and the receptor.
- Topography and ground effects; and
- Shielding.

Regulatory Context

CEQR Technical Manual

The construction noise impact criteria from Chapter 22 of the *CEQR Technical Manual* were used to assess potential significant adverse noise impacts. Developed by New York City, this manual is tailored to local conditions, making it apt for evaluating project effects in the City. Using these criteria helps New York City agencies meet their environmental review obligations under CEQR when issuing permits or approvals.

Chapter 22, Section 100 of the *CEQR Technical Manual* defines construction duration as "short-term" (less than two years) or "long-term" (more than two years) and indicates that construction noise analysis is needed only if it affects a sensitive receptor over a long period. According to the manual, the construction noise analysis evaluates both the potential increase in noise levels (magnitude) and the duration of construction noise to assess potential effects.

The noise impact criteria in Chapter 19, Section 410 of the *CEQR Technical Manual* act as a screening 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 the receptor would not have the potential to experience a construction noise impact. However, 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 potential significant adverse impacts. The screening thresholds for mobile and on-site construction activities are as follows:

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

When the screening-thresholds are exceeded, a more detailed assessment is completed, determining the duration of exceedances above the screening-level noise impact criteria along with the magnitude of construction noise levels.

Therefore, a temporary significant adverse construction noise impact from the Expansion Project is identified when the screening-level thresholds are exceeded for two years or more.

Construction Noise Code

In addition, the NYC Noise Code (Section 24-228) has the following applicable criteria that should also be considered:

- Noise from non-impulsive construction equipment to a maximum of 85 dBA as measured 50 feet or more from a source or sources, measured at a point at the property line. This value also correlates with the criteria provided in the *CEQR Technical Manual* chapter for Human Health.
- Sound should not exceed 10 dBA above the ambient sound levels on or after 7:00 AM and before 10:00 PM.

Therefore, the construction activities are expected to comply with NYC Noise Code criteria thresholds throughout the whole duration of the construction work.

As outlined in the NYC Noise Code (Section 24-228) and in Section 3307.7 of the DOB regulations, the Expansion Project must include a perimeter noise barrier within 200 feet of any receptor, constructed to provide adequate sound attenuation. Section 3307.7 of the New York City Building Code mandates a solid perimeter noise barrier made of wood or other suitable materials around new construction or demolition sites. For the Expansion Project, a 16-foot-high perimeter noise barrier is planned to surround the Project Site during the first phases of construction.

Construction Noise Assessment Methodology

The quantitative construction noise analysis includes both mobile and stationary construction noise sources. Stationary sources are based on typical equipment used during the assessed phases of construction. There would be overlapping construction activities during the majority of construction work.

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 Mobile Source Noise Modeling

The construction mobile source noise assessment evaluated 11 intersections during the 6:00 to 7:00 AM period in the second quarter of 2029 (Q2 2029). These 11 intersections were evaluated for construction traffic impacts and are further described in the **Transportation** section and in **Chapter 17, Mitigation**. VHB conducted traffic counts during peak hours of travel on Thursday, October 27, 2022. Construction traffic assumptions were developed using 2000 Census "reverse journey to work" data for the construction industry for Queens Community District 10.

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. Chapter 19 of the *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:

$$Sound\ Level\ Increase\ (Leq) = 10 * \log\left(\frac{Existing\ and\ Construction\ PCEs}{Existing\ PCEs}\right)$$

Construction Stationary Source Noise Modelling

Construction of the Expansion Project is anticipated to begin in 2026, with each phase lasting up to or more than 12 months, and full project completion expected by 2031. Because the Expansion Project would involve multiple phases of construction, the worst-case quarter for each construction phase has been assessed to determine the likelihood of noise levels exceeding a temporary significant adverse construction noise impact threshold. Where construction phases overlap, the cumulative noise levels from both phases of construction are assessed. Where predicted noise levels exceed the screening thresholds, additional modeling of subsequent quarters has been conducted to determine if the duration threshold of two years or more has also been exceeded. If both criteria are exceeded, a temporary significant adverse construction noise impact would be identified.

Based on the construction program, the following phases of construction were assessed:

› Phase 2A: Ring Road/ Parking Garage and CUP Building (Q2 2026):
  - Utility relocation and galleries for Ring Road, constructing Ring Road, utility relocation for Parking Garage and CUP Building, and constructing Parking Garage/CUP foundation.
  - No other construction phases are working simultaneously.

› Phase 2A-2: Plaza Construction (Q3 2027):
  - Construct new plaza foundation, new plaza underground plumbing, and new plaza underground electrical.
  - Phase 2B-1 is working simultaneously and has been considered in the predictions.

› Phase 2B-1: Relocate Utilities, Pool and Hotel (Q4 2027):
  - Utility relocation, construction of hotel foundation, and construction of new hotel underground.
  - Phase 2A-2 is working simultaneously and has been considered in the predictions.

› Phase 2B-2: Arena and Ballroom (2028 – 2031) (Q1 and Q4 2028):
  - Construct arena foundation, construct ballroom foundation, construct arena structure, and construct ballroom structure.
  - Phases 2A-2, 2B-1, 2B-2, and 2C are working simultaneously and have been considered in the predictions.

› Phase 2C: Conservatory (Q4 – 2029):
  - Conservatory general construction, conservatory mechanical, conservatory sprinkler, conservatory electrical, construct trackside plaza, and conservatory building finishes.
  - Phases 2B-1 and 2B-2 are working simultaneously and have been considered in the predictions.

Figure 16-1 shows the location of the various construction phases for the Expansion Project.

The worst-case quarter for each construction activity takes into account the projected quantity of equipment that would likely be operating simultaneously, and the number of trucks entering and exiting the site per day and the duration of the activity. It is also important to note that passenger vehicles would be present on-site. However, given that passenger vehicles traveling at speeds below 35 mph generate sound levels that are more than 10 dB quieter than those of trucks, their contribution to the overall sound level is considered insignificant. Hence, passenger vehicles were excluded from the sound model.

Construction Equipment Noise Emissions

Table 16-9 presents the type of construction 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 the peak quarter of each construction phase. A breakdown of type, and amount of equipment during each quarter of the construction project is provided in **Appendix F**. Equipment type and quantity are based on available data from the construction team and the sound level at 50 feet as well as the usage factor are based on Chapter 22 of the *CEQR Technical Manual*. This table does not include trucks at the Project Site such as box trucks, pickup trucks, tractor trailers, packer trucks and container trucks, since they are not allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163.

Table 16-9 Construction Equipment by Quarter of Analysis

Equipment Type	Max Sound Level at 50 feet (L_{max}, dBA)	Usage Factor	Number of Construction Equipment Pieces by Analysis					
			Q2 2026	Q3 2027	Q4 2027	Q1 2028	Q4 2028	Q4 2029
Grader	85	0.4	3	1	1	0	0	0
Excavator	85	0.4	9	3	3	1	0	0
Dozer	85	0.4	3	1	1	0	0	0
Manlift	85	0.2	3	0	0	0	1	0
Dump Truck	84	0.4	20	8	8	0	0	0
Crane	85	0.16	0	0	0	0	2	0
Concrete Trucks	85	0.4	1	2	3	2	5	0
Concrete Pumps	82	0.2	0	2	3	2	5	0
Trucks (Average per hour)*	N/A	N/A	9	3	7	10	12	4

*Average truck numbers per hour are based on the information provided in **Table 16-1**, assuming an 8-hour workday between 7:00am – 3:00pm

To account for the noise generated by these trucks as they enter the site, traverse the construction access road, and depart, the TNM 2.5 module in CadnaA has been utilized. Consequently, the construction noise predictions presented here also encompass the noise contributions from truck movements on-site.

Noise Reduction Measures

Construction of the Expansion Project would be required to follow the requirements of the NYC Noise Code (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) for construction noise control measures.

Additionally, construction of the Expansion Project would incorporate noise control measures that go beyond those required by the NYC Noise Code. Specific noise control measures would be incorporated in a noise control plan required under the NYC Noise Code. These measures could include a variety of source and path controls.

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 implemented in accordance with the NYC Noise Code:

- A 16-foot-tall perimeter sound wall will be installed prior to the commencement of construction works. The sound wall will follow the existing boundary fence line and will be in-situ for the duration of the construction. To ensure a sufficient STC[6] rating, the sound wall should be constructed to meet the following criteria:
  - A surface density of at least 10 kg/m^2;
  - A fully closed surface with no large cracks or gaps; and
  - Sufficient width and height to minimize sound diffraction around or over the barrier.

  Additionally, the NRC[7] of the sound wall facing the construction site should be at least 0.7 to minimize reflections.
- Temporary acoustic barriers approximately 2 meters high will be installed around construction areas, combining solid fencing with noise-absorbing curtains.
- Equipment that meets the sound level standards specified in Subchapter 5 of the NYC Noise Code would be utilized from the start of construction. **Table 16-10** shows the noise levels for construction equipment and the mandated noise levels for the equipment that would be used for construction of the Expansion Project.
- As early in the construction period as logistics allow, diesel- or gas-powered equipment would be replaced, to the extent feasible and practicable, with electrical-powered equipment such as welders and water pumps (i.e., early electrification). Where electrical equipment cannot be used, diesel or gas-powered generators and pumps would be located within buildings to the extent feasible and practicable.
- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, trucks would not be allowed to idle more than 3 minutes at the construction site per Title 24, Chapter 1, Subchapter 7, Section 24-163 of the New York City Administrative Code.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

Receptors

Adopting the guidance for modeling noise from stationary sources, the *CEQR Technical Manual* stipulates that receptors situated within a 1,500-foot radius of the Project Site and within direct line-of-sight should be considered for analysis. Identification of receptors within this radius, particularly

[6] Sound Transmission Class (STC) is a rating that measures how well a material or structure, such as a wall or partition, reduces airborne sound transmission. A higher STC rating indicates better sound insulation, meaning less sound passes through a sound wall.

[7] Noise Reduction Coefficient (NRC) is a rating that measures how much sound a material absorbs rather than reflecting it back into a space. It is expressed as a value between 0 and 1, where 0 means no absorption (total reflection) and 1 means complete absorption (no reflection). The NRC is determined by averaging a material's absorption coefficients at four key mid-range frequencies (250, 500, 1000, and 2000 Hz). Higher NRC values indicate better sound absorption.

those with direct line-of-sight to the proposed construction work, was accomplished through the utilization of various tools such as GIS, satellite imagery, and Google Street View. Furthermore, a noise survey was conducted on October 28th and 29th, 2022, during which an evaluation was completed of existing receptors, including potential line-of-sight considerations.

Based on Chapter 22 of the *CEQR Technical Manual*, approximately 950 receptors were identified within the 1,500-foot radius. Land uses found surrounding the Project Site are predominantly residential. However, a small portion of the study area directly south of the Belt Parkway and South Conduit Avenue is zoned for light industrial uses. Of the residential receptors within the 1,500-foot screening distance, the following 19 receptors have been identified as having a direct line-of-sight to the proposed construction work, listed with the neighborhood street they are representing:

- R01 – 107th Street
- R02 – 108th Street
- R03 – Sutter Avenue
- R04 – 106th Street
- R05 – Sutter Avenue
- R06 – 105th Street
- R07 – Centerville Street
- R08 – Project Property Plan
- R09 – Boss Street
- R10 – Centerville Street
- R11 – Centerville Street
- R12 – Peconic Street
- R13 – Hawtree Street
- R14 – Hawtree Street
- R15 – Linden Boulevard
- R16 – 135th Road
- R17 – Pitkin Avenue
- R18 – 135th Drive
- R19 - Hawtree Street
- R20 – Hyatt Regency JFK Airport

The identified receptors for the detailed construction noise assessment are provided in **Figure 16-11**.

Figure 16-11 Construction Noise Receptors

Source: VHB Technical Noise Analysis, MapPLUTO, NYC Parks

Existing Ambient Noise Measurements

Noise measurements were undertaken on October the 28th and 29th of 2022 in locations representative of the closest receptors to the Project Site. The measurements determined the existing ambient noise levels and help provide context into the local noise climate. The results from the noise measurements are shown in **Table 16-10**. **Figure 16-11** shows the noise monitoring locations in relation to the Project Site and receptor locations.

Table 16-10 Noise Measurement Results

ID	Monitoring Location	Time Period	Date and Time	Duration	Leq	Lmax	L10	L90	Lmin
M1	114-03 North Conduit Avenue	Fri Evening	18:20:00	20 min	71	85	74	60	58
		Sat Midday	12:00:00	20 min	72	90	75	60	57
		Sat Evening	17:00:00	20 min	71	87	74	60	57
		Sat Night*	3:00:00	1 hour	60	79	62	52	49
M2	South of 132-16 106th Street	Fri Evening	19:10:00	20 min	53	70	55	47	45
		Sat Midday	12:50:00	20 min	58	74	61	45	43
		Sat Evening	18:40:00	20 min	58	78	60	48	47
		Sat Night**	3:00:00	1 hour	55	74	57	47	44
M3	Aqueduct Road	Fri Evening	19:45:00	20 min	66	78	69	54	50
		Sat Midday	13:30:00	20 min	66	85	70	49	44
		Sat Evening	17:50:00	20 min	66	79	70	56	49
		Sat Night***	3:00:00	1 hour	57	76	59	49	46
M4	Aqueduct Road/ Pitkin Avenue	Fri Evening	19:00:00	20 min	57	69	60	53	50
		Sat Midday	12:00:00	20 min	60	77	60	51	48
		Sat Evening	18:00:00	20 min	61	83	61	53	50
		Sat Night	3:00:00	1 hour	57	76	59	49	46

*Nighttime noise levels are based on Measurement ID 4. A +3 dBA correction has been applied to account for increased noise levels due to the proximity to Belt Parkway, assuming a 50 percent decrease in traffic between 3 AM and 4 AM.
**Nighttime noise levels are based on Measurement ID 4. A -2 dBA correction has been applied as measurement ID 2 being further away from the MTA subway A-trains.
***Nighttime noise levels are based on Measurement ID 4. No correction has been applied, as noise levels are expected to be consistent across both sites.

Table 16-10 indicates that receptors closest to the Expansion Project are already exposed to high existing ambient noise levels. The L_{10} dBA values range from 60 to 75, suggesting that some receptors near the Project Site may already experience interior noise levels exceeding the 45 L_{10} dBA threshold during certain periods.

Observations during the noise measurements determined that the dominant noise sources include highway noise from Rockaway Boulevard, Aqueduct Road and North Conduit Avenue, rail noise from the A-Line Subway, and various noise industrial and commercial sources surrounding the Project Site (e.g., auto repair).

Construction Noise Assessment

Mobile Source

As described in the **Transportation** section, the peak construction vehicle trips during the Q2 2029 construction quarter would include 330 automobiles and 19 delivery trips in the 6:00 AM to 7:00 AM period. These vehicle trips are primarily traveling on Rockaway Boulevard and North Conduit Avenue to enter the construction site. As shown in **Table 16-11**, noise from construction mobile sources would increase 1.0 dBA compared to the existing condition. As the construction mobile source noise levels would not increase by 3 dBA or more, there would be no significant adverse noise impact.

Table 16-11 Construction Mobile Source Analysis

	Intersection	Existing PCEs (6:00 to 7:00 AM)	Existing with Construction PCEs	Construction Mobile Source Sound Increase (dBA)
1	Cross Bay Blvd/Woodhaven Blvd & Rockaway Blvd	9,089	9,267	0.1
2	Rockaway Blvd at Aqueduct Rd/108th St	2,327	2,925	1.0
3	Rockaway Blvd at Linden Blvd	3,412	3,721	0.4
4	North Conduit Ave at Cohancy St	8,650	8,684	0.0
5	Aqueduct Rd and North Conduit Ave	8,201	8,580	0.2
6	Lefferts Blvd and North Conduit Ave	10,382	10,728	0.1
7	Lefferts Blvd at Nassau Expway	2,583	2,699	0.2
8	Lefferts Blvd at Aqueduct Rd	2,316	2,386	0.1
9	North Conduit Ave at Off Ramp to Lefferts	4,625	4,800	0.2
10	Linden Blvd and VWE SB SRD	4,943	4,981	0.0
11	Linden Blvd at VWE NB SRD	5,945	6,244	0.2

Stationary Source

The stationary construction noise predictions account for the equipment listed in **Table 16-9**. The predictions also incorporate a perimeter sound wall, approximately 16 feet high, which would follow the existing perimeter fence (see **Figure 16-11** for its location). Additionally, temporary sound walls with acoustic panels will be installed along the boundaries of construction activities to help reduce noise levels for the nearest residences.

The *CEQR Technical Manual* screening thresholds determine whether temporary significant adverse noise impacts are likely to occur. At locations where construction of the Expansion Project would exceed these thresholds, noise reduction measures must be implemented to protect affected receptors.

It should be noted that existing noise levels are considered the No-Action noise levels for receptors most impacted by construction work. The mobile source analysis of surrounding roads did indicate an increase in noise due to traffic growth. However, since the receptors most impacted by construction are not within 500 feet of any road within the mobile source study area, it is assumed consistent with a conservative assessment approach that the No-Action noise level is equivalent to the existing noise levels.

The construction noise levels ($L_{eq,1hr}$) at the nearest receptors are presented in **Table 16-12**, accounting for overlapping construction activities where applicable. Detailed quarterly construction noise results are provided in **Appendix F**. For construction activities from 2029 onwards, only the

peak construction quarter was evaluated since noise levels during this peak period remained below the *CEQR Technical Manual's* Screening-Level criteria. This demonstrated that a detailed analysis of other construction phases was not warranted.

Table 16-12 Construction Noise Assessment Results for Worst-Case Quarters for Each Construction Phase

		Existing Ambient Sound Level (LAeq,20min) dBA	Total Noise Level (Existing + Predicted) Leq,1hr dBA					
Receptor ID	**Address**		**Q2 2026**	**Q3 2027**	**Q4 2027**	**Q1 2028**	**Q4 2028**	**Q1 2029**
R1	107th Street	58	68	59	59	59	59	59
R2	108th Street	58	65	60	60	59	59	59
R3	Sutter Ave	58	65	58	58	58	59	59
R4	106th Street	58	69	59	59	59	59	59
R5	Sutter Eve	58	68	59	59	59	59	59
R6	105 Street	58	69	59	59	59	59	59
R7	Centerville Street	58	63	58	58	58	59	58
R8	Project Property Line	58	69	59	59	59	59	59
R9	Boss Street	58	65	61	61	59	58	58
R10	Centerville Street	58	63	59	59	58	58	58
R11	Centerville Street	60	72	62	62	61	60	60
R12	Peconic Street	60	71	68	68	64	62	60
R13	Hawtree Street	60	67	68	68	64	63	60
R14	Hawtree Street	60	70	70	70	65	63	60
R15	Linden Blvd	60	64	62	62	60	61	60
R16	135th Road	60	67	67	67	63	62	60
R17	Pitkin Ave	60	71	68	69	64	64	60
R18	135th Drive	60	69	68	68	63	62	60
R19	Hawtree Street	60	68	68	68	64	62	60
R20	Hyatt Regency JFK Airport	60	74	75	75	71	67	60

Cells highlighted in orange indicate an exceedance above the *CEQR Technical Manual's* screening-level noise impact criteria.

R01 – R08

Construction noise levels at receptors R01-R08 exceed the CEQR screening thresholds, with increases of 5 dBA or more above existing ambient levels. External construction noise levels are predicted to range from 58-69 dBA $L_{eq,1hr}$ during peak construction periods.

According to **Table 16-12** and **Appendix F**, noise levels will exceed *CEQR Technical Manual* screening thresholds between Q1 and Q4 2026. During subsequent construction phases, noise levels remain below these thresholds. As the exceedances do not persist for two years or more, no temporary significant noise impact is identified.

While construction noise levels remain below the NYC Noise Code's 85 dBA threshold, receptor R8 experiences an increase of 11 dBA above ambient levels. Although this marginal exceedance is temporary, additional noise reduction measures outlined in the **Additional Noise Reduction Measures** section would be implemented. However, the effectiveness of these measures cannot be quantified at this stage.

R11 – R19

Construction noise levels at receptors R11-R19 exceed the CEQR screening thresholds, with increases of 5 dBA or more above existing ambient levels. External construction noise levels are predicted to range from 60-72 dBA $L_{eq,1hr}$ during peak construction periods.

According to **Table 16-12** and **Appendix F**, noise levels will exceed *CEQR Technical Manual* screening thresholds from Q1 2026 through Q4 2027. During subsequent construction phases, noise levels remain below these thresholds. As the exceedances do not persist for two years or more, no temporary significant noise impact is identified.

While construction noise levels remain below the NYC Noise Code's 85 dBA threshold, receptors R11, R12, and R17 experience increases of 12 dBA above ambient levels. Although this marginal exceedance is temporary, additional noise reduction measures outlined in the **Additional Noise Reduction Measures** section would be implemented. However, the effectiveness of these measures cannot be quantified at this stage.

R20

Construction noise levels at receptor R20 exceed the CEQR screening threshold during multiple construction phases, with increases of 5 dBA or more. While external noise levels exceed the NYC Noise Code's ambient +10 dBA criterion during multiple phases, they remain below the 85 dBA threshold.

As R20 is a hotel with no sensitive external areas, the *CEQR Technical Manual's* interior noise criterion of 45 dBA $L_{eq,1hr}$ applies. The hotel's masonry construction, double-glazed windows, and mechanical ventilation system provide 35 dBA of noise reduction (per FHWA guidance). Accounting for this attenuation, interior noise levels remain below 45 dBA $L_{eq,1hr}$ throughout all construction phases. Therefore, no temporary significant noise impact is identified. Additional noise reduction measures outlined in the **Additional Noise Reduction Measures** section would be implemented. However, the effectiveness of these measures cannot be quantified at this stage.

Additional Noise Reduction Measures

To reduce potential construction noise at nearby residences, schools, parks and businesses, a comprehensive noise abatement plan would be implemented for all subcontractors and equipment on site. The plan would consider the following Best Management Practices (BMPs):

- The responsible party would make sure all construction equipment is properly maintained (mechanism properly lubricated, faulty silencers replaced, worn bearings replaced, cutting tools sharpened, etc.)
- All construction equipment would be equipped with necessary noise reduction equipment, including properly installed and operating noise muffler systems. All equipment with internal combustion engines would be operated at the lowest-feasible engine speed with the doors closed, and include noise-insulating materials.
- 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 Occupational Safety and Health Administration (OSHA) standards.
- All exterior construction activities such as site excavation/grading and new building construction, would be limited to normal working hours (i.e., 7:00 AM to 3:00 PM). After-hours work would be minimized, to the extent practicable, to avoid excess noise generating work at sensitive times.
- 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.
- Appropriate traffic management techniques to mitigate roadway traffic noise impacts would be implemented during the construction period. Construction trucks would avoid residential roadways and use only major roads, as detailed in the **Transportation** section.
- Phasing of materials deliveries to be controlled on a 'just in time' basis to minimize noise and congestion on roads around the site.
- Excessive idling of construction equipment engines would be prohibited. On-site idling would comply with NYSDEC regulations. Off-site idling would comply with New York City regulations.
- Providing regular briefings for all site-based personnel so that noise and vibration issues are understood, and that generic and site-specific noise control measures are explained and adhered to.
- Additionally, specific noise-control measures to reduce sound pressure levels would be implemented on a case-by-case basis and would include measures such as erecting sound screens or berms.

Appropriate operational specifications and performance standards like the noise suppression measures listed above would be developed and incorporated into the construction noise management plan. These measures and performance standards would minimize the impact of noise during construction.

Conclusion

The construction activities for the Expansion Project would temporarily increase noise levels in the vicinity. The assessment identifies the following impacts across receptor groups.

Construction-related vehicle trips, including 330 automobiles and 19 delivery trips during peak hours, would result in a maximum noise level increase of 1.0 dBA at nearby intersections, which is below the 3 dBA significant adverse impact threshold for mobile sources.

Construction noise impacts have been evaluated against both *CEQR Technical Manual* and NYC Noise Code criteria. For receptors R01-R08, while construction noise levels exceed CEQR screening thresholds, the exceedances are limited to Q1-Q4 2026 and remain below NYC Noise Code criteria throughout construction. Similarly, at receptors R11-R19, exceedances of CEQR screening thresholds occur from Q1 2026 through Q4 2027. While receptors R11, R12, and R17 experience temporary increases of 11 dBA above ambient levels, the duration of exceedances remains under two years.

For receptor R20 (Hyatt Regency JFK Airport), although external noise levels exceed both CEQR screening thresholds and the NYC Noise Code's ambient +10 dBA criterion, the building's masonry construction, double-glazed windows, and mechanical ventilation system provide 35 dBA of noise reduction. This ensures interior noise levels remain below the *CEQR Technical Manual's* 45 dBA $L_{eq,1hr}$ criterion throughout construction.

As no receptor group experiences exceedances lasting two years or more, and with the implementation of additional noise reduction measures, no significant adverse construction noise impacts are identified.

Construction activities would be limited to 7:00 AM to 3:00 PM. A noise abatement plan would be implemented, including equipment maintenance requirements, noise reduction equipment, operational controls, and site management practices.

In summary, while construction would cause temporary noise increases, no significant adverse impacts are anticipated due to compliance with NYC Noise Code thresholds and implementation of comprehensive noise reduction measures.

17

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, the Expansion Project has the potential to result in significant adverse impacts to transportation. Mitigation measures have been identified to address those impacts where feasible and/or practicable. 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 eliminate the impacts to the fullest extent practicable is developed and evaluated.

Traffic Mitigation

Of the 31 intersections analyzed, the Expansion Project would result in significant adverse traffic impacts at ten intersections (at 18 movements) during the Friday PM peak hour, ten intersections (at 14 movements) during the Saturday PM peak hour, and nine intersections (at ten movements) during the Saturday Night peak hour. The majority of the intersections analyzed would either not be significantly impacted or could be fully mitigated with traffic improvement measures described below.

Four of the 31 intersections would remain unmitigated during the Friday PM peak hour (two of the four intersections would be partially mitigated), five intersections would remain unmitigated during

the Saturday PM peak hour, and five intersections would remain unmitigated during the Saturday Night peak hour. In terms of impacted movements, eight of 18 movements, eight of 14 movements, and six of ten movements would remain unmitigated during the Friday PM, Saturday PM, and Saturday Night peak hours, respectively. Mitigation measures identified later in the chapter, specifically signal timing changes, are standard traffic capacity improvements that are typically implemented by the New York City Department of Transportation (NYC DOT).

Project Commitments

The project commitments to mitigate significant adverse impacts include:

- Modifying the signal timing at specific intersections are recommended to mitigate traffic impacts.
- Proposing a new traffic signal at the intersection of North Conduit Avenue and the Belt Parkway Westbound Off-Ramp to accommodate increased traffic volumes. The installation will be consistent with the *Manual of Uniform Traffic Control Devices (MUTCD), 11th Edition* and New York State Department of Transportation (NYS DOT) standards.
- Implementing right turns on red along the Nassau Expressway Eastbound Off-Ramp approach to Lefferts Boulevard to improve traffic flow and reduce congestion.
- Engaging with the NYC DOT and the NYS DOT for approvals and implementation of the proposed and additional mitigation measures as necessary to ensure compliance and appropriate integration with the existing transportation infrastructure.

Transportation—Traffic

Of the 31 intersections analyzed, the Expansion Project would result in significant adverse traffic impacts at ten intersections (at 18 movements) during the Friday PM peak hour, ten intersections (at 14 movements) during the Saturday PM peak hour, and nine intersections (at ten movements) during the Saturday Night peak hour. **Table 17-1** summarizes the number of significantly impacted traffic intersections and whether they could be fully mitigated or partially mitigated, and **Table 17-2** summarizes the significantly impacted traffic movements.

Table 17-1 Traffic Impact Mitigation Summary

Intersections	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
No significant impacts	21	21	22
Fully mitigated	6	5	4
Partially mitigated	2	0	0
All impacts remain unmitigated	2	5	5

Note: Includes 28 signalized intersections and three unsignalized intersections.

As shown in **Table 17-1** and **Table 17-2**, four of the 31 intersections would remain unmitigated during the Friday PM peak hour (two of the four intersections would be partially mitigated), five intersections would remain unmitigated during the Saturday PM peak hour, and five intersections would remain unmitigated during the Saturday Night peak hour. The overall finding of the traffic

mitigation analysis is that the majority of the 31 intersections analyzed would either not be significantly impacted or could be fully mitigated with traffic improvement measures: specifically signal timing changes, installation of a traffic signal, and permitting right turns on red. In terms of impacted movements, eight of 18 movements, eight of 14 movements, and six of ten movements would remain unmitigated during the Friday PM, Saturday PM, and Saturday Night peak hours, respectively.

Table 17-2 Summary of Significantly Impacted Traffic Movements

Intersection	Friday PM Peak Hour	Saturday PM Peak Hour	Saturday Night Peak Hour
Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard	WB-L		
	WB-TR		
	SB-L	SB-L	SB-L
Rockaway Boulevard & 113th Street/ Linden Boulevard/Home Depot Parking Lot	EB-L	EB-L	EB-L
	SB-LTR	SB-LTR	
	SB-R	SB-R	
Cross Bay Boulevard & North Conduit Avenue	WB-L		
	WB-LT		
North Conduit Avenue & Cohancy Street/ Albert Road		WB-T	WB-T
North Conduit Avenue & Aqueduct Road		SB-R	SB-R
North Conduit Avenue & Lefferts Boulevard/ Old South Road	WB-T	WB-T	WB-T
	NB-defL	NB-defL	
Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp	EB-defL	EB-LTR	
	EB-TR		
Lefferts Boulevard & Aqueduct Road	SB-TR	SB-TR	SB-TR
Linden Boulevard & Southbound Van Wyck Service Road			EB-TR
		WB-defL	WB-LT
Linden Boulevard & Northbound Van Wyck Service Road	EB-defL	EB-defL	EB-defL
	WB-TR	WB-TR	
North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)	WB-T	WB-T	WB-T
Cohancy Street & 155th Avenue	SB-LTR		
North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road	WB-LT		
Number of impacted traffic movements	**18**	**14**	**10**
Number of unmitigated traffic movements	**8**	**8**	**6**

Notes: EB=Eastbound; WB=Westbound; NB=Northbound; SB=Southbound; L=Left turn; T=Through; R=Right turn; defL=De facto left turn. Shading denotes significantly impacted traffic movements that would remain unmitigated.

Details of the intersection capacity analyses and traffic mitigation measures are summarized in **Table 17-3** through **Table 17-5**.

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
1. Rockaway Boulevard & 94th Street														
Rockaway Boulevard	EB	TR	0.56	44.4	D	TR	0.67	47.8	D	TR	0.67	44.5	D	Mitigation not needed.[2]
	WB	LT	0.58	12.5	B	LT	0.69	14.9	B	LT	0.69	12.2	B	
94th Street	SB	LTR	0.16	13.2	B	LTR	0.16	13.2	B	LTR	0.16	14.5	B	
Overall Intersection[3]		-	-	**27.2**	**C**	-	-	**30.8**	**C**	-	-	**28.3**	**C**	
2. Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard														
Rockaway Boulevard	EB	TR	0.48	10.9	B	TR	0.58	10.4	B	TR	0.55	9.9	A	**Partially Mitigated.** Shift 3 seconds of green time from NB/SB phase to EB/WB phase. (NB/SB phase shifts from 74 seconds to 71 seconds; EB/WB phase shifts from 54 seconds to 57 seconds.)
	WB	L	0.69	55.7	E	L	0.92	94.4	F	L	0.82	70.0	E	
		TR	0.95	65.8	E	TR	1.05	88.5	F	TR	0.99	69.0	E	
Woodhaven Boulevard SB Service Road	SB	T	0.49	18.1	B	T	0.49	18.1	B	T	0.51	19.9	B	
		R	0.04	12.0	B	R	0.04	12.0	B	R	0.04	13.2	B	
Woodhaven Boulevard Main Line	NB	T	0.67	6.4	A	T	0.67	6.4	A	T	0.70	8.5	A	
	SB	L	1.07	151.1	F	L	1.55	337.2	F	L	1.55	337.2	F	
		T	0.75	24.1	C	T	0.75	24.1	C	T	0.78	26.8	C	
Cross Bay Boulevard NB Service Road	NB	TR	0.40	5.4	A	TR	0.40	5.4	A	TR	0.42	7.7	A	
Overall Intersection[3]		-	-	**28.3**	**C**	-	-	**44.8**	**D**	-	-	**42.9**	**D**	
3. Liberty Avenue & Rockaway Boulevard														
Rockaway Boulevard	EB	LT	0.56	7.4	A	LT	0.73	10.8	B	LT	0.73	10.3	B	Mitigation not needed.[2]
Liberty Avenue	NB	T	0.09	42.7	D	T	0.09	44.1	D	T	0.09	44.1	D	
		R	0.35	42.4	D	R	0.38	43.6	D	R	0.38	43.6	D	
Overall intersection[3]		-	-	**14.6**	**B**	-	-	**16.5**	**B**	-	-	**16.1**	**B**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
4. Rockaway Boulevard/Liberty Avenue & 96th Street														
Liberty Avenue	EB	LT	0.42	35.9	D	LT	0.42	35.2	D	LT	0.42	36.1	D	Mitigation not needed.[2]
	WB	TR	0.54	50.5	D	TR	0.54	50.5	D	TR	0.54	50.5	D	
96th Street	NB	LTR	0.42	48.7	D	LTR	0.42	48.7	D	LTR	0.42	48.7	D	
Rockaway Boulevard	NW	T	0.42	36.8	D	T	0.48	38.0	D	T	0.48	38.0	D	
	SE	T	0.31	0.8	A	T	0.41	0.8	A	T	0.41	0.8	A	
Overall Intersection[3]		-	-	**26.8**	**C**	-	-	**24.6**	**C**	-	-	**24.7**	**C**	
5. Cross Bay Boulevard Northbound Service Road & Liberty Avenue														
Cross Bay Blvd NB Service Road	NB	TR	0.73	36.8	D	TR	0.75	37.8	D	TR	0.75	37.8	D	Mitigation not needed.
Overall Intersection[3]		-	-	**36.8**	**D**	-	-	**37.8**	**D**	-	-	**37.8**	**D**	
6. Cross Bay Boulevard & Liberty Avenue														
Cross Bay Boulevard	NB	T	0.65	31.7	C	T	0.65	31.7	C	T	0.65	31.7	C	Mitigation not needed.[2]
	SB	T	0.71	6.3	A	T	0.71	6.1	A	T	0.71	5.1	A	
Overall Intersection[3]		-	-	**14.7**	**B**	-	-	**14.6**	**B**	-	-	**13.9**	**B**	
7. Liberty Avenue & 94th Street														
Liberty Avenue	EB	R	0.86	109.8	F	R	0.86	109.8	F	R	0.86	109.8	F	Mitigation not needed.[2]
94th Street	SB	TR	0.20	21.0	C	TR	0.20	20.3	C	TR	0.20	21.0	C	
Overall Intersection[3]		-	-	**48.2**	**D**	-	-	**47.7**	**D**	-	-	**48.2**	**D**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
8. Rockaway Boulevard & Centreville Street/109th Avenue/Plattwood Avenue														
Rockaway Boulevard	EB	L	0.38	23.1	C	L	0.41	25.4	C	L	0.41	25.4	C	Mitigation not needed.
		TR	0.75	27.4	C	TR	1.00	51.4	D	TR	1.00	51.4	D	
	WB	L	0.54	35.6	D	L	0.64	32.2	C	L	0.64	32.2	C	
		TR	0.52	24.7	C	TR	0.57	15.5	B	TR	0.57	15.5	B	
Centreville Street	NB	LTR	1.00	71.6	E	LTR	1.00	71.6	E	LTR	1.00	71.6	E	
109th Avenue	SB	LTR	0.70	32.4	C	LTR	0.70	32.4	C	LTR	0.70	32.4	C	
Overall Intersection[3]		-	-	**34.7**	**C**	-	-	**41.4**	**D**	-	-	**41.4**	**D**	
9. Rockaway Boulevard & 107th Street														
Rockaway Boulevard	EB	T	0.59	5.4	A	T	0.80	8.4	A	T	0.80	8.4	A	Mitigation not needed.
	WB	T	0.50	11.4	B	T	0.54	18.9	B	T	0.54	18.9	B	
107th Street	NB	LTR	0.25	24.7	C	LTR	0.26	24.9	C	LTR	0.26	24.9	C	
	SB	LTR	0.33	26.0	C	LTR	0.58	32.6	C	LTR	0.58	32.6	C	
Overall Intersection[3]		-	-	**10.1**	**B**	-	-	**14.9**	**B**	-	-	**14.9**	**B**	
10. Rockaway Boulevard & Aqueduct Road/108th Street														
Rockaway Boulevard	EB	L	-	10.1	B	L	-	11.6	B	L	-	11.6	B	Mitigation not needed.
		T	0.54	9.4	A	T	0.95	40.9	D	T	0.95	40.9	D	
		R	0.33	8.9	A	R	0.66	25.8	C	R	0.66	25.8	C	
	WB	L	0.62	21.6	C	L	0.83	35.1	D	L	0.83	35.1	D	
		T	0.41	7.1	A	T	0.84	17.2	B	T	0.84	17.2	B	
Aqueduct Road	NB	LR	0.35	24.9	C	LR	0.51	27.2	C	LR	0.51	27.2	C	
		R	0.40	27.2	C	R	0.28	9.9	A	R	0.28	9.9	A	
Overall Intersection[3]		-	-	**13.1**	**B**	-	-	**28.4**	**C**	-	-	**28.4**	**C**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
11. Rockaway Boulevard & 109th Street														
Rockaway Boulevard	EB	T	0.42	8.5	A	T	0.46	15.0	B	T	0.46	15.0	B	Mitigation not needed.
	WB	T	0.40	22.1	C	T	0.59	26.2	C	T	0.59	26.2	C	
109th Street	SB	LR	0.26	24.4	C	LR	0.34	25.7	C	LR	0.34	25.7	C	
Overall Intersection[3]		-	-	**15.6**	**B**	-	-	**21.5**	**C**	-	-	**21.5**	**C**	
12. Rockaway Boulevard & 111th Street/Home Depot Parking Lot														
Rockaway Boulevard	EB	L	0.19	4.1	A	L	0.52	41.6	D	L	0.52	41.6	D	Mitigation not needed.
		TR	0.68	7.0	A	TR	0.72	17.4	B	TR	0.72	17.4	B	
	WB	L	0.05	23.5	C	L	0.05	18.6	B	L	0.05	18.6	B	
		TR	0.76	30.2	C	TR	1.02	46.6	D	TR	1.02	46.6	D	
Home Depot Parking Lot	NB	LTR	0.25	22.3	C	LTR	0.28	22.9	C	LTR	0.28	22.9	C	
111th Street	SB	LTR	0.64	32.6	C	LTR	0.89	51.8	D	LTR	0.89	51.8	D	
Overall Intersection[3]		-	-	**20.0**	**B**	-	-	**35.7**	**D**	-	-	**35.7**	**D**	
13. Rockaway Boulevard & 113th Street/Linden Boulevard/Home Depot Parking Lot														
Rockaway Boulevard	EB	L	0.88	47.0	D	L	1.14	122.5	F	L	1.14	122.5	F	**Unmitigable.**
		TR	0.78	12.9	B	TR	0.81	22.1	C	TR	0.81	22.1	C	
	WB	L	0.62	37.4	D	L	0.68	46.4	D	L	0.68	46.4	D	
		TR	0.70	18.2	B	TR	0.75	19.5	B	TR	0.75	19.5	B	
Home Depot Parking Lot	NB	LTR	0.93	87.2	F	LTR	0.93	87.2	F	LTR	0.93	87.2	F	
Linden Boulevard	SB	LTR	0.51	37.3	D	LTR	1.04	99.9	F	LTR	1.04	99.9	F	
		R	0.47	35.7	D	R	0.97	79.0	E	R	0.97	79.0	E	
Overall Intersection[3]		-	-	**25.2**	**C**	-	-	**45.6**	**D**	-	-	**45.6**	**D**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
14. Rockaway Boulevard & 114th Street														
Rockaway Boulevard	EB	LT	0.90	19.3	B	LT	0.99	31.9	C	LT	0.99	31.9	C	Mitigation not needed.
		R	0.51	5.2	A	R	0.51	4.9	A	R	0.51	4.9	A	
	WB	L	0.10	14.5	B	L	0.13	15.8	B	L	0.13	15.8	B	
		TR	0.38	15.6	B	TR	0.41	16.0	B	TR	0.41	16.0	B	
114th Street	NB	LTR	0.52	28.0	C	LTR	0.52	28.0	C	LTR	0.52	28.0	C	
Overall Intersection[3]		-	-	**17.0**	**B**	-	-	**21.9**	**C**	-	-	**21.9**	**C**	
15. Rockaway Boulevard & Lefferts Boulevard														
Rockaway Boulevard	EB	L	0.14	19.1	B	L	0.16	19.5	B	L	0.16	19.5	B	Mitigation not needed.
		T	0.74	31.4	C	T	0.77	32.9	C	T	0.77	32.9	C	
		R	0.19	18.9	B	R	0.19	18.9	B	R	0.19	18.9	B	
	WB	L	0.46	28.8	C	L	0.49	30.6	C	L	0.49	30.6	C	
		T	0.51	22.6	C	T	0.56	23.3	C	T	0.56	23.3	C	
Lefferts Boulevard	NB	L	0.30	26.4	C	L	0.30	26.4	C	L	0.30	26.4	C	
		TR	1.02	78.1	E	TR	1.02	78.1	E	TR	1.02	78.1	E	
	SB	LTR	0.58	30.1	C	LTR	0.58	30.1	C	LTR	0.58	30.1	C	
Overall Intersection[3]		-	-	**37.1**	**D**	-	-	**37.3**	**D**	-	-	**37.3**	**D**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
16. Cross Bay Boulevard & North Conduit Avenue														
North Conduit Avenue	WB	L	0.65	56.5	E	L	0.77	63.1	E	L	0.73	59.0	E	Shift 2 seconds of green time from NB/SB phase to WB phase. (NB/SB phase shifts from 105 seconds to 103 seconds; WB phase shifts from 45 seconds to 47 seconds.)
		LT	0.67	57.4	E	LT	0.79	65.3	E	LT	0.75	60.6	E	
		R	0.71	61.1	E	R	0.71	61.1	E	R	0.68	57.4	E	
Cross Bay Boulevard	NB	T	0.47	12.9	B	T	0.47	13.0	B	T	0.48	14.0	B	
	SB	TR	0.66	16.3	B	TR	0.66	16.3	B	TR	0.68	17.6	B	
Overall Intersection[3]		-	-	**21.6**	**C**	-	-	**23.2**	**C**	-	-	**23.5**	**C**	
17. Cross Bay Boulevard & Shore Parkway/Nassau Expressway Eastbound On-Ramp														
Cross Bay Boulevard	NB	L	0.98	94.6	F	L	0.98	94.6	F	L	0.98	94.6	F	Mitigation not needed.
		T	0.66	24.4	C	T	0.67	24.5	C	T	0.67	24.5	C	
		R	0.15	0.2	A	R	0.15	0.2	A	R	0.15	0.2	A	
	SB	L	1.08	109.3	F	L	1.08	109.3	F	L	1.08	109.3	F	
		T	0.48	12.8	B	T	0.49	13.0	B	T	0.49	13.0	B	
		R	0.78	3.9	A	R	0.82	5.0	A	R	0.82	5.0	A	
Overall Intersection[3]		-	-	**30.3**	**C**	-	-	**30.2**	**C**	-	-	**30.2**	**C**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
18. North Conduit Avenue & Cohancy Street/Albert Road														
North Conduit Avenue	WB	L	0.57	10.0	A	L	0.62	11.1	B	L	0.62	11.1	B	Mitigation not needed.[2]
		T	0.88	17.4	B	T	0.92	18.4	B	T	0.92	18.4	B	
		R	0.33	7.3	A	R	0.33	8.1	A	R	0.33	8.1	A	
Cohancy Street	NB	L	0.54	40.4	D	L	0.54	40.4	D	L	0.54	41.9	D	
		T	0.24	28.2	C	T	0.24	28.1	C	T	0.24	29.9	C	
	SB	TR	0.97	86.2	F	TR	0.97	86.2	F	TR	0.97	86.2	F	
Overall Intersection[3]		-	-	**23.3**	**C**	-	-	**23.9**	**C**	-	-	**24.0**	**C**	
19. North Conduit Avenue & Aqueduct Road (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A	Mitigation not needed.
Aqueduct Road	SB	R	-	11.7	B	R	-	26.3	D	R	-	26.3	D	
Overall Intersection[3]		-	-	**1.1**	**A**	-	-	**3.0**	**A**	-	-	**3.0**	**A**	
20. North Conduit Avenue & 114th Street														
North Conduit Avenue	WB	TR	0.66	5.8	A	TR	0.85	7.7	A	TR	0.85	7.7	A	Mitigation not needed.
114th Street	SB	R	0.54	44.4	D	R	0.54	44.4	D	R	0.54	44.4	D	
Overall Intersection[3]		-	-	**8.7**	**A**	-	-	**9.9**	**A**	-	-	**9.9**	**A**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
21. North Conduit Avenue & Lefferts Boulevard/Old South Road														
North Conduit Avenue	WB	T	0.99	20.8	C	T	1.18	95.7	F	T	1.18	95.7	F	**Unmitigable.[2]**
		R	0.08	5.0	A	R	0.08	5.7	A	R	0.08	6.2	A	
Lefferts Boulevard	NB	L	1.11	113.6	F	defL	1.19	128.4	F	defL	1.19	128.4	F	
		LT	1.07	88.8	F	T	0.88	49.1	D	T	0.88	49.1	D	
	SB	TR	0.87	57.3	E	TR	0.87	57.6	E	TR	0.87	57.6	E	
Overall Intersection[3]		-	-	**44.0**	**D**	-	-	**89.8**	**F**	-	-	**89.8**	**F**	
22. Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp														
Nassau Expressway Eastbound Off-Ramp	EB	defL	1.02	66.8	E	defL	1.27	159.3	F	defL	1.27	159.3	F	**Partially Mitigated.** Permit right turns on red for the eastbound approach.
		TR	0.42	22.3	C	TR	1.34	192.7	F	TR	0.55	24.9	C	
Lefferts Boulevard	NB	TR	0.60	13.3	B	TR	0.65	14.6	B	TR	0.65	14.6	B	
	SB	LT	0.21	13.1	B	LT	0.21	13.1	B	LT	0.21	13.1	B	
Overall Intersection[3]		-	-	**31.8**	**C**	-	-	**105.8**	**F**	-	-	**66.5**	**E**	
23. Lefferts Boulevard & Aqueduct Road														
Aqueduct Road	EB	LR	0.33	26.3	C	LR	0.44	27.4	C	LR	0.44	27.4	C	Mitigated by measures identified at nearby intersection.
Lefferts Boulevard	NB	L	0.27	29.1	C	L	0.47	32.9	C	L	0.47	32.9	C	
		T	0.64	14.1	B	T	0.64	14.5	B	T	0.64	14.5	B	
	SB	TR	0.24	54.1	D	TR	0.46	120.4	F	TR	0.46	33.3	C	
Overall Intersection[3]		-	-	**24.0**	**C**	-	-	**41.6**	**D**	-	-	**23.9**	**C**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
24. Linden Boulevard & Southbound Van Wyck Service Road														
Linden Boulevard	EB	TR	0.74	36.3	D	TR	0.80	39.9	D	TR	0.80	39.9	D	Mitigation not needed.[2]
	WB	defL	0.90	27.6	C	defL	0.99	40.5	D	defL	0.99	44.9	D	
		T	0.51	7.8	A	T	0.54	7.5	A	T	0.54	7.9	A	
Southbound Van Wyck Service Road	SB	LTR	0.65	20.5	C	LTR	0.79	24.2	C	LTR	0.79	24.2	C	
Overall Intersection[3]		-	-	**22.0**	**C**	-	-	**25.9**	**C**	-	-	**26.4**	**C**	
25. Linden Boulevard & Northbound Van Wyck Service Road														
Linden Boulevard	EB	defL	1.08	106.5	F	defL	1.25	164.9	F	defL	1.10	106.5	F	Shift 2 seconds of green time from NB phase to EB/WB phase. (EB/WB phase shifts from 33 seconds to 35 seconds; NB phase shifts from 46 seconds to 44 seconds.)
		T	0.76	23.1	C	T	0.79	21.2	C	T	0.75	18.4	B	
	WB	TR	0.99	66.3	E	TR	1.02	74.9	E	TR	0.96	56.5	E	
Northbound Van Wyck Service Road	NB	LTR	0.87	27.1	C	LTR	0.87	27.1	C	LTR	0.91	31.5	C	
Overall Intersection[3]		-	-	**38.8**	**D**	-	-	**44.9**	**D**	-	-	**39.2**	**D**	
26. North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	1.02	20.4	C	Install new signal with a 120 second cycle and two phases. (WB North Conduit Avenue phase is allotted 65 seconds; WB Belt Parkway Off-ramp is allotted 55 seconds.)
Belt Parkway Westbound Off-Ramp	WB	T	-	39.7	E	T	-	397.3	F	T	0.75	35.6	D	
Overall Intersection[3]		-	-	**4.1**	**A**	-	-	**69.9**	**F**	-	-	**23.1**	**C**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
27. 155th Avenue & Belt Parkway Eastbound On-Ramp (unsignalized)														
155th Avenue	WB	R	-	14.1	B	R	-	15.3	C	R	-	15.3	C	Mitigation not needed.
Belt Parkway Eastbound On-Ramp	NB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A	
		R	-	0.0	A	R	-	0.0	A	R	-	0.0	A	
Overall Intersection[3]		**-**	**-**	**4.6**	**A**	**-**	**-**	**5.7**	**A**	**-**	**-**	**5.7**	**A**	
28. Cohancy Street & 155th Avenue														
155th Avenue	EB	LT	0.23	20.2	C	LT	0.23	20.2	C	LT	0.21	27.6	C	Modify cycle length from 60 seconds to 90 seconds. (EB/WB phase shifts from 19 seconds to 28 seconds; NB/SB phase shifts from 41 seconds to 62 seconds.)
	WB	TR	0.26	20.3	C	TR	0.26	20.3	C	TR	0.24	27.8	C	
Cohancy Street	NB	LTR	0.19	5.8	A	LTR	0.19	5.8	A	LTR	0.18	7.2	A	
	SB	LTR	1.01	52.0	D	LTR	1.06	64.2	E	LTR	1.00	47.8	D	
Overall Intersection[3]		**-**	**-**	**39.8**	**D**	**-**	**-**	**48.8**	**D**	**-**	**-**	**38.7**	**D**	
29. North Conduit Avenue & 130th Street														
North Conduit Avenue	WB	LTR	0.91	17.8	B	LTR	1.00	31.9	C	LTR	1.00	32.6	C	Mitigation not needed.[2]
130th Street	NB	L	0.45	31.2	C	L	0.45	31.0	C	L	0.45	31.0	C	
		T	0.65	37.6	D	T	0.65	37.3	D	T	0.65	37.3	D	
	SB	T	0.64	47.2	D	T	0.64	47.2	D	T	0.64	47.2	D	
		R	0.23	38.0	D	R	0.23	38.0	D	R	0.23	38.0	D	
Overall Intersection[3]		**-**	**-**	**23.7**	**C**	**-**	**-**	**33.8**	**C**	**-**	**-**	**34.3**	**C**	

Table 17-3 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Friday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
30. South Conduit Avenue & 130th Street														
South Conduit Avenue	EB	LTR	0.60	23.0	C	LTR	0.62	23.4	C	LTR	0.62	23.4	C	Mitigation not needed.[2]
130th Street	NB	TR	0.61	50.6	D	TR	0.61	50.6	D	TR	0.61	50.6	D	
	SB	L	0.80	36.9	D	L	0.80	36.0	D	L	0.80	36.0	D	
		T	0.21	21.0	C	T	0.21	20.5	C	T	0.21	20.6	C	
Overall Intersection[3]		-	-	**27.7**	**C**	-	-	**27.7**	**C**	-	-	**27.7**	**C**	
31. North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road														
North Conduit Avenue	WB	L	0.61	28.5	C	L	0.61	28.5	C	L	0.60	27.5	C	Shift 1 second of green time from SB phase to WB phase. (SB phase shifts from 59 seconds to 58 seconds; WB phase shifts from 61 seconds to 62 seconds.)
		LT	1.05	68.6	E	LT	1.07	76.1	E	LT	1.06	68.6	E	
Van Wyck Expressway Service Road	SB	T	0.62	27.0	C	T	0.62	27.0	C	T	0.63	27.9	C	
		R	0.49	24.7	C	R	0.71	30.2	C	R	0.72	31.3	C	
Overall Intersection[3]		-	-	**48.6**	**D**	-	-	**52.1**	**D**	-	-	**48.7**	**D**	

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

[3] Overall intersection volume-to-capacity (v/c) ratio is the critical lane groups' v/c ratio.

Shading denotes a significantly impacted movement.

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
1. Rockaway Boulevard & 94th Street														
Rockaway Boulevard	EB	TR	0.50	32.4	C	TR	0.63	35.1	D	TR	0.63	35.1	D	Mitigation not needed.[2]
	WB	LT	0.41	5.5	A	LT	0.49	6.4	A	LT	0.49	6.4	A	
94th Street	SB	LTR	0.13	12.9	B	LTR	0.13	12.9	B	LTR	0.13	12.9	B	
Overall Intersection[3]		-	-	**20.1**	**C**	-	-	**22.7**	**C**	-	-	**22.7**	**C**	
2. Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard														
Rockaway Boulevard	EB	TR	0.38	5.8	A	TR	0.48	5.4	A	TR	0.48	5.4	A	Shift 7 seconds of green time from NB/SB phase to SB/SBL phase. (NB/SB phase shifts from 53 seconds to 46 seconds; SB/SBL phase shifts from 19 seconds to 26 seconds; EB/WB phase remains unchanged.)
	WB	L	0.51	28.5	C	L	0.66	35.5	D	L	0.66	35.5	D	
		TR	0.62	25.5	C	TR	0.72	25.5	C	TR	0.72	25.5	C	
Woodhaven Boulevard	SB	T	0.35	15.5	B	T	0.35	15.5	B	T	0.35	15.5	B	
SB Service Road		R	0.03	12.0	B	R	0.03	12.0	B	R	0.03	12.0	B	
Woodhaven Boulevard	NB	T	0.65	4.7	A	T	0.65	4.7	A	T	0.76	11.0	B	
Main Line	SB	L	0.92	99.2	F	L	1.46	284.4	F	L	0.97	94.1	F	
		T	0.58	18.8	B	T	0.58	18.8	B	T	0.58	18.8	B	
Cross Bay Boulevard NB Service Road	NB	TR	0.34	3.6	A	TR	0.34	3.6	A	TR	0.40	10.2	B	
Overall Intersection[3]		-	-	**17.7**	**B**	-	-	**31.9**	**C**	-	-	**20.9**	**C**	
3. Liberty Avenue & Rockaway Boulevard														
Rockaway Boulevard	EB	LT	0.50	9.0	A	LT	0.69	12.5	B	LT	0.69	14.5	B	Mitigation not needed.[2]
Liberty Avenue	NB	T	0.06	19.7	B	T	0.06	20.6	C	T	0.06	20.6	C	
		R	0.21	18.8	B	R	0.24	19.9	B	R	0.24	19.9	B	
Overall intersection[3]		-	-	**10.9**	**B**	-	-	**13.7**	**B**	-	-	**15.4**	**B**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
4. Rockaway Boulevard/Liberty Avenue & 96th Street														
Liberty Avenue	EB	LT	0.36	28.7	C	LT	0.36	28.0	C	LT	0.36	28.0	C	Mitigation not needed.
	WB	TR	0.41	35.0	C	TR	0.41	35.0	C	TR	0.41	35.0	C	
96th Street	NB	LTR	0.37	40.2	D	LTR	0.37	40.2	D	LTR	0.37	40.2	D	
Rockaway Boulevard	NW	T	0.45	33.4	C	T	0.54	35.2	D	T	0.54	35.2	D	
	SE	T	0.22	0.6	A	T	0.32	0.6	A	T	0.32	0.6	A	
Overall Intersection[3]		-	-	**23.3**	**C**	-	-	**21.5**	**C**	-	-	**21.5**	**C**	
5. Cross Bay Boulevard Northbound Service Road & Liberty Avenue														
Cross Bay Blvd NB Service Road	NB	TR	0.66	35.0	C	TR	0.69	36.0	D	TR	0.69	36.0	D	Mitigation not needed.
Overall Intersection[3]		-	-	**35.0**	**C**	-	-	**36.0**	**D**	-	-	**36.0**	**D**	
6. Cross Bay Boulevard & Liberty Avenue														
Cross Bay Boulevard	NB	T	0.67	32.9	C	T	0.67	32.9	C	T	0.67	32.9	C	Mitigation not needed.
	SB	T	0.53	7.6	A	T	0.60	9.0	A	T	0.60	9.0	A	
Overall Intersection[3]		-	-	**17.4**	**B**	-	-	**17.5**	**B**	-	-	**17.5**	**B**	
7. Liberty Avenue & 94th Street														
Liberty Avenue	EB	R	0.40	36.1	D	R	0.40	36.1	D	R	0.40	36.1	D	Mitigation not needed.
94th Street	SB	TR	0.20	21.6	C	TR	0.20	20.6	C	TR	0.20	20.6	C	
Overall Intersection[3]		-	-	**25.5**	**C**	-	-	**24.8**	**C**	-	-	**24.8**	**C**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
8. Rockaway Boulevard & Centreville Street/109th Avenue/Plattwood Avenue														
Rockaway Boulevard	EB	L	0.25	17.8	B	L	0.27	19.7	B	L	0.27	19.7	B	Mitigation not needed.
		TR	0.51	21.9	C	TR	0.74	26.9	C	TR	0.74	26.9	C	
	WB	L	0.46	25.0	C	L	0.63	28.1	C	L	0.63	28.1	C	
		TR	0.40	22.2	C	TR	0.47	14.3	B	TR	0.47	14.3	B	
Centreville Street	NB	LTR	0.77	37.8	D	LTR	0.77	37.8	D	LTR	0.77	37.8	D	
109th Avenue	SB	LTR	0.54	27.3	C	LTR	0.54	27.3	C	LTR	0.54	27.3	C	
Overall Intersection[3]		-	-	**25.5**	**C**	-	-	**25.2**	**C**	-	-	**25.2**	**C**	
9. Rockaway Boulevard & 107th Street														
Rockaway Boulevard	EB	T	0.39	4.9	A	T	0.58	5.2	A	T	0.58	5.2	A	Mitigation not needed.
	WB	T	0.42	8.2	A	T	0.47	14.3	B	T	0.47	14.3	B	
107th Street	NB	LTR	0.25	24.6	C	LTR	0.26	24.7	C	LTR	0.26	24.7	C	
	SB	LTR	0.33	26.1	C	LTR	0.59	33.4	C	LTR	0.59	33.4	C	
Overall Intersection[3]		-	-	**9.3**	**A**	-	-	**12.6**	**B**	-	-	**12.6**	**B**	
10. Rockaway Boulevard & Aqueduct Road/108th Street														
Rockaway Boulevard	EB	L	-	9.7	A	L	-	10.8	B	L	-	10.8	B	Mitigation not needed.
		T	0.38	9.5	A	T	0.68	29.6	C	T	0.68	29.6	C	
		R	0.32	9.7	A	R	0.65	23.9	C	R	0.65	23.9	C	
	WB	L	0.48	15.1	B	L	0.80	28.3	C	L	0.80	28.3	C	
		T	0.31	7.4	A	T	0.63	10.4	B	T	0.63	10.4	B	
Aqueduct Road	NB	LR	0.39	25.5	C	LR	0.62	29.3	C	LR	0.62	29.3	C	
		R	0.45	28.5	C	R	0.34	10.6	B	R	0.34	10.6	B	
Overall Intersection[3]		-	-	**14.1**	**B**	-	-	**23.3**	**C**	-	-	**23.3**	**C**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
11. Rockaway Boulevard & 109th Street														
Rockaway Boulevard	EB	T	0.34	9.9	A	T	0.40	11.7	B	T	0.40	11.7	B	Mitigation not needed.
	WB	T	0.31	18.1	B	T	0.47	23.8	C	T	0.47	23.8	C	
109th Street	SB	LR	0.20	23.6	C	LR	0.29	24.9	C	LR	0.29	24.9	C	
Overall Intersection[3]		-	-	**14.3**	**B**	-	-	**18.5**	**B**	-	-	**18.5**	**B**	
12. Rockaway Boulevard & 111th Street/Home Depot Parking Lot														
Rockaway Boulevard	EB	L	0.12	2.5	A	L	0.48	34.8	C	L	0.48	34.8	C	Mitigation not needed.
		TR	0.55	5.8	A	TR	0.61	13.3	B	TR	0.61	13.3	B	
	WB	L	0.06	19.5	B	L	0.07	16.1	B	L	0.07	16.1	B	
		TR	0.62	25.2	C	TR	0.85	25.2	C	TR	0.85	25.2	C	
Home Depot Parking Lot	NB	LTR	0.24	22.1	C	LTR	0.27	22.5	C	LTR	0.27	22.5	C	
111th Street	SB	LTR	0.45	26.4	C	LTR	0.69	34.1	C	LTR	0.69	34.1	C	
Overall Intersection[3]		-	-	**16.9**	**B**	-	-	**22.4**	**C**	-	-	**22.4**	**C**	
13. Rockaway Boulevard & 113th Street/Linden Boulevard/Home Depot Parking Lot														
Rockaway Boulevard	EB	L	0.66	26.8	C	L	0.98	83.1	F	L	0.98	83.1	F	**Unmitigable.**
		TR	0.63	11.2	B	TR	0.68	20.8	C	TR	0.68	20.8	C	
	WB	L	0.50	24.9	C	L	0.57	30.5	C	L	0.57	30.5	C	
		TR	0.60	16.8	B	TR	0.65	17.5	B	TR	0.65	17.5	B	
Home Depot Parking Lot	NB	LTR	1.09	127.8	F	LTR	1.09	127.8	F	LTR	1.09	127.8	F	
Linden Boulevard	SB	LTR	0.43	34.5	C	LTR	0.88	63.1	E	LTR	0.88	63.1	E	
		R	0.41	34.1	C	R	0.86	59.7	E	R	0.86	59.7	E	
Overall Intersection[3]		-	-	**27.9**	**C**	-	-	**40.6**	**D**	-	-	**40.6**	**D**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
14. Rockaway Boulevard & 114th Street														
Rockaway Boulevard	EB	LT	0.73	13.9	B	LT	0.88	21.4	C	LT	0.88	21.4	C	Mitigation not needed.
		R	0.44	6.9	A	R	0.44	6.2	A	R	0.44	6.2	A	
	WB	L	0.06	13.2	B	L	0.08	13.6	B	L	0.08	13.6	B	
		TR	0.36	15.5	B	TR	0.40	15.9	B	TR	0.40	15.9	B	
114th Street	NB	LTR	0.37	24.9	C	LTR	0.37	24.9	C	LTR	0.37	24.9	C	
Overall Intersection[3]		-	-	**14.6**	**B**	-	-	**17.4**	**B**	-	-	**17.4**	**B**	
15. Rockaway Boulevard & Lefferts Boulevard														
Rockaway Boulevard	EB	L	0.07	17.9	B	L	0.08	18.0	B	L	0.08	18.0	B	Mitigation not needed.
		T	0.66	27.8	C	T	0.70	29.3	C	T	0.70	29.3	C	
		R	0.21	19.1	B	R	0.21	19.1	B	R	0.21	19.1	B	
	WB	L	0.32	23.0	C	L	0.35	24.1	C	L	0.35	24.1	C	
		T	0.46	21.7	C	T	0.50	22.3	C	T	0.50	22.3	C	
Lefferts Boulevard	NB	L	0.29	26.2	C	L	0.29	26.2	C	L	0.29	26.2	C	
		TR	0.80	42.9	D	TR	0.80	42.9	D	TR	0.80	42.9	D	
	SB	LTR	0.55	29.1	C	LTR	0.55	29.1	C	LTR	0.55	29.1	C	
Overall Intersection[3]		-	-	**28.1**	**C**	-	-	**28.4**	**C**	-	-	**28.4**	**C**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
16. Cross Bay Boulevard & North Conduit Avenue														
North Conduit Avenue	WB	L	0.54	32.5	C	L	0.64	35.6	D	L	0.64	35.6	D	Mitigation not needed.
		LT	0.56	33.1	C	LT	0.66	36.2	D	LT	0.66	36.2	D	
		R	0.40	29.7	C	R	0.40	29.7	C	R	0.40	29.7	C	
Cross Bay Boulevard	NB	T	0.51	19.0	B	T	0.51	19.1	B	T	0.51	19.1	B	
	SB	TR	0.63	21.1	C	TR	0.63	21.1	C	TR	0.63	21.1	C	
Overall Intersection[3]		-	-	**22.5**	**C**	-	-	**23.3**	**C**	-	-	**23.3**	**C**	
17. Cross Bay Boulevard & Shore Parkway/Nassau Expressway Eastbound On-Ramp														
Cross Bay Boulevard	NB	L	0.99	95.5	F	L	0.99	95.5	F	L	0.99	95.5	F	Mitigation not needed.
		T	0.46	8.5	A	T	0.47	8.5	A	T	0.47	8.5	A	
		R	0.13	0.2	A	R	0.13	0.2	A	R	0.13	0.2	A	
	SB	L	0.96	87.2	F	L	0.96	87.2	F	L	0.96	87.2	F	
		T	0.41	7.9	A	T	0.42	8.0	A	T	0.42	8.0	A	
		R	0.83	5.2	A	R	0.89	7.8	A	R	0.89	7.8	A	
Overall Intersection[3]		-	-	**17.6**	**B**	-	-	**18.1**	**B**	-	-	**18.1**	**B**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
18. North Conduit Avenue & Cohancy Street/Albert Road														
North Conduit Avenue	WB	L	0.59	11.6	B	L	0.65	16.4	B	L	0.61	13.9	B	Shift 3 seconds of green time from NB/SB phase to WB phase. (WB phase shifts from 65 seconds to 68 seconds; NB/SB phase shifts from 40 seconds to 37 seconds; NB/NBL phase remains unchanged.)
		T	1.06	49.8	D	T	1.12	77.9	E	T	1.07	54.5	D	
		R	0.26	8.2	A	R	0.26	11.8	B	R	0.25	10.1	B	
Cohancy Street	NB	L	0.33	21.6	C	L	0.33	21.6	C	L	0.36	24.0	C	
		T	0.12	18.1	B	T	0.12	18.0	B	T	0.13	19.8	B	
	SB	TR	0.50	38.5	D	TR	0.50	38.5	D	TR	0.55	42.1	D	
Overall Intersection[3]		-	-	**40.4**	**D**	-	-	**60.9**	**E**	-	-	**44.5**	**D**	
19. North Conduit Avenue & Aqueduct Road (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A	**Unmitigable.**
Aqueduct Road	SB	R	-	12.9	B	R	-	51.6	F	R	-	51.6	F	
Overall Intersection[3]		-	-	**1.4**	**A**	-	-	**7.0**	**A**	-	-	**7.0**	**A**	
20. North Conduit Avenue & 114th Street														
North Conduit Avenue	WB	TR	0.68	5.2	A	TR	0.85	7.4	A	TR	0.85	7.4	A	Mitigation not needed.
114th Street	SB	R	0.54	44.4	D	R	0.54	44.4	D	R	0.54	44.4	D	
Overall Intersection[3]		-	-	**8.1**	**A**	-	-	**9.6**	**A**	-	-	**9.6**	**A**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
21. North Conduit Avenue & Lefferts Boulevard/Old South Road														
North Conduit Avenue	WB	T	1.04	37.4	D	T	1.22	113.4	F	T	1.22	112.0	F	**Unmitigable.[2]**
		R	0.06	4.9	A	R	0.06	5.6	A	R	0.06	5.6	A	
Lefferts Boulevard	NB	L	1.11	115.4	F	defL	1.19	132.5	F	defL	1.19	132.5	F	
		LT	0.91	50.6	D	T	0.74	38.1	D	T	0.74	38.1	D	
	SB	TR	0.84	55.1	E	TR	0.85	55.5	E	TR	0.85	55.5	E	
Overall Intersection[3]		-	-	**46.4**	**D**	-	-	**101.7**	**F**	-	-	**100.8**	**F**	
22. Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp														
Nassau Expressway Eastbound Off-Ramp	EB	LTR	0.59	23.7	C	LTR	1.10	84.8	F	LTR	0.94	41.2	D	Permit right turns on red for the eastbound approach.
Lefferts Boulevard	NB	TR	0.58	12.8	B	TR	0.65	14.4	B	TR	0.65	14.4	B	
	SB	LT	0.19	12.9	B	LT	0.19	12.9	B	LT	0.19	12.9	B	
Overall Intersection[3]		-	-	**17.1**	**B**	-	-	**50.9**	**D**	-	-	**27.2**	**C**	
23. Lefferts Boulevard & Aqueduct Road														
Aqueduct Road	EB	LR	0.32	26.5	C	LR	0.51	30.3	C	LR	0.51	30.3	C	**Unmitigable.[2]**
Lefferts Boulevard	NB	L	0.54	34.6	C	L	0.75	43.3	D	L	0.75	43.3	D	
		T	0.65	14.1	B	T	0.63	12.8	B	T	0.63	12.8	B	
	SB	TR	0.24	58.1	E	TR	(a)	88.6	F	TR	(a)	71.6	E	
						T	0.29	39.4	D	T	0.29	36.5	D	
						defR	0.69	111.6	F	defR	0.69	88.0	F	
Overall Intersection[3]		-	-	**25.8**	**C**	-	-	**39.0**	**D**	-	-	**35.2**	**D**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
24. Linden Boulevard & Southbound Van Wyck Service Road														
Linden Boulevard	EB	TR	0.69	34.0	C	TR	0.81	40.1	D	TR	0.84	43.5	D	**Unmitigable.**
	WB	defL	0.91	38.9	D	defL	1.08	84.5	F	defL	1.06	81.4	F	
		T	0.43	10.1	B	T	0.46	9.9	A	T	0.46	10.7	B	Proposed modifications are needed to accommodate measures at nearby intersection: Shift 1 seconds of green time from EB/WB phase to WB/WBL phase. (EB/WB phase shifts from 33 seconds to 32 seconds; WB/WBL phase shifts from 11 seconds to 12 seconds.)
Southbound Van Wyck Service Road	SB	LTR	0.80	25.7	C	LTR	1.00	49.5	D	LTR	1.00	49.5	D	
Overall Intersection[3]		-	-	**26.6**	**C**	-	-	**46.3**	**D**	-	-	**46.7**	**D**	
25. Linden Boulevard & Northbound Van Wyck Service Road														
Linden Boulevard	EB	defL	0.89	58.8	E	defL	1.19	135.2	F	defL	0.97	57.0	E	Shift 2 seconds of green time from NB phase to EB/WB phase; Shift 1 second of green time from NB phase to EB/EBL phase. (NB phase shifts from 46 seconds to 43 seconds; EB/WB phase shifts from 33 seconds to 35 seconds; EB/EBL phase shifts from 11 seconds to 12 seconds.)
		T	0.63	18.1	B	T	0.66	15.1	B	T	0.61	11.9	B	
	WB	TR	0.96	59.8	E	TR	0.99	67.3	E	TR	0.93	51.4	D	
Northbound Van Wyck Service Road	NB	LTR	0.51	18.2	B	LTR	0.51	18.2	B	LTR	0.55	20.6	C	
Overall Intersection[3]		-	-	**31.5**	**C**	-	-	**41.0**	**D**	-	-	**29.7**	**C**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
26. North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	1.07	42.3	D	Install new signal with a 120 second cycle and two phases (WB North Conduit Avenue phase is allotted 65 seconds; WB Belt Parkway Off-ramp is allotted 55 seconds.)
Belt Parkway Westbound Off-Ramp	WB	T	-	36.6	E	T	-	381.5	F	T	0.68	32.8	C	
Overall Intersection[3]		**-**	**-**	**3.0**	**A**	**-**	**-**	**58.0**	**F**	**-**	**-**	**40.9**	**D**	
27. 155th Avenue & Belt Parkway Eastbound On-Ramp (unsignalized)														
155th Avenue	WB	R	-	6.9	A	R	-	7.1	A	R	-	7.1	A	Mitigation not needed.
Belt Parkway Eastbound On-Ramp	NB	T	-	11.2	B	T	-	11.2	B	T	-	11.2	B	
		R	-	6.4	A	R	-	6.4	A	R	-	6.4	A	
Overall Intersection[3]		**-**	**-**	**9.5**	**A**	**-**	**-**	**9.5**	**A**	**-**	**-**	**9.5**	**A**	
28. Cohancy Street & 155th Avenue														
155th Avenue	EB	LT	0.15	19.1	B	LT	0.15	19.1	B	LT	0.15	19.1	B	Mitigation not needed.[2]
	WB	TR	0.28	20.7	C	TR	0.28	20.7	C	TR	0.28	20.7	C	
Cohancy Street	NB	LTR	0.13	5.5	A	LTR	0.13	5.5	A	LTR	0.13	5.5	A	
	SB	LTR	0.81	21.2	C	LTR	0.85	24.9	C	LTR	0.85	23.9	C	
Overall Intersection[3]		**-**	**-**	**18.9**	**B**	**-**	**-**	**21.6**	**C**	**-**	**-**	**20.9**	**C**	

Table 17-4 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
29. North Conduit Avenue & 130th Street														
North Conduit Avenue	WB	LTR	0.88	39.7	D	LTR	0.97	43.1	D	LTR	0.97	43.1	D	Mitigation not needed.[2]
130th Street	NB	L	0.39	35.2	D	L	0.39	35.0	C	L	0.39	34.9	C	
		T	0.28	32.6	C	T	0.28	32.4	C	T	0.28	32.4	C	
	SB	T	0.68	49.8	D	T	0.68	49.8	D	T	0.68	49.8	D	
		R	0.30	39.5	D	R	0.30	39.5	D	R	0.30	39.5	D	
Overall Intersection[3]		-	-	**40.0**	**D**	-	-	**42.6**	**D**	-	-	**42.6**	**D**	
30. South Conduit Avenue & 130th Street														
South Conduit Avenue	EB	LTR	0.37	19.3	B	LTR	0.40	19.7	B	LTR	0.40	19.7	B	Mitigation not needed.
130th Street	NB	TR	0.36	44.3	D	TR	0.36	44.3	D	TR	0.36	44.3	D	
	SB	L	0.63	27.1	C	L	0.63	26.5	C	L	0.63	26.5	C	
		T	0.12	21.5	C	T	0.12	21.2	C	T	0.12	21.2	C	
Overall Intersection[3]		-	-	**23.1**	**C**	-	-	**23.1**	**C**	-	-	**23.1**	**C**	
31. North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road														
North Conduit Avenue	WB	L	0.58	27.6	C	L	0.57	26.2	C	L	0.57	26.2	C	Mitigation not needed.
		LT	0.98	48.7	D	LT	0.98	46.3	D	LT	0.98	46.3	D	
Van Wyck Expressway Service Road	SB	T	0.60	26.6	C	T	0.59	26.1	C	T	0.59	26.1	C	
		R	0.48	24.5	C	R	0.66	28.5	C	R	0.66	28.5	C	
Overall Intersection[3]		-	-	**37.8**	**D**	-	-	**36.5**	**D**	-	-	**36.5**	**D**	

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

[3] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

(a) Under the With-Action condition, this approach operates as separate through and de facto right movements. The delay for the entire approach is shown for impact comparison purposes.

Shading denotes a significantly impacted movement.

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
1. Rockaway Boulevard & 94th Street														
Rockaway Boulevard	EB	TR	0.37	30.1	C	TR	0.43	31.1	C	TR	0.43	31.1	C	Mitigation not needed.
	WB	LT	0.33	4.2	A	LT	0.38	6.0	A	LT	0.38	6.0	A	
94th Street	SB	LTR	0.10	12.6	B	LTR	0.10	12.6	B	LTR	0.10	12.6	B	
Overall Intersection[3]		-	-	**17.0**	**B**	-	-	**18.3**	**B**	-	-	**18.3**	**B**	
2. Cross Bay Boulevard/Woodhaven Boulevard & Rockaway Boulevard														
Rockaway Boulevard	EB	TR	0.27	5.7	A	TR	0.32	5.3	A	TR	0.32	5.3	A	Shift 2 seconds of green time from NB/SB phase to SB/SBL phase. (NB/SB phase shifts from 53 seconds to 51 seconds; SB/SBL phase shifts from 19 seconds to 21 seconds; EB/WB phase remains unchanged.)
	WB	L	0.42	25.6	C	L	0.47	22.7	C	L	0.47	22.7	C	
		TR	0.58	25.1	C	TR	(a)	36.5	D	TR	(a)	36.5	D	
		-	-	-	-	T	0.81	30.0	C	T	0.81	30.0	C	
		-	-	-	-	defR	0.92	42.7	D	defR	0.92	42.7	D	
Woodhaven Boulevard SB Service Road	SB	T	0.21	13.8	B	T	0.21	13.8	B	T	0.21	13.8	B	
		R	0.02	11.9	B	R	0.02	11.9	B	R	0.02	11.9	B	
Woodhaven Boulevard Main Line	NB	T	0.56	4.3	A	T	0.56	4.3	A	T	0.59	5.8	A	
	SB	L	0.92	97.9	F	L	1.09	141.8	F	L	0.95	99.6	F	
		T	0.55	18.1	B	T	0.55	18.1	B	T	0.55	18.1	B	
Cross Bay Boulevard NB Service Road	NB	TR	0.33	4.1	A	TR	0.33	4.1	A	TR	0.35	5.4	A	
Overall Intersection[3]		-	-	**18.1**	**B**	-	-	**26.3**	**C**	-	-	**24.7**	**C**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
3. Liberty Avenue & Rockaway Boulevard														
Rockaway Boulevard	EB	LT	0.43	8.5	A	LT	0.51	9.0	A	LT	0.51	9.6	A	Mitigation not needed.[2]
Liberty Avenue	NB	T	0.06	17.8	B	T	0.06	19.3	B	T	0.06	19.3	B	
		R	0.20	17.3	B	R	0.23	18.6	B	R	0.23	18.6	B	
Overall intersection[3]		-	-	**10.3**	**B**	-	-	**10.9**	**B**	-	-	**11.4**	**B**	
4. Rockaway Boulevard/Liberty Avenue & 96th Street														
Liberty Avenue	EB	LT	0.28	28.1	C	LT	0.28	27.4	C	LT	0.28	27.4	C	Mitigation not needed.
	WB	TR	0.38	34.3	C	TR	0.38	34.3	C	TR	0.38	34.3	C	
96th Street	NB	LTR	0.30	38.9	D	LTR	0.30	38.9	D	LTR	0.30	38.9	D	
Rockaway Boulevard	NW	T	0.42	33.0	C	T	0.68	38.6	D	T	0.68	38.6	D	
	SE	T	0.20	0.6	A	T	0.25	0.6	A	T	0.25	0.6	A	
Overall Intersection[3]		-	-	**22.6**	**C**	-	-	**24.9**	**C**	-	-	**24.9**	**C**	
5. Cross Bay Boulevard Northbound Service Road & Liberty Avenue														
Cross Bay Blvd NB Service Road	NB	TR	0.63	33.9	C	TR	0.66	34.9	C	TR	0.66	34.9	C	Mitigation not needed.
Overall Intersection[3]		-	-	**33.9**	**C**	-	-	**34.9**	**C**	-	-	**34.9**	**C**	
6. Cross Bay Boulevard & Liberty Avenue														
Cross Bay Boulevard	NB	T	0.58	30.6	C	T	0.58	30.6	C	T	0.58	30.6	C	Mitigation not needed.
	SB	T	0.51	8.2	A	T	0.51	7.8	A	T	0.51	7.8	A	
Overall Intersection[3]		-	-	**16.2**	**B**	-	-	**15.9**	**B**	-	-	**15.9**	**B**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
7. Liberty Avenue & 94th Street														
Liberty Avenue	EB	R	0.20	28.5	C	R	0.20	28.5	C	R	0.20	28.5	C	Mitigation not needed.
94th Street	SB	TR	0.17	18.6	B	TR	0.17	17.8	B	TR	0.17	17.8	B	
Overall Intersection[3]		-	-	**20.9**	**C**	-	-	**20.3**	**C**	-	-	**20.3**	**C**	
8. Rockaway Boulevard & Centreville Street/109th Avenue/Plattwood Avenue														
Rockaway Boulevard	EB	L	0.16	15.7	B	L	0.21	21.0	C	L	0.21	21.0	C	Mitigation not needed.
		TR	0.45	20.8	C	TR	0.56	22.5	C	TR	0.56	22.5	C	
	WB	L	0.30	14.2	B	L	0.36	11.1	B	L	0.36	11.1	B	
		TR	0.36	11.6	B	TR	0.58	13.5	B	TR	0.58	13.5	B	
Centreville Street	NB	LTR	0.60	29.7	C	LTR	0.60	29.7	C	LTR	0.60	29.7	C	
109th Avenue	SB	LTR	0.42	24.9	C	LTR	0.42	24.9	C	LTR	0.42	24.9	C	
Overall Intersection[3]		-	-	**19.8**	**B**	-	-	**20.0**	**C**	-	-	**20.0**	**C**	
9. Rockaway Boulevard & 107th Street														
Rockaway Boulevard	EB	T	0.38	5.6	A	T	0.47	5.5	A	T	0.47	5.5	A	Mitigation not needed.
	WB	T	0.42	18.4	B	T	0.60	19.2	B	T	0.60	19.2	B	
107th Street	NB	LTR	0.14	24.4	C	LTR	0.14	24.4	C	LTR	0.14	24.4	C	
	SB	LTR	0.25	26.1	C	LTR	0.33	27.6	C	LTR	0.33	27.6	C	
Overall Intersection[3]		-	-	**13.7**	**B**	-	-	**14.4**	**B**	-	-	**14.4**	**B**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
10. Rockaway Boulevard & Aqueduct Road/108th Street														
Rockaway Boulevard	EB	L	-	9.1	A	L	-	11.0	B	L	-	11.0	B	Mitigation not needed.
		T	0.29	9.6	A	T	0.52	17.0	B	T	0.52	17.0	B	
		R	0.43	11.3	B	R	0.50	15.4	B	R	0.50	15.4	B	
	WB	L	0.57	6.9	A	L	0.58	33.0	C	L	0.58	33.0	C	
		T	0.28	1.5	A	T	0.57	4.0	A	T	0.57	4.0	A	
Aqueduct Road	NB	LR	0.29	24.2	C	LR	0.80	35.0	C	LR	0.80	35.0	C	
		R	0.33	26.0	C	R	0.43	11.8	B	R	0.43	11.8	B	
Overall Intersection[3]		-	-	**10.5**	**B**	-	-	**21.2**	**C**	-	-	**21.2**	**C**	
11. Rockaway Boulevard & 109th Street														
Rockaway Boulevard	EB	T	0.27	7.7	A	T	0.45	17.1	B	T	0.45	17.1	B	Mitigation not needed.
	WB	T	0.34	12.3	B	T	0.43	12.7	B	T	0.43	12.7	B	
109th Street	SB	LR	0.15	24.5	C	LR	0.17	24.7	C	LR	0.17	24.7	C	
Overall Intersection[3]		-	-	**10.9**	**B**	-	-	**15.4**	**B**	-	-	**15.4**	**B**	
12. Rockaway Boulevard & 111th Street/Home Depot Parking Lot														
Rockaway Boulevard	EB	L	0.11	11.5	B	L	0.73	48.6	D	L	0.73	48.6	D	Mitigation not needed.
		TR	0.42	14.6	B	TR	0.64	16.0	B	TR	0.64	16.0	B	
	WB	L	0.03	4.1	A	L	0.05	4.3	A	L	0.05	4.3	A	
		TR	0.64	8.4	A	TR	0.75	10.1	B	TR	0.75	10.1	B	
Home Depot Parking Lot	NB	LTR	0.12	20.6	C	LTR	0.12	20.6	C	LTR	0.12	20.6	C	
111th Street	SB	LTR	0.41	25.4	C	LTR	0.57	29.2	C	LTR	0.57	29.2	C	
Overall Intersection[3]		-	-	**12.9**	**B**	-	-	**17.6**	**B**	-	-	**17.6**	**B**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
13. Rockaway Boulevard & 113th Street/Linden Boulevard/Home Depot Parking Lot														
Rockaway Boulevard	EB	L	0.71	54.3	D	L	1.49	283.5	F	L	1.49	283.5	F	**Unmitigable.**
		TR	0.44	34.9	C	TR	0.58	36.0	D	TR	0.58	36.0	D	
	WB	L	0.14	12.5	B	L	0.18	13.5	B	L	0.18	13.5	B	
		TR	0.54	14.5	B	TR	0.56	14.6	B	TR	0.56	14.6	B	
Home Depot Parking Lot	NB	LTR	0.36	32.1	C	LTR	0.36	32.1	C	LTR	0.36	32.1	C	
Linden Boulevard	SB	LTR	0.43	34.7	C	LTR	0.59	39.9	D	LTR	0.59	39.9	D	
		R	0.41	34.0	C	R	0.57	38.8	D	R	0.57	38.8	D	
Overall Intersection[3]		-	-	**28.2**	**C**	-	-	**62.7**	**E**	-	-	**62.7**	**E**	
14. Rockaway Boulevard & 114th Street														
Rockaway Boulevard	EB	LT	0.50	7.3	A	LT	1.02	53.5	D	LT	1.02	53.5	D	Mitigation not needed.
		R	0.28	4.9	A	R	0.28	4.1	A	R	0.28	4.1	A	
	WB	L	0.06	13.5	B	L	0.09	14.3	B	L	0.09	14.3	B	
		TR	0.32	15.6	B	TR	0.34	15.8	B	TR	0.34	15.8	B	
114th Street	NB	LTR	0.43	27.5	C	LTR	0.43	27.5	C	LTR	0.43	27.5	C	
Overall Intersection[3]		-	-	**13.4**	**B**	-	-	**30.6**	**C**	-	-	**30.6**	**C**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
15. Rockaway Boulevard & Lefferts Boulevard														
Rockaway Boulevard	EB	L	0.07	18.4	B	L	0.08	18.5	B	L	0.08	18.5	B	Mitigation not needed.
		T	0.47	23.7	C	T	0.54	25.3	C	T	0.54	25.3	C	
		R	0.19	19.5	B	R	0.19	19.5	B	R	0.19	19.5	B	
	WB	L	0.23	20.8	C	L	0.26	21.6	C	L	0.26	21.6	C	
		T	0.43	21.9	C	T	0.45	22.2	C	T	0.45	22.2	C	
Lefferts Boulevard	NB	L	0.22	26.3	C	L	0.22	26.3	C	L	0.22	26.3	C	
		TR	0.82	46.4	D	TR	0.82	46.4	D	TR	0.82	46.4	D	
	SB	LTR	0.56	31.0	C	LTR	0.56	31.0	C	LTR	0.56	31.0	C	
Overall Intersection[3]		-	-	**28.7**	**C**	-	-	**28.8**	**C**	-	-	**28.8**	**C**	
16. Cross Bay Boulevard & North Conduit Avenue														
North Conduit Avenue	WB	L	0.32	28.0	C	L	0.60	34.2	C	L	0.60	34.2	C	Mitigation not needed.
		LT	0.33	28.2	C	LT	0.62	35.0	C	LT	0.62	35.0	C	
		R	0.37	29.1	C	R	0.37	29.1	C	R	0.37	29.1	C	
Cross Bay Boulevard	NB	T	0.44	18.0	B	T	0.44	18.1	B	T	0.44	18.1	B	
	SB	TR	0.54	19.5	B	TR	0.54	19.5	B	TR	0.54	19.5	B	
Overall Intersection[3]		-	-	**20.4**	**C**	-	-	**22.2**	**C**	-	-	**22.2**	**C**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
17. Cross Bay Boulevard & Shore Parkway/Nassau Expressway Eastbound On-Ramp														
Cross Bay Boulevard	NB	L	0.90	75.4	E	L	0.90	75.4	E	L	0.90	75.4	E	Mitigation not needed.
		T	0.38	7.7	A	T	0.38	7.7	A	T	0.38	7.7	A	
		R	0.10	0.1	A	R	0.10	0.1	A	R	0.10	0.1	A	
	SB	L	1.01	100.6	F	L	1.01	100.6	F	L	1.01	100.6	F	
		T	0.29	7.0	A	T	0.31	7.2	A	T	0.31	7.2	A	
		R	0.55	1.4	A	R	0.73	3.1	A	R	0.73	3.1	A	
Overall Intersection[3]		-	-	**18.8**	**B**	-	-	**17.9**	**B**	-	-	**17.9**	**B**	
18. North Conduit Avenue & Cohancy Street/Albert Road														
North Conduit Avenue	WB	L	0.49	34.7	C	L	0.80	44.8	D	L	0.80	44.1	D	**Unmitigable.**
		T	0.90	44.6	D	T	1.20	136.3	F	T	1.20	135.5	F	Modify offset to accommodate signal timing changes at nearby intersections. (Offset shifts from 59 seconds to 60 seconds.)
		R	0.34	31.7	C	R	0.34	30.4	C	R	0.34	30.0	C	
Cohancy Street	NB	L	0.19	24.5	C	L	0.19	24.6	C	L	0.19	25.3	C	
		T	0.09	22.9	C	T	0.09	22.9	C	T	0.09	23.5	C	
	SB	TR	0.38	32.3	C	TR	0.38	32.3	C	TR	0.38	32.3	C	
Overall Intersection[3]		-	-	**40.2**	**D**	-	-	**104.7**	**F**	-	-	**104.0**	**F**	
19. North Conduit Avenue & Aqueduct Road (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	-	0.0	A	**Unmitigable.**
Aqueduct Road	SB	R	-	10.7	B	R	-	176.1	F	R	-	176.1	F	
Overall Intersection[3]		-	-	**0.9**	**A**	-	-	**51.8**	**D**	-	-	**51.8**	**F**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
20. North Conduit Avenue & 114th Street														
North Conduit Avenue	WB	TR	0.66	22.3	C	TR	0.73	23.5	C	TR	0.73	23.5	C	Mitigation not needed.
114th Street	SB	R	0.17	27.0	C	R	0.17	27.0	C	R	0.17	27.0	C	
Overall Intersection[3]		-	-	**22.5**	**C**	-	-	**23.6**	**C**	-	-	**23.6**	**C**	
21. North Conduit Avenue & Lefferts Boulevard/Old South Road														
North Conduit Avenue	WB	T	0.99	54.1	D	T	1.05	70.7	E	T	1.05	46.8	D	Impact mitigated as a result of proposed signal at the upstream intersection of North Conduit and Belt Parkway Westbound Off-Ramp.
		R	0.14	21.7	C	R	0.14	21.2	C	R	0.14	7.9	A	
Lefferts Boulevard	NB	L	0.80	44.1	D	defL	0.87	41.9	D	defL	0.87	41.9	D	
		LT	0.64	29.9	C	T	0.54	27.9	C	T	0.54	27.9	C	
	SB	TR	0.54	38.8	D	TR	0.55	39.0	D	TR	0.55	39.0	D	
Overall Intersection[3]		-	-	**47.4**	**D**	-	-	**58.2**	**E**	-	-	**42.6**	**D**	
22. Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp														
Nassau Expressway Eastbound Off-Ramp	EB	LTR	0.58	23.6	C	LTR	0.76	28.1	C	LTR	0.61	24.3	C	Mitigation not needed.
Lefferts Boulevard	NB	TR	0.38	10.1	B	TR	0.57	15.4	B	TR	0.57	15.4	B	Permit eastbound approach right turns on red to mitigate impacts at downstream intersection of Lefferts Boulevard & Aqueduct Road.
	SB	LT	0.09	11.9	B	LT	0.09	12.0	B	LT	0.09	12.0	B	
Overall Intersection[3]		-	-	**17.0**	**B**	-	-	**21.2**	**C**	-	-	**19.0**	**B**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
23. Lefferts Boulevard & Aqueduct Road														
Aqueduct Road	EB	LR	0.13	21.3	C	LR	0.43	24.6	C	LR	0.43	24.6	C	Impact mitigated as a result of proposed measure at the upstream intersection of Lefferts Boulevard & Nassau Expressway Eastbound Off-Ramp.
Lefferts Boulevard	NB	L	0.15	28.5	C	L	0.38	32.0	C	L	0.38	32.0	C	
		T	0.52	14.2	B	T	0.52	14.2	B	T	0.52	14.2	B	
	SB	TR	0.26	88.6	F	TR	0.32	114.1	F	TR	0.32	89.8	F	
Overall Intersection[3]		-	-	**30.8**	**C**	-	-	**35.3**	**D**	-	-	**31.6**	**C**	
24. Linden Boulevard & Southbound Van Wyck Service Road														
Linden Boulevard	EB	TR	0.69	33.9	C	TR	1.08	90.0	F	TR	1.08	90.0	F	**Unmitigable.**
	WB	LT	0.59	26.7	C	LT	(b)	89.3	F	LT	(b)	89.3	F	
		-	-	-	-	defL	1.25	181.1	F	defL	1.25	181.1	F	
		-	-	-	-	T	0.43	24.4	C	T	0.43	24.4	C	
Southbound Van Wyck Service Road	SB	LTR	0.82	26.8	C	LTR	0.88	30.2	C	LTR	0.88	30.2	C	
Overall Intersection[3]		-	-	**28.1**	**C**	-	-	**64.5**	**E**	-	-	**64.5**	**E**	
25. Linden Boulevard & Northbound Van Wyck Service Road														
Linden Boulevard	EB	defL	0.88	54.1	D	defL	1.74	375.1	F	defL	1.74	375.1	F	**Unmitigable.**
		T	0.58	22.2	C	T	0.62	23.4	C	T	0.62	23.4	C	
	WB	TR	0.83	41.9	D	TR	0.87	45.6	D	TR	0.87	45.6	D	
Northbound Van Wyck Service Road	NB	LTR	0.70	21.4	C	LTR	0.70	21.4	C	LTR	0.70	21.4	C	
Overall Intersection[3]		-	-	**28.1**	**C**	-	-	**80.6**	**F**	-	-	**80.6**	**F**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
26. North Conduit Avenue & Belt Parkway Westbound Off-Ramp (unsignalized)														
North Conduit Avenue	WB	T	-	0.0	A	T	-	0.0	A	T	0.92	38.1	D	Install new signal with a 120-second cycle, and two phases. (WB North Conduit Avenue phase is allotted 61 seconds; WB Belt Parkway Off-ramp is allotted 59 seconds.)
Belt Parkway Westbound Off-Ramp	WB	T	-	39.9	E	T	-	125.7	F	T	0.52	25.9	C	
Overall Intersection[3]		**-**	**-**	**4.7**	**A**	**-**	**-**	**19.8**	**C**	**-**	**-**	**36.2**	**D**	
27. 155th Avenue & Belt Parkway Eastbound On-Ramp (unsignalized)														
155th Avenue	WB	R	-	6.8	A	R	-	8.1	A	R	-	8.1	A	Mitigation not needed.
Belt Parkway Eastbound On-Ramp	NB	T	-	9.5	A	T	-	9.5	A	T	-	9.5	A	
		R	-	6.3	A	R	-	6.3	A	R	-	6.3	A	
Overall Intersection[3]		**-**	**-**	**8.4**	**A**	**-**	**-**	**8.6**	**A**	**-**	**-**	**8.6**	**A**	
28. Cohancy Street & 155th Avenue														
155th Avenue	EB	LT	0.16	19.6	B	LT	0.16	19.6	B	LT	0.16	19.6	B	Mitigation not needed.[2]
	WB	TR	0.22	19.9	B	TR	0.22	19.9	B	TR	0.22	19.9	B	
Cohancy Street	NB	LTR	0.11	5.4	A	LTR	0.11	5.4	A	LTR	0.11	5.4	A	
	SB	LTR	0.65	10.4	B	LTR	0.90	24.1	C	LTR	0.90	24.8	C	
Overall Intersection[3]		**-**	**-**	**11.3**	**B**	**-**	**-**	**21.4**	**C**	**-**	**-**	**22.0**	**C**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
29. North Conduit Avenue & 130th Street														
North Conduit Avenue	WB	LTR	0.61	13.4	B	LTR	0.63	13.1	B	LTR	0.63	13.1	B	Mitigation not needed.
130th Street	NB	L	0.31	33.6	C	L	0.31	33.2	C	L	0.31	33.2	C	
		T	0.24	32.3	C	T	0.24	31.8	C	T	0.24	31.8	C	
	SB	T	0.60	46.4	D	T	0.60	46.4	D	T	0.60	46.4	D	
		R	0.16	36.9	D	R	0.16	36.9	D	R	0.16	36.9	D	
Overall Intersection[3]		-	-	**19.7**	**B**	-	-	**19.3**	**B**	-	-	**19.3**	**B**	
30. South Conduit Avenue & 130th Street														
South Conduit Avenue	EB	LTR	0.25	17.9	B	LTR	0.32	18.7	B	LTR	0.32	18.7	B	Mitigation not needed.
130th Street	NB	TR	0.29	42.6	D	TR	0.29	42.6	D	TR	0.29	42.6	D	
	SB	L	0.60	31.2	C	L	0.60	31.0	C	L	0.60	31.0	C	
		T	0.11	25.0	C	T	0.11	24.8	C	T	0.11	24.8	C	
Overall Intersection[3]		-	-	**24.3**	**C**	-	-	**23.9**	**C**	-	-	**23.9**	**C**	

Table 17-5 No-Action vs. With-Action Conditions Intersection Traffic Levels of Service – Saturday Night Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
31. North Conduit Avenue & Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road														
North Conduit Avenue	WB	L	0.51	25.6	C	L	0.51	25.6	C	L	0.51	25.6	C	Mitigation not needed.
		LT	0.71	28.1	C	LT	0.73	28.8	C	LT	0.73	28.8	C	
Van Wyck Expressway Service Road	SB	T	0.66	28.1	C	T	0.66	28.1	C	T	0.66	28.1	C	
		R	0.34	22.2	C	R	0.34	22.2	C	R	0.34	22.2	C	
Overall Intersection[3]		**-**	**-**	**27.1**	**C**		**-**	**27.4**	**C**		**-**	**27.4**	**C**	

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

[3] Overall intersection v/c ratio is the critical lane groups' v/c ratio.

(a) Under the With-Action condition, this approach operates as separate through and de facto right movements. The delay for the entire approach is shown for impact comparison purposes.

(b) Under the With-Action condition, this approach operates as separate de facto left and through movements. The delay for the entire approach is shown for impact comparison purposes.

Shading denotes a significantly impacted movement.

Rockaway Boulevard Corridor

Two of the 12 intersections analyzed along Rockaway Boulevard would be significantly impacted during the Friday PM peak hour, Saturday PM peak hour, and Saturday Night peak hour. Of the two intersections along Rockaway Boulevard that would be significantly impacted during at least one peak hour, one intersection could be partially mitigated during the Friday PM peak hour, and one intersection could be fully mitigated during the Saturday PM and Saturday Night peak hours.

Rockaway Boulevard and Cross Bay Boulevard/Woodhaven Boulevard

This intersection would be significantly impacted during all three peak hours analyzed. The Woodhaven Boulevard mainline southbound left-turn movement would be significantly impacted in each of the three peak hours analyzed, and the Rockaway Boulevard westbound left-turn and through-right movements would be significantly impacted during the Friday PM peak hour. The significant impact to the Rockaway Boulevard westbound shared through-right movement during the Friday PM peak hour, and the significant impact to the Woodhaven Boulevard mainline southbound left-turn movement during the Saturday PM and Saturday Night peak hours could both be mitigated with signal timing modifications during the peak hours analyzed. All other impacts could not be mitigated.

Rockaway Boulevard and 113th Street/Linden Boulevard/Home Depot Parking Lot

This intersection would be significantly impacted during all three peak hours analyzed. The Rockaway Boulevard eastbound left-turn movement would be impacted in all three peak hours analyzed. The Linden Boulevard southbound shared through-left-right-turn lane and southbound left-turn lane would be impacted in both the Friday PM and Saturday PM peak hours. None of these impacts could be mitigated.

North Conduit Avenue Corridor

Six of the eight intersections analyzed along North Conduit Avenue would be significantly impacted during at least one analyzed peak hour. Of the six impacted intersections, significant impacts at three intersections could be mitigated during the Friday PM peak hour, and two could be mitigated during both the Saturday PM and Saturday Night peak hours. One intersection would remain unmitigated during the Friday PM peak hour and two intersections would remain unmitigated during the Saturday PM and Saturday Night peak hours.

North Conduit Avenue and Cross Bay Boulevard

This intersection would be significantly impacted during the Friday PM peak hour (the westbound left and left-through lanes would be significantly impacted) and could be mitigated with signal timing modifications.

North Conduit Avenue and Cohancy Street/Albert Road

This intersection would be significantly impacted during the Saturday PM and Saturday Night peak hours (the westbound-through movement would be significantly impacted) and could be mitigated

with signal timing modifications only during the Saturday PM peak hour. The significant impact during the Saturday Night peak hour could not be mitigated.

North Conduit Avenue and Aqueduct Road

This intersection would be significantly impacted during the Saturday PM and Saturday Night peak hours (the southbound right-turn movement would be significantly impacted) and could not be mitigated.

North Conduit Avenue and Lefferts Boulevard/Old South Road

This intersection would be significantly impacted during all three peak hours analyzed. During both the Friday PM and Saturday PM peak hours, the westbound through and northbound de facto left turn movements would be significantly impacted and could not be mitigated in either period. During the Saturday Night peak hour, the impact to the westbound-through movement could be mitigated as a result of the proposed traffic signal at the upstream intersection of North Conduit Avenue and Belt Parkway Westbound Off-Ramp, which would meter vehicle traffic arriving along the westbound approach.

North Conduit Avenue and Belt Parkway Westbound Off-Ramp

This intersection would be significantly impacted during all three peak hours analyzed (the westbound Belt Parkway off-ramp would be impacted). These impacts could be mitigated in all three peak hours with the installation of a new traffic signal—highway operations were evaluated and showed that there would be sufficient ramp storage capacity, and queues would not affect the westbound Belt Parkway mainline.

North Conduit Avenue and Belt Parkway Westbound On-Ramp/Van Wyck Expressway Service Road

This intersection would be significantly impacted during the Friday PM peak hour (the westbound shared left-through movement would be significantly impacted) and could be mitigated with signal timing modifications.

Lefferts Boulevard Corridor

Two intersections analyzed along Lefferts Boulevard (not including the previously discussed intersection of Lefferts Boulevard/Old South Road with North Conduit Avenue) would be significantly impacted during one or more peak hours analyzed. During both the Friday PM peak hour and Saturday PM peak hour, significant impacts were identified at two intersections and significant impacts were identified at one intersection during the Saturday Night peak hour. During the Friday PM peak hour, significant impacts at one intersection could be fully mitigated and one other could be partially mitigated. During the Saturday PM and Saturday Night peak hours, one impacted intersection could be fully mitigated.

Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp

This intersection would be significantly impacted during the Friday PM peak hour and Saturday PM peak hour. During the Friday PM peak hour, the impact to the eastbound shared through-right lane

could be mitigated by permitting right turns on red for the eastbound approach; however, the impact to the eastbound de facto left turn lane could not be mitigated. During the Saturday PM peak hour, the impact to the eastbound approach could be mitigated by permitting right turns on red.

Lefferts Boulevard and Aqueduct Road

This intersection would be significantly impacted during all three peak hours analyzed (the southbound shared through-right lane would be impacted). However, with the permitting of right turns on red for the eastbound approach at the upstream intersection of Lefferts Boulevard and Nassau Expressway Eastbound Off-Ramp, significant impacts would be fully mitigated during the Friday PM and Saturday Night peak hours. Impacts could not be mitigated during the Saturday PM peak hour.

Linden Boulevard Corridor

Two intersections were analyzed along Linden Boulevard (not including the previously discussed intersection of Linden Boulevard/113th Street/Home Depot Parking Lot with Rockaway Boulevard). The intersection of Linden Boulevard and the Southbound Van Wyck Service Road would be significantly impacted during the Saturday PM and Saturday Night peak hours, and the intersection of Linden Boulevard and Northbound Van Wyck Service Road would be significantly impacted during all three peak hours analyzed.

Significant impacts at the intersection of Linden Boulevard and Southbound Van Wyck Service Road could not be mitigated in two impacted peak hours analyzed. The intersection of Linden Boulevard and Northbound Van Wyck Service Road could be mitigated during the Friday PM and Saturday PM peak hours with signal timing modifications but could not be mitigated during the Saturday Night peak hour.

Cohancy Street and 155th Street

Significant impacts were identified to southbound approach of the intersection of Cohancy Street and 155th Street during the Friday PM peak hour. Modification of the traffic signal cycle length, from 60 seconds to 120 seconds, could mitigate the significant traffic impact to this intersection.

Implementation

The proposed mitigation measures would be subject to NYC DOT and NYS DOT approval. The proposed signal timing modifications would be implemented by NYC DOT. The proposed new traffic signal at the intersection of North Conduit Avenue and the Belt Parkway Westbound Off-Ramp would meet the current *MUTCD* requirements for a traffic signal. A warrant analysis was conducted and determined that this intersection would meet Warrant #3 (Peak Hour Volume). Installation of the traffic signal would be coordinated with NYC DOT and NYS DOT. A new sign would need to be installed at the intersection of Lefferts Boulevard and the Nassau Expressway Eastbound Off-Ramp to permit right turns on red. The implementation of these measures would not result in the loss of any parking or "standing" spaces. If, prior to implementation, NYC DOT or NYS DOT determines that any of the identified mitigation measures are infeasible, and no other alternative and equivalent mitigation measures could be advanced, then those impacts would be considered unmitigated.

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Alternatives

As described in the *2021 City Environmental Quality Review (CEQR) Technical Manual*, alternatives selected for consideration in an Environmental Impact Statement (EIS) are generally those that 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 seeking approval for modification of the existing ground lease of State-owned property and issuance of a Gaming Facility license from the New York State Gaming Commission (the Gaming Commission) in conjunction with the proposed expansion of the existing Resorts World New York City (RWNYC) casino and installation and operation of live table games (the Proposed Actions). RWNYC is located at 110-00 Rockaway Boulevard (Block 11543, p/o Lot 2) in the Jamaica neighborhood of Queens, New York. A portion of the site is currently occupied by the existing casino and a 400-key (approximately 249,500 gross square-foot [gsf]) hotel (the Hyatt Regency JFK Airport at RWNYC). The casino facility includes accessory retail, restaurant/food and beverage space, and meeting and event space. Approximately 4,779 parking spaces are provided on the RWNYC property in surface and structured parking to serve the hotel and casino. Together the existing development totals approximately 1,888,535 gsf, including the 803,900-gsf structured parking facility.

The Expansion Project involves the expansion of the existing RWNYC facility by approximately 3,442,665 gsf, resulting in a total of approximately 5,331,200 gsf (existing square footage, plus the proposed expansion. The Expansion Project would be comprised of the following elements:

› Up to approximately 2,000-key hotel within approximately 1,376,900 gsf of hotel space;

- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to approximately 11,000 gaming positions, which will include a mix of live table games, slots, and electronic table games (ETGs);
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,300 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical/utility space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

The Proposed Actions would include the approval of a gaming license from the Gaming Commission, a decision that is subject to the State Environmental Quality Review Act, and the modification of the ground lease by the Franchise Oversight Board (FOB). The FOB is the Lead Agency for the environmental review.

This chapter considers the following two alternatives to the Proposed Actions:

- No-Action Alternative
- No Unmitigated Significant Adverse Impacts Alternative

Principal Conclusions

No-Action Alternative

The No-Action Alternative is the future without the Proposed Actions (the No-Action condition), described in **Chapter 1, Project Description** and analyzed in **Chapter 2, Land Use, Zoning, and Public Policy** through **Chapter 16, Construction**. Absent the Expansion Project, it is assumed that the full program analyzed in the Approved 2017 Plan (detailed below) would be built out, namely a second proposed hotel, and that existing uses on-site would continue to operate. The No-Action condition would total 2,163,666 gsf including 600 hotel keys, 473,731 gsf of casino and gaming facilities, 134,253 gsf of retail and dining, 35,526 gsf of lobby and public circulation space, 18,357 gsf of other support space, and 4,960 parking spaces.

While the No-Action Alternative would not result in any significant adverse impacts, it would only moderately increase the number of gaming positions and hotel rooms, and it would not introduce new amenities and infrastructure such as the arena, pool deck, central utility plant, conservatory, or public plaza space. Without these features of the Expansion Project, the No-Action Alternative would not achieve the same economic benefits and would not meet the purpose and need of the Expansion Project to solidify RWNYC as a destination for entertainment, dining, and shopping in New York City and the region.

No Unmitigated Significant Adverse Impacts Alternative

The No Unmitigated Significant Adverse Impact Alternative identifies those modifications to the Proposed Actions that would be required to eliminate all the Proposed Actions' unmitigated significant adverse impacts. The Expansion Project would result in significant adverse impacts to traffic elements that could not be fully mitigated.

While this alternative considers development that would not result in any unmitigated significant adverse impacts, 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.

The Expansion Project would result in significant adverse traffic impacts that could not be fully mitigated with standard traffic capacity improvement measures during the Friday PM, Saturday PM, and Saturday night peak periods. A sensitivity analysis was conducted at critical intersections where unmitigated traffic impacts were identified and determined that the critical intersection would be the intersection of North Conduit Avenue and Lefferts Boulevard/Old South Road. A development increment equivalent to 22 percent of the full Expansion Project development program would result in significant adverse traffic impacts that could not be fully mitigated. Therefore, for the Expansion Project to not result in unmitigated significant adverse traffic impacts, the development increment would need to be reduced by more than 78 percent.

Project Commitments

There are no project commitments specific to either the No-Action or No Unmitigated Significant Adverse Impacts Alternatives.

No-Action Alternative

Description of the No-Action Alternative

The No-Action Alternative examines future conditions absent approval of the Proposed Actions. Absent the Proposed Actions, it is anticipated that the Applicant would build a second hotel and other program additions that were evaluated and approved in 2017 (the Approved 2017 Plan, as described in more detail in **Chapter 1, Project Description**) but have not yet been constructed. The technical chapters of this EIS have described the No-Action Alternative as the "No-Action condition," which includes the following additional program on the Project Site:

- 504,180 gsf of hotel (two hotels with a total of 600 rooms);
- A 28,005-gsf grand lobby;
- 5,988 gsf of retail;
- 12,214 gsf of dining;
- 10,253 gsf of retail/food and beverage support space;
- 56,108 gsf of gaming (600 additional VLTs for a total of 6,650);
- 94,411 gsf of function/event space;
- 7,110 gsf of mechanical and electrical space; and
- A 2,847-gsf bus drop-off area.

The No-Action Alternative would result in a moderate increase in gaming positions and hotel rooms and would maintain the same uses that currently exist on the Project Site. The No-Action Alternative would total 2,163,666 gsf compared to the existing 1,888,535-gsf RWNYC casino.

By comparison, the Expansion Project would expand the RWNYC facility by 3,442,665 gsf and would not result in significant adverse impacts to land use, zoning, and public policy; socioeconomic conditions; community services and solid waste; open space; shadows; urban design and visual resources; hazardous materials; water and sewer infrastructure; energy, sustainability, greenhouse gas emissions and climate change; air quality; noise; public health; neighborhood character; or construction. Therefore, it can be concluded that the No-Action Alternative would also not result in any significant adverse impacts in these categories. The Expansion Project would, however, result in significant adverse impacts related to traffic. Traffic conditions under the No-Action Alternative in comparison to the future with the Proposed Actions are described below.

The No-Action Alternative would not meet the goals and objectives of the Proposed Actions, and the economic and public realm benefits (approximately 11.1 acres of public open space) expected from the Proposed Actions would not be realized under this alternative. Therefore, the No-Action Alternative is not a preferred alternative.

Traffic

Under the No-Action Alternative, the majority of intersection traffic movements would continue to operate at acceptable levels of service. 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. As detailed in **Chapter 11, Transportation**, 14 intersections would have at least one movement operating at unacceptable levels of service during at least one peak hour under the No-Action condition. Compared to the No-Action Alternative, the Proposed Actions would result in significant adverse traffic impacts at ten intersections (at 18 movements) during the Friday PM peak hour, 10 intersections (at 14 movements) during the Saturday PM peak hour, and nine intersections (at ten movements) during the Saturday night peak hour.

Unlike the Proposed Actions, the No-Action Alternative would not result in significant adverse traffic impacts.

No Unmitigated Significant Adverse Impacts 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 while achieving the project's goals and objectives. 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 Expansion Project goals and objectives would not be realized,

as detailed below. Therefore, the No Unmitigated Significant Adverse Impact Alternative is not a preferred alternative.

Traffic

As discussed in **Chapter 17, Mitigation** and **Chapter 19, Unavoidable Significant Adverse Impacts**, the Expansion Project would result in significant adverse traffic impacts that could not be fully mitigated with standard traffic capacity improvement measures at four of the 31 intersections during the Friday PM peak hour (two of the four intersections would be partially mitigated), five intersections during the Saturday PM peak hour, and five intersections during the Saturday night peak hour. Sensitivity analyses were conducted to determine the level of reduction in the development program to eliminate the unmitigated significant adverse traffic impacts. The sensitivity analysis determined that the critical intersection would be the intersection of North Conduit Avenue and Lefferts Boulevard/Old South Road. A development increment equivalent to 22 percent of the full Expansion Project development program would result in significant adverse traffic impacts that could not be fully mitigated. Therefore, for the Expansion Project to result in insignificant adverse impacts without mitigation, the development increment would need to be reduced by more than 78 percent, which would not facilitate the scale of development necessary to achieve the purpose and need of the project. Further, a reduced program would not allow for the scale of development needed to be responsive to the State's competitive *Request for Applications to Develop and Operate a Gaming Facility in New York State*, dated January 3, 2023, and listed evaluation criteria.

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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

All potential significant adverse impacts of the Proposed Actions would be mitigated to the maximum extent practicable, as described in **Chapter 17, Mitigation** and consistent with the requirements of SEQRA. The Proposed Actions have the potential to result in significant adverse impacts on traffic at certain locations. In addition, certain unavoidable effects associated with construction would result from the Proposed Actions.

Transportation

Traffic

Of the 31 intersections analyzed, the Expansion Project would result in significant adverse traffic impacts at 10 intersections (at 18 movements) during the Friday PM peak hour, 10 intersections (at 14 movements) during the Saturday PM peak hour, and nine intersections (at 10 movements) during the Saturday Night peak hour. The majority of the intersections analyzed would either not be significantly impacted or could be fully mitigated with the readily implementable traffic improvement measures described below. Four of the 31 intersections would remain unmitigated during the Friday PM peak hour (two of the four intersections would be partially mitigated), five intersections would remain unmitigated during the Saturday PM peak hour, and five intersections would remain unmitigated during the Saturday Night peak hour.

Construction

As discussed in **Chapter 16, Construction**, Phase 1 includes interior finishing work associated with renovations of the existing casino and would last approximately six months. The construction would occur wholly within the existing buildings and would not result in disruptions to adjacent uses.

It is assumed that full build out of the Expansion Project would be sequenced over a period of 53 months, with the bulk of the new construction occurring in three phases: Phase 2A would involve construction of the parking garage, open space plaza, and central utility plant; Phase 2B would include construction of the casino, arena, ballroom and pool deck, and hotel expansion; and Phase 2C would include construction of the conservatory. However, construction impacts would be temporary in nature, and heavier equipment would be utilized during the earlier phases of construction and would remain on-site.

The following is a summary of the unavoidable construction-related impacts anticipated from the Expansion Project. Analysis of construction-related impacts is provided in **Chapter 16, Construction**, and, as detailed, significant construction traffic impacts are anticipated while no significant adverse impacts related to construction air quality or noise are anticipated. The Expansion Project would, however, result in effects related to air quality and noise during the construction period. While these air quality and noise effects during the construction period are not significant adverse impacts, the effects would be unavoidable and are summarized below. It is important to note that upon completion of construction, all construction impacts would subside or would be eliminated.

Traffic and Parking

It is anticipated that construction of the Expansion Project would not result in closure of parking lanes, travel lanes, or sidewalk spaces, as all construction activity, including staging and loading, would occur within the Project Site. It is anticipated that a significant number of Expansion Project construction workers would drive, and parking would be accommodated on the Project Site when possible.

Construction traffic would include trucks performing operations on the site, delivery and removal of materials, and construction worker's vehicles. The number and types of construction vehicles would vary depending on the phase of construction and the particular operations underway at any given time. Construction vehicles would arrive and depart near Project Site roadways as needed. As with any construction project, redevelopment of the Project Site would necessitate deliveries of materials and supplies. It is anticipated that deliveries to the Project Site would occur throughout the workday, from Monday to Friday, and staging of materials would either occur onsite to the extent practicable or negotiated for staging on adjacent parcels as needed.

Of the 11 intersections analyzed as part of the construction transportation analysis, significant construction traffic impacts were identified at one intersection during the AM construction peak hour and four intersections during the PM construction peak hour. Standard traffic capacity improvements typically implemented by the New York City Department of Transportation (NYCDOT), such as signal timing modifications, could fully mitigate traffic impacts at the one significantly impacted intersection during the AM construction peak hour and two of the four significantly impacted intersections during the PM construction peak hour. Significant traffic impacts to the intersections listed below would remain unmitigated during the PM construction peak hour:

› Linden Boulevard and Southbound Van Wyck Service Road

› Linden Boulevard and Northbound Van Wyck Service Road

Noise and Air Quality

The construction activities for the Expansion Project would temporarily increase noise levels in the vicinity of construction activities, including in the adjacent residential neighborhoods, particularly due to the use of heavy machinery. Despite these increases, the highest noise levels are expected primarily during peak construction phases, such as the building of the parking garage and the central utility plant (CUP). Notably, construction noise levels are expected to decrease after the completion of the ring road, as this work is closest to the nearest receptors. While construction would cause temporary noise increases, no significant adverse impacts are anticipated due to compliance with NYC Noise Code thresholds and implementation of comprehensive noise reduction measures. The construction contractor would be required to adhere to all specified noise reduction measures, as outlined in **Chapter 16, Construction**, and construction activities would be limited to 7:00 AM to 3:00 PM, avoiding noise-sensitive evening and nighttime periods.

During construction, there would be increased air quality effects related to particulate matter (fugitive dust) created by demolition, excavation, transfer of debris into trucks, emissions from on-site diesel equipment, and emissions from increased truck traffic to and from the construction site. The emission control measures implemented would include, but not be limited to, the suppression of fugitive dust through watering at the construction site, use of on-site equipment meeting U.S. Environmental Protection Agency's (EPA's) tier 3 with diesel particulate filters or tier 4 standards and truck idling restrictions. Commitments related to emission reduction measures during construction are outlined in **Chapter 16, Construction.**

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Growth-Inducing Aspects of the Expansion Project

The term "growth-inducing aspects" generally refers to the potential for a proposed project to trigger additional development in areas outside of a project site (i.e., directly affected area) that would not experience such development without the 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 Expansion Project would consist of the construction of an approximately 3.4-million-square-foot (sf) addition to the existing facilities on a 62-acre portion of Queens Block 11543, Lot 2 (the Project Site).

Principal Conclusions

The Applicant is proposing a two-stage conversion and expansion of the existing facilities at the Project Site to construct a world-class integrated resort and casino. Upon issuance of the Gaming Facility license, Resorts World New York City (RWNYC) would undertake an initial interior renovation to convert the existing event and exposition space on the third floor to live gaming, as well as renovations to the existing

video lottery terminal areas of the casino on the lower floors, accommodating a total of 6,650 gaming positions. This initial conversion would allow RWNYC to quickly deliver live gaming to the NYC market.[1]

Following the conversion of existing space to live gaming, the Proposed Actions would facilitate the expansion of the RWNYC facility through the construction of a new hotel and facility space featuring a pool and ballroom/multi-purpose event space; expanded retail and dining offerings, including new restaurants, a bar/stage area, and club; expanded casino and gaming facilities as well as required support spaces (count room, surveillance room, employee lounges, etc.); a new 7,000-seat arena; a central utility plant to service the proposed new buildings; a new central plaza and conservatory; and a new parking garage in the location of the existing surface parking on the Project Site.

As discussed in **Chapter 3, Socioeconomic Conditions**, the Expansion Project would augment and enhance an existing facility with new entertainment and commercial space supporting similar uses and businesses to what exists on the Project Site, and therefore would not introduce a new development trend. As documented in the socioeconomic conditions analysis, the development conditions and local economy of the area surrounding the Project Site have been relatively stable, with no clear trend occurring in recent years. The area did not experience a change in development trends following the expansion of the RWNYC casino that was constructed in 2021, which suggests that further expansion of operations at the Project Site would not introduce new trends that could affect nearby local businesses. Therefore, the Expansion Project would be consistent with the existing mix of uses at the Project Site and would not affect development conditions in the study area.

As discussed in **Chapter 9, 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 at the Project Site, it is not anticipated that the Proposed Actions would generate significant secondary effects resulting in substantial new development in nearby areas. Additionally, the Proposed Actions are limited in applicability to the boundaries of the Project Site and would not extend beyond the Project Site.

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

Project Commitments

There are no project commitments specific to the growth inducing aspects of the expansion project chapter.

[1] The initial stage conversion of the existing RWNYC facility to live gaming would involve interior renovations only on the Project Site. No additional gross square footage would be constructed. It is anticipated that the existing exposition and event space on the third floor would be converted for gaming purposes as a first step, followed by renovations on the lower levels, in order to provide continuous gaming operations during the initial stage and minimize disruption as much as possible. There would be no increase in gaming positions beyond the 6,650 studied and permitted under the 2017 Expanded Environmental Assessment.

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Irreversible and Irretrievable Commitments of Resources

Resources, both natural and man-made, would be expended in the construction and operation of developments projected to occur as a result of a proposed project. These resources include the building materials used in construction; energy in the form of gas and electricity consumed during construction and operation of project-generated development by various mechanical and processing systems; and the human effort (time and labor) required to develop, construct, and operate various components of project-generated development. These are considered irretrievably committed because their reuse for some purpose would be highly unlikely.

The Expansion Project constitutes a long-term commitment of land resources, thereby rendering land use for other purposes highly unlikely in the foreseeable future. However, the Project 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, and operation of the Expansion Project under the Proposed Actions are not available for other projects.

These commitments of resources and materials are weighed against the benefits of the Expansion Project. As described in **Chapter 1, Project Description**, the Proposed Actions would facilitate the construction of an approximately 3.4-million-square-foot (sf) addition to the existing facilities on a 62-acre portion of Queens Block 11543, Lot 2 (the Project Site).

The Expansion Project would result in a total of approximately 5,331,200 gross square feet (gsf) (existing gsf, plus the Expansion Project) comprising the following elements:

› Up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;

- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to 11,000 gaming positions;
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,300 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

The Proposed Actions would facilitate the construction of an integrated resort that includes new hotel space, dining, shopping, and an arena as well as live gaming and an expanded casino area at the existing Resorts World New York City (RWNYC) facility. The Applicant believes the Expansion Project would solidify RWNYC as a destination for dining, shopping, and entertainment in New York City and support new workforce development opportunities and economic activity in the region.

There are currently 859 jobs located on the site; with the Expansion Project, the Project Site would accommodate approximately 5,000 jobs. The additional 4,140 jobs would be primarily centered in the casino (60 percent of jobs), though several jobs would be created in a variety of divisions such as administration, finance, hotel, and security. The diversity in job types allows for a range of employee skill sets and opportunities, with 84 percent as family-sustaining union jobs (hourly employees), 7 percent as mid-level jobs (staff professionals and supervisors), and 9 percent as managerial/high-level jobs (managers and senior management employees). The Applicant proposes to work with Queens-based stakeholders to identify local residents who would qualify for the additional job opportunities associated with the Expansion Project.

The Expansion Project would benefit the local economy both directly and indirectly. As the facility expands, it would rely on local and regional businesses for supplies and services and could benefit a variety of industries, such as construction, waste management, food and beverage supply, and other business-to-business services. Local businesses would also benefit from the new influx of workers and visitors to the Project Site. As noted above, the Expansion Project would generate over 4,000 new workers who could be expected to spend a portion of their new income locally. Likewise, when the Expansion Project is fully operational, site patronage is estimated to be about 9 million patrons per year, of which approximately 960,000 would stay overnight either on-site or in the region. These visitors are likely to explore the surrounding neighborhood and region, supporting restaurants, shops, entertainment, accommodations, and other businesses.

The Expansion Project would capitalize on the existing investments at the Project Site to continue to build job opportunities, resulting in new construction jobs and permanent employment. The proposal would continue the investment made at this location supported by previous Gaming Commission decisions. Finally, the Expansion Project would introduce new publicly accessible open spaces to the Project Site, including multi-use paths and passive open spaces that would serve visitors, employees, and the surrounding community.

The horse racing that is currently held at the Aqueduct Racetrack is anticipated to be moved to Belmont Park, which is undergoing renovation to make it suitable for year-round racing and training. Once the renovations are complete, NYRA will be able to consolidate all downstate racing and training activities at the new Belmont Park, unlocking the balance of the State-owned land at Aqueduct Racetrack for redevelopment opportunities, which may include housing, additional open space, and other uses that will be defined through a competitive request for proposals process. The proposed timing of redevelopment and ultimate building program for the Aqueduct Racetrack site is undefined as of the writing of this environmental impact statement, and therefore quantification of the commitment of resources associated with that future redevelopment opportunity is not possible at this time and would be the subject of a future environmental review process. However, commitment of resources associated with the Expansion Project would not foreclose future options on the Aqueduct Racetrack site. For example, water service in New York City is not a competitive process and future development would not affect or be affected by the Expansion Project, as any future development would undergo its own environmental review and site connection approval process. The Project Site does not contain, nor is it adjacent to, any known natural resources, and therefore, the Expansion Project would not be expected to adversely affect any habitats, vegetation, or wildlife. A site plan and circulation plan would need to be prepared for the redevelopment of the Aqueduct Racetrack site to accommodate the specific uses proposed for the site and a site-specific transportation assessment would need to be prepared to assess the travel demand characteristics of the future uses and the additional vehicles that would be circulating through the local street network. While the development of the Proposed Expansion would not create traffic congestion such that the local street network would not be able to handle additional capacity, it is not possible to quantify the future condition without site-specific circulation and program information. Further, the Expansion Project is projected to reduce impervious surfaces on the Project Site and incorporate green infrastructure elements, measures that would contribute to effective storm water management, and align with City policy goals related to sustainability and resiliency, as described in **Chapter 2, Land Use, Zoning, and Public Policy**.

In conclusion, the Proposed Actions would not result in an immediate or long-term loss of environmental resources, since the Project Site does not possess any natural resource of significant value, and the Project Site has been previously developed. The long-term commitment of land resources needed for the Expansion Project would be balanced by the project's beneficial aspects, including economic development, job creation, and community benefits.

Project Commitments

There are no project commitments specific to the irreversible and irretrievable commitments of resources chapter.

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Cumulative Impacts

Cumulative impacts are two or more individual effects on the environment that, when taken together, are significant or that compound or increase other environmental effects. Generally, they are the long-term impacts of either an individual action or a group of actions.

As described in **Chapter 1, Project Description**, the Proposed Actions would facilitate the construction of an approximately 3.4-million-square-foot (sf) addition to the existing facilities on a 62-acre portion of Queens Block 11543, Lot 2 (the Project Site).

The Expansion Project would result in a total of approximately 5,331,200 gross square feet (gsf) (existing gsf, plus the Expansion Project), comprised of the following elements:

- Up to 2,000 hotel keys within approximately 1,376,900 gsf of hotel space;
- Approximately 725,900 gsf of casino/gaming facility space accommodating a combined total of up to 11,000 gaming positions;
- Approximately 213,900 gsf of retail and restaurant space;
- An approximately 187,900-gsf, 7,000-seat arena;
- Approximately 73,900 gsf of function and event space;
- Approximately 53,000 gsf of pool deck area;
- Approximately 232,900 gsf of lobby and public circulation space;
- Approximately 145,800 gsf of mechanical/electrical space;
- An approximately 97,500-gsf central utility plant;
- An approximately 79,700-gsf conservatory; and,
- Approximately 2,143,500 gsf of structured parking, with a total of approximately 7,309 structured and surface parking spaces.

Generally, cumulative impacts can occur when the incremental or increased impacts of an action, or actions, are added to other past, present, and reasonably foreseeable future actions. The Proposed

Actions would facilitate the construction of an integrated resort that includes new hotel space, dining, shopping, and an event center as well as live gaming and an expanded casino area at the existing RWNYC facility. As detailed in **Chapter 1, Project Description**, Phase I of the proposed expansion was constructed in 2021. This included the 28,005-gsf grand lobby space; the 56,108-gsf gaming space; 270,310 gsf of hotel space; 28,455 gsf of retail, dining, food, and beverage support space; and the 2,847-gsf bus drop off area that exist on the site today.

Many of the technical analysis areas included in this EIS by nature review the potential cumulative impacts of the Proposed Actions and the 2021 Phase I development on the Project Site. Where additional analysis is required to assess the potential for cumulative impacts, that information is detailed in this chapter. As noted in **Chapter 2, Land Use, Zoning, and Public Policy**, there are no new planned developments within the quarter-mile study area that are expected to be completed by the 2030 analysis year that would contribute to cumulative impacts.

Principal Conclusions

Land Use, Zoning, and Public Policy

Chapter 2, Land Use, Zoning, and Public Policy reviews the full build-out of the Project Site, including the Expansion Project and the existing facilities, in order to assess the potential for significant adverse impacts. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Socioeconomic Conditions

The cumulative Phase I and Phase II program represent a continuation and expansion of what was previously developed on the Project Site as an entertainment facility, beginning in 2011. As detailed in **Chapter 3, Socioeconomic Conditions**, the development conditions and local economy of the study area are relatively static, with no clear trend occurring in recent years. The stable economic conditions of the study area have been consistent with the objectives of the 2013 Ozone Park Rezoning, which sought to limit local commercial development to existing commercial corridors and transit-rich areas. The study area did not experience a change in development trends following the construction of the site's previous expansion, which suggests that further expansion of operations at the Project Site would not introduce new trends that could affect nearby local businesses. Therefore, no cumulative impacts related to indirect business displacement are anticipated.

Community Facilities and Solid Waste

Community Facilities and Services

The new guest and worker population expected to be introduced to the Project Site from the cumulative Phase I and Phase II Expansion Project would increase the demand for fire and police services. Based on public safety data maintained by the Applicant, the cumulative increase in development program would result in the following annual demand for emergency services:

- Approximately 578 medical 911 calls
- Approximately 406 crime 911 calls

› Approximately 39 FDNY response calls[1]

It is noted in the *CEQR Technical Manual* that the emergency service providers do not allocate resources based on proposed or projected developments, but continually evaluate the need for changes in personnel, equipment, or facilities and make any adjustments necessary. The Applicant is in ongoing discussions with the local fire and police service providers, who have indicated that the Expansion Project can be accommodated. In addition, the Expansion Project would continue to rely on internal surveillance and security services to reduce the need for emergency services from local providers.[2] The FDNY and NYPD would continue to evaluate the need for personnel and equipment and make necessary adjustments to adequately serve the area according to demand-based needs. It is expected that additional public safety, fire, and EMS units would be allocated as needed as the development occurs. The Applicant is committed to continued coordination with the local fire and police services as development occurs to address any concerns raised and avoid impacts to the local community.

Solid Waste

The cumulative Phase I and Phase II Expansion Project program would result in an overall increase in solid waste generation. Based on the citywide average rates for solid waste generation, the cumulative solid waste generation would be approximately 78.24 tons per week. Given that approximately 350,000 tons of public and private sector solid waste is generated in the City per week under existing conditions, this would represent approximately 0.02 percent of the City's current solid waste generation. It would represent 0.04 percent of the City's anticipated future weekly commercial- and Department of Sanitation of New York (DSNY)-managed waste generation in 2025 (estimated at 213,600 tons per week). Because the Expansion Project would not introduce residential uses, solid waste from residents would not be generated and DSNY would not need to collect waste.

Overall, the cumulative uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately four commercial carter truck loads per week. This would represent less than one percent of the private carting fleet and would therefore not overburden existing commercial solid waste handling services. Furthermore, the Project Site operations would not have a direct effect on a solid waste management facility. As a result, no significant adverse cumulative impacts on the City's solid waste and sanitation services would occur.

Open Space

Chapter 5, Open Space reviews the full build-out of the Project Site, including the Expansion Project and the existing facilities, and assesses the open space ratio for this cumulative condition in order to determine the potential for significant adverse impacts. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Shadows

In accordance with the *CEQR Technical Manual*, a Tier 3 shadow screening assessment was performed for the full build-out of the Project Site under the With-Action condition, as detailed in

[1] This estimate is conservative in that it does not account for fire alarm activations that do not result in a FDNY response.

[2] The Applicant has engaged in discussions with NYPD 106th Precinct (Capt. Berkley Vantull, December 3, 2024), Queens District Attorney Melinda Katz (January 23, 2025), FDNY Ladder Co. 142 (Capt. Raymond McCarthy, February 3, 2025), and FDNY Engine Co. 285 (Capt. Chris Polin, February 3, 2025).

Chapter 6, Shadows. The Tier 3 screening assessment was performed for the four representative days of the year set forth in the *CEQR Technical Manual*—December 21st, the winter solstice and shortest day of the year; March 21st/September 21st, the equinoxes; May 6th/August 6th, the midpoints between the summer solstice and the equinoxes; and June 21st, the summer solstice and the longest day of the year. The Tier 3 screening indicates that in the absence of intervening structures, the Expansion Project would cast shadows on portions of the State-owned Ozone Howard Little League Fields and the Aqueduct Racetrack.

The detailed assessment provided in **Chapter 6, Shadows** assesses the potential for incremental increases in shadows on these resources, and the detailed analysis figures show the full extent of potential shadow resulting from the full build-out of the Project Site. These therefore reflect the cumulative effects of potential shadows, as described below.

Ozone Howard Little League Fields

The Ozone Howard Little League Fields consist of approximately 3.9-acres of baseball and softball fields which are located between Centreville Avenue and the IND Rockaway (A) Line of the NYC Subway. This recreational facility contains four baseball/softball fields. The ballfields located along the eastern border of the park, adjacent to the Project Site, contain artificial turf. Accessory parking lots related to the fields are located along the northwestern and southwestern portion of the property.

At their greatest extent, the shadows generated in the future With-Action condition would cover the northern-most perimeter portion of the resource, which contains paved areas, and portions of Baseball Field 1, located on the northeastern portion of the property. The fields would receive uninterrupted sunlight for a minimum of 8 hours and 36 minutes on any one of the analysis days. Therefore, shadows cast by the full build-out of the Project Site would not hinder the usage or the enjoyment of this resource, and no cumulative significant adverse shadows impacts are anticipated.

Aqueduct Racetrack

The Aqueduct Racetrack is comprised of approximately 110 acres (this excludes the RWNYC portion of the site) and includes three horse racetracks (main, inner and turf courses), 14 barns, and grandstand areas. At their greatest extent, the shadows generated in the future With-Action condition would cover portions of the perimeter of the main racetrack located on the western section of the property closest to the grandstand area and portions of the inner track and turf surfaces. The racetrack would receive uninterrupted sunlight for a minimum of approximately 5 hours and 40 minutes on any one of the analysis days. Although the full build-out of the Project Site would cast shading on the Aqueduct Racetrack, it would add a small area (less than one percent of the overall resource). Therefore, cumulative significant adverse shadows impacts are not anticipated.

Urban Design and Visual Resources

Chapter 7, Urban Design and Visual Resources reviews the full build-out of the Project Site, including the Expansion Project and the existing facilities, and assesses the context of the Expansion Project with respect to existing and future conditions in the surrounding area in order to determine the potential for significant adverse impacts. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Hazardous Materials

Chapter 8, Hazardous Materials reviews the past and future conditions on the Project Site through the review of the Phase I ESA dated July 20, 2023 and the Applicant's commitment to conduct additional testing and remediation, if necessary, in the future with the Expansion Project. Specifically, the Applicant has submitted for review and approval a Remedial Investigation Workplan (RIWP) based on the Recognized Environmental Conditions (RECs) identified in the 2023 Phase I ESA. The Phase II Remedial Investigation (RI) will be conducted to characterize the existing conditions of the Project Site and investigate specific sources of suspected contamination locations. If determined to be necessary, a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) would be prepared and implemented to address contaminants of concern identified. The Phase II RI and implementation of the proposed remedial measures (if applicable) would be completed prior to the issuance of building permits by the NYS Office of General Services (OGS), acting on behalf of the New York State Gaming Commission (the Gaming Commission). In addition, regulatory requirements relating to asbestos-containing materials, lead-based paint, and polychlorinated biphenyls-containing building materials would be followed as part of standard site redevelopment practices.

With the implementation of these measures and in complying with the conditions set forth by NYS OGS that testing be performed and mitigation measures be proposed (if applicable), additional review of cumulative impact from hazardous materials is not warranted, as no significant adverse cumulative impacts are anticipated.

Water and Sewer Infrastructure

As detailed in **Chapter 9, Water and Sewer Infrastructure**, the total water usage anticipated as a result of the Proposed Actions, including both Phase I and Phase II, is approximately 1.071 million gallons per day (mgd). In accordance with the guidance of the *CEQR Technical Manual*, a preliminary assessment of the water supply and wastewater and stormwater conveyance and treatment systems is provided, and no significant adverse impacts were identified.

The Project Area is not located within a low-pressure area, and hydrant flow tests conducted indicated adequate water pressures to serve the Project Site without negatively impacting surrounding properties. The Expansion Project is planning water reduction strategies and investigating reclamation measures. It is anticipated that booster pumps would be incorporated at the proposed garage structure to ensure fire suppression demands are provided for the Expansion Project. In addition to already-planned low-flow flush and flow fixtures, the project is evaluating the potential to use reclaimed stormwater for irrigation, flushing toilets, and central plant make-up water. In addition, individual water branches would be provided to irrigation and water features, which can be controlled to operate during off-peak hours.

The total sanitary sewage generated by the Proposed Actions would be 593,000 gpd in 2030. This increase in wastewater generation would be approximately 0.59 percent of the Jamaica Wastewater Resource Recovery Facility (WRRF) capacity of 100 mgd. With the Jamaica WRRF currently operating at 81 percent of its permitted capacity, there is sufficient capacity to treat the additional amount of sewage that would be generated in the future with the Expansion Project.

In accordance with the New York City Plumbing Code (Local Law 33 of 2007), the Expansion Project would be required to utilize low flow plumbing fixtures, which would reduce sanitary flows to the

plant. Therefore, the cumulative program on the Project Site would not result in a significant adverse impact to the City's sanitary sewage conveyance and treatment system.

Regarding stormwater flows, the cumulative combined sewer system flow would be between 0.09 mgd and 3.74 mgd, based on the NYC DEP Flow Volume Calculation Matrix. Dry weather flows (zero rainfall, normal conditions) associated with sanitary discharges are expected to increase as a result of the Phase I and Phase II development programs, however, the Jamaica WRRF is well below the treatment capacity, and no adverse impacts are expected at the Jamaica WRRF from the increase in sanitary sewage. In addition, the Expansion Project is expected to result in a considerable decrease in wet weather runoff volumes to the NYC DEP combined sewer system due to the substantial stormwater management practices proposed at the Project Site in accordance with NYC DEP Unified Stormwater Rule (USWR) requirements.

Overall, no cumulative impacts to water and sewer infrastructure are anticipated.

Energy, Sustainability, GHG, and Climate Change

Chapter 10, Energy, Sustainability, GHG, and Climate Change analyzes the full build-out of the Project Site, including the Expansion Project and the existing facilities, and assesses the context of the Expansion Project with respect to existing and future conditions in order to determine the potential for significant adverse impacts. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Transportation

Chapter 11, Transportation reviews the full build-out of the Project Site, including the Expansion Project and the existing facilities, and assesses area transportation conditions for this cumulative condition in order to determine the potential for significant adverse impacts. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Air Quality

Chapter 12, Air Quality reviews the full build-out of the Project Site, including the Expansion Project and the existing facilities, and assesses existing and future sources of emissions that could affect or be affected by the Expansion Project. A cumulative condition is analyzed in order to determine the potential for significant adverse impacts. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Noise

Chapter 13, Noise chapter reviews the full build-out of the Project Site, including the Expansion Project and the existing facilities, and assesses existing and future sources of noise that could affect or be affected by the Expansion Project. A cumulative condition is analyzed in order to determine the potential for significant adverse impacts. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Public Health

Chapter 14, Public Health considers the conclusions of the hazardous materials, air quality, noise, water quality and construction analyses, each of which are cumulative, making public health an analysis that is also cumulative by design and finds no significant adverse impact. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Neighborhood Character

Chapter 15, Neighborhood Character considers the defining features of the existing neighborhood and how the Expansion Project would fit in context with those features, which is cumulative in nature, and finds no significant adverse impact. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Construction

Chapter 16, Construction considers the effects of the construction of Expansion Project on the immediate surrounding area over the full duration of construction to capture the potential for cumulative effects and finds no significant adverse impact. The horse racing that is currently held at the Aqueduct Racetrack will be moved to Belmont Park, which is undergoing renovation to make it suitable for year-round racing and training. Once the renovations are complete, NYRA will be able to consolidate all downstate racing and training activities at the new Belmont Park, unlocking the balance of the State-owned land at Aqueduct Racetrack for redevelopment opportunities, which may include housing, additional open space, and other uses that will be defined through a competitive request for proposals process. Timing of future redevelopment of the Aqueduct Racetrack may overlap with portions of Phase 2 of the Expansion Project. Any cumulative construction impacts associated between these projects are assumed to require accommodating on the part of the future developer of the racetrack parcels. Therefore, additional review is not warranted, as no significant adverse cumulative impacts are anticipated.

Project Commitments

There are no project commitments specific to the cumulative impacts chapter.

Appendix A: Workforce Development and Diversity Plan

WORKFORCE DEVELOPMENT AND DIVERSITY PLAN

Introduction

Our founder, Dr. Lim Goh Tong, once said "I believe the most valuable asset of a company is its people." At Resorts World New York City ("RWNYC"), we are fortunate to have a pool of dedicated, hardworking team members, many of whom have been with us since our inception over a decade ago. Hence, hiring is the most important thing we do. RWNYC's "locals first" approach is aimed at making a difference in our local community by continuing to foster relationships with community members. RWNYC is an integral part of the community, and we are committed to hiring qualified local talent. Our current team is comprised of approximately 1,150 team members, over half of whom reside in Queens County.

Our dedicated, hardworking team members reinforce our commitment to our community while bringing us closer to our vision of becoming the first fully integrated resort in New York City. Our belief system is built on the following values:

Compassion: *Success is only complete with an equal measure of compassion. We give generously to make lives better for others.*

Hard Work: *Our culture of hard work, diligence, and commitment enables us to combine long-term thinking with a mindset of taking quick action to solve important and urgent operational problems.*

Harmony: *Teamwork leads to efficiency and encourages constructive feedback. We work well together and support one another.*

Honesty: *We must deal with our customers, partners and employees in an honest, fair and moral manner.*

Loyalty: *We have a sense of belonging and a sense of allegiance to our commitments. We hold loyalty to the company and people in the highest of regards.*

WE LOVE OUR HOME

Our Workforce Development and Diversity Plan ("Plan") defines our strategy to recruit, retain and develop over four thousand qualified, local, and diverse new team members.

Our plan outlines how we will create new opportunities for the unemployed and underemployed individuals in our community and demonstrates our commitment to social responsibility and community empowerment by creating pathways to economic stability for individuals who face barriers to entry into the job market.

Our plan is especially attentive to the challenges facing the neighborhoods immediately surrounding our property. According to NYC's 2021 statistics, the three highest unemployment rates among Queens districts include the home of RWNYC (Jamaica), as well as the adjacent Howard Beach and Far Rockaway, as illustrated in the chart below. While these statistics are concerning, we recognize the economic opportunity we can create for the unemployed and underemployed within a two-mile radius of our property. The stable and high-paying careers provide our current employees with financial security and upward mobility and will do the same for thousands more of our future hires. Our current minority representation is 80% and represents our broader community. Our Workforce Development and Diversity Plan considers our hiring preference for Jamaica, Howard Beach, and the Far Rockaways residents. These communities represent the top three unemployment rates in our county.

Highest Unemployment Rates in Queens Community Districts (2021)[1]

Rank	Community District	Unemployment Rate	Population
1	Howard Beach	15.30%	26,148
2	Jamaica	14.80%	53,751
3	Far Rockaway	14.20%	50,058
4	Astoria	13.10%	78,793
5	Flushing	12.80%	72,008
6	Fresh Meadows	12.40%	38,974
7	East Elmhurst	11.60%	23,150
8	Ridgewood	11.40%	69,317
9	Woodhaven	11.10%	56,674
10	Queens Village	10.20%	52,504

[1] https://data.cccnewyork.org/data/table/85/unemployment-rate#85/131/127/1/d

Promoting diversity and inclusion is a priority for our organization. RWNYC will continue our practice of creating an inclusive and equitable workforce by continuing to utilize outreach efforts in our immediate community and beyond. We attract individuals from diverse backgrounds, providing equal opportunities for career advancement and development. As our workforce demographics submission illustrates, our workforce represents the community in which we sit. Queens is nicknamed "The World's Borough" as a reflection of its status as the most diverse county in the United States. In fact, according to the 2020 U.S. Census, 47.2% of its population was born outside the United States. With 91 distinct neighborhoods, Queens residents are said to speak 130 languages—Spanish, Russian, Korean, Greek, Urdu, and Tagalog, to start—and represent over 120 countries. The 7 subway line, which runs between Flushing, Queens and Manhattan, is referred to as the "International Express."

Neighborhoods within Queens reflect these diverse backgrounds with subsections. They can also make for a culinary adventure, where you can find dishes like Tibetan momos, Venezuelan or Colombian arepas, Greek moussaka, Indian chaat, Mexican birria tacos, Trinidadian roti, and many others.

The 2020 United State Census Bureau Data reported that there are 2.3 million residents of Queens County. Of those 2.3 million residents, 53.5% identify as a minority, 51.1% identify as female and 2% are classified as veterans. With Black, Hispanic, Veterans and disabled New Yorkers having higher unemployment rates (12.4%, 10.4%, 11.9% and 17.7%, respectively) than the New York City average of 8.6%, we work with local employment agencies to encourage New Yorkers to apply for careers in our organization. RWNYC works with organizations like the NYC Department of Veterans' Services (DVS), Queens Economic Development Corporation, Queens Center for Progress and Workforce1 Career Centers to provide meaningful employment and opportunities to advance economically.

RWNYC is committed to gender equity; half our current workforce is female. Our goal is to continue promoting and hiring women in all areas of the organization.

We will continue to emphasize increasing awareness of our unique employer brand and highlighting our best practices.

Our team currently consists of 47.2% female, 27.4% Black or African American, 14% White, 1% Native Hawaiian/Pacific Islander, 25% Asian, 1% American Indian/Alaska Native, 4% two of more races.

WE LOVE OUR TEAM

Workforce Development and Diversity Hiring preferences will be implemented as follows:

For applications submitted through our hiring portal:

- Qualified **JAMAICA, HOWARD BEACH and FAR ROCKAWAY** residents' resumes will be reviewed first and called for an initial round of interviews.

RWNYC leverages existing partnerships with community organizations in several ways:

- RWNYC collaborates with several workforce development groups to recruit local and diverse talent. From a cultural perspective, we partner with groups like 100 Black Men and the Chinese American Planning Council to provide opportunities within their respective communities. We also recognize that diversity is not merely cultural. To this end, we partner with community organizations to find candidates with diverse abilities, ages, and life experiences. Our partners at the Queens Centers for Progress have sourced us candidates with developmental disabilities, and we continue to support

each other in providing opportunities for community members. Our recruitment work with Queens Community House and the Boys & Girls Club reaches college-aged youth just entering the job market as we introduce them to an industry with incredible growth opportunities that many in the NYC area have yet to consider.

Our Recruitment Plan Objectives

We collaborate with local organizations, such as minority-focused community groups like the Queens Economic Development Corporation (QEDC), women's associations like Center for the Women of New York, and disability advocacy organizations like Queens Center for Progress, to enhance outreach efforts and attract a diverse pool of candidates.

RWNYC actively participates in, and hosts job fairs, career expos, and networking events that specifically target underrepresented and under employed groups. RWNYC also utilizes our in-house marketing team to promote job openings through various channels, including online job boards, social media, and community bulletins, to reach a wide range of potential applicants. We have ongoing relationships with colleges, universities, and vocational schools to actively recruit candidates from diverse backgrounds.

Beyond our steadfast commitment to Diversity, Equity, Inclusion, and Belonging (DEIB), RWNYC recognizes the paramount importance of placing a strong emphasis on accessibility. At the core of our values lies the commitment to addressing barriers, guaranteeing equal opportunities, and vehemently combating any discriminatory practices within our organization. RWNYC is dedicated to cultivating a workplace that authentically mirrors the diversity of our community, fostering an environment that is both open and accessible to all individuals. In pursuit of this vision, we proactively ensure that our workplace aligns with and exceeds all federal ADA (Americans with Disabilities Act) regulations, underscoring our commitment to providing an inclusive and accessible space for everyone in our community. RWNYC is currently enhancing our plan to recruit

diversly abled team members through a thoughtful and inclusive approach that creates meaningful and productive opportunities for this population. To attract this pool of candidates, we partner with the following associations:

- Jamaica-Queens Independent Living Center (QILC): QILC is a nonprofit organization dedicated to promoting the independence and inclusion of individuals with disabilities. They provide a range of services, including advocacy, information and referral, peer counseling, and skills training.
- AHRC New York City: AHRC NYC is a leading provider of services for individuals with intellectual and developmental disabilities. They offer employment support programs, vocational training, and job placement services.
- Queens Community Board Disability Committee: Collaborate with the Disability Committee of the Queens Community Board to engage with local community members and organizations that focus on disability-related issues. They provide valuable insights, guidance, and connections within the community.
- Workforce1 Career Centers: Workforce1 is a network of career centers in New York City that provide job placement assistance and career counseling. Collaborate with their disability services unit to connect with diversely able individuals seeking employment.
- Center for Independence of the Disabled, New York (CIDNY): CIDNY is a leading advocacy organization in New York City that works to ensure full integration, independence, and equal opportunity for individuals with disabilities. They offer a range of services, including advocacy, peer counseling, information and referral, and skills training.
- Queens Vet Center: The Queens Vet Center is part of the VA's Vet Center program, which offers readjustment counseling services to veterans and their families. Collaborate with the Vet Center to provide information and support for disabled veterans seeking employment opportunities.
- Veterans' Service Organizations (VSOs): Engage with local VSOs in Queens, such as the American Legion, Veterans of Foreign Wars (VFW), and Disabled Veterans of America (DVA). These organizations often have employment assistance programs and can help employers connect with disabled veterans in the community.

RWNYC provides comprehensive workforce training programs that cater to a wide range of individuals. These training initiatives are designed to equip participants with the skills and knowledge necessary for employment in the casino and hospitality industry.

The following training programs and employment access methods outline how RWNYC supports the unemployed and prepares them for meaningful careers:

1. **Skill Matching Technology**
   RWNYC is working to develop a career and skills exploration platform, driven by SkillSmart technology. This plays a key role in achieving success across several of our workforce development plan objectives:
   1) Raising Awareness;
   2) Preparing Career Seekers; and
   3) Local & Diverse Recruiting & Hiring.

   The SkillSmart platform will help job seekers:

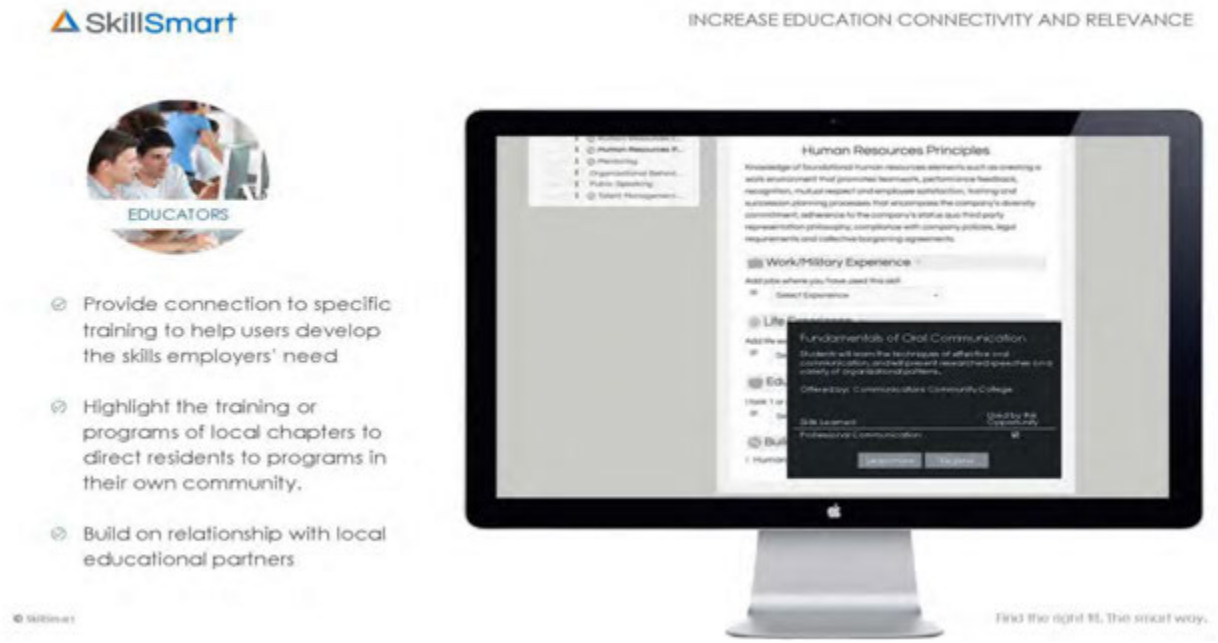
1) Learn about career opportunities with RWNYC;
2) Understand the skills required and preferred for each position;
3) Learn how their existing skills and experiences align with positions of interest; and
4) Connect with training resources available for skill development that enhance their ability to successfully apply for positions of interest.

   In addition to being a resource for job seekers and educators, the SkillSmart platform provides RWNYC the capability to review the prospective candidate pool to determine interest in key career opportunities, understand any skills gaps, and tailor our outreach strategies. This platform serves as a basis for informing career seekers regarding the specific skills required for each available career and will connect them with local educational and training resources that can enhance skills needed for success in our careers. A wide range of educational and training resources will be featured on the platform, from community college courses to online learning to skills training programs and adult education hosted at local high schools. Queens Community College, LaGuardia Community College, and Kingsborough Community College have provided or will provide course details that will correspond with specific skills required by positions at RWNYC. Career seekers will be able to view a position they are interested in, see the skills required by that job, and click through to specific courses they can take that will enhance their skills if needed.

SkillSmart allows our job seekers the opportunity to:

1. Learn about career opportunities with Resort World New York City.
2. Comprehend the skills that are required for each position.
3. Learn how their experiences and skills align with the job seeker's interest.
4. Connect the job seeker with local training and educational resources for skill enhancement to make them more qualified for positions of interest.

We are able to quantify any skill gap and customize our outreach initiatives.



2. Job Readiness Training

Job readiness workshops are designed to equip individuals with the essential skills needed to enter the workforce successfully. These programs cover topics such as resume writing, interview skills, workplace etiquette, and effective

communication. By providing job readiness workshops, RWNYC helps unemployed individuals build a strong foundation for their employment journey.

3. **Skills Development Programs**

RWNYC offers skills development programs that focus on specific areas related to the casino and hospitality industry. These programs provide hands-on training and practical experience in various roles, such as customer service, food and beverage service, hotel operations, and gaming operations. These programs range from formal classroom training to on-the-job mentorship. The goal is to enhance participants' skills and increase their employability.

A. Table Games Dealer School

RWNYC's Dealer School teaches the skills needed to become a casino dealer and makes available increased learning opportunities to further careers. The curriculum is approved by the New York State Gaming Commission.

Details are as follows:

Cost: Free

Location: Onsite

Schedule: Scheduling of classes will be constructed to maximize participation levels and will include morning, afternoon and evening sessions.

Registration: Students will be able to sign up for classes via a link on RWNYC's website.

Syllabus: The bulk of our table game offerings will be Blackjack and Baccarat. All new dealers will take these classes first. ***Blackjack*** requires 120 hours of classroom training and ***Baccarat*** requires 80 hours of training. After completing the required 200 hours, students will be eligible to apply and audition for Dealer 1 positions. Dealers will become eligible to learn any of the three remaining core games: ***Roulette*** (80 hours), ***Craps*** (180 hours), ***Pai Gow Tiles*** (200 hours) once they have demonstrated skills and proficiency in Blackjack and Baccarat. Each of these new skills may result in roles of increased pay and responsibility.

Hiring: RWNYC is committed to hiring 100% of their Dealer School graduates upon successful completion of hiring prerequisites including, but not limited to, obtaining a NYS Gaming License and passing an audition.

B. **Slot Technical Training School**

To ensure that we maintain a roster of qualified technicians, we partner with IGT University.

Details are as follows:

Cost: Free

Location: Onsite

Our Slot Technical Training Program is designed to provide education and training in the repair and maintenance of casino gaming machines. Students will train for jobs as technicians servicing sophisticated electronic equipment in the casino/racing industry. Students may be new to the industry or currently employed in this field. Upon successful completion of this program, students are ready for employment in the gaming industry.

C. Culinary Training

According to the Bureau of Labor Statistics, the overall employment of cooks is projected to grow 16 percent from 2021 to 2031, much faster than the average for all occupations. RWNYC will employ approximately 200 individuals in line-level cook positions.

RWNYC has taken steps to address potential gaps versus demands. Currently, the RWNYC Executive Chef and Human Resources are working with the Institute of Culinary Education ("I.C.E."), to promote job opportunities. Individuals can embark on diverse career paths such as becoming an executive chef overseeing the entire culinary operation, specializing as a pastry chef, managing high-end restaurant kitchens, or even curating unique culinary experiences for guests, offering a range of opportunities to showcase creativity and expertise in a dynamic and vibrant gaming environment.

D. Vocational Training Partnerships

RWNYC collaborates with vocational training partners such as trade schools and community colleges to provide specialized vocational training programs. These programs offer participants the opportunity to gain industry-specific skills and certifications. Examples may include programs for culinary arts, hospitality management, casino operations, IT management, and facilities maintenance. By partnering with vocational training institutions, RWNYC ensures that participants receive quality training that aligns with industry standards and our anticipated needs.

E. Job Placement Assistance

RWNYC maintains strong connections with local employment agencies, community organizations, and job placement services. Through these

partnerships, RWNYC can connect individuals with job openings within our organization.

F. Apprenticeship Programs

Our Unions afford our team members the opportunity to grow their career through their Apprenticeship programs. These programs offer participants hands-on experience and exposure to different aspects of casino operations.

G. Internship Programs

Internship programs offered by RWNYC provide hands-on experience and exposure to different aspects of the industry. These programs are designed for individuals seeking practical training and industry immersion. Internships may be available in various non-gaming departments, including marketing, human resources, F&B operations, and hotel operations. By participating in internships, individuals can gain valuable industry experience and build their professional networks.

JOINING OUR TEAM

We currently have an active hiring process. During times of mass hiring, for our Integrated Resort, we will open an auxiliary Hiring Center which will be a central hub for candidates to learn about our careers and apply for positions. Our Hiring Center will be located onsite and have ample parking for individuals traveling by personal vehicle, a subway station, an MTA bus stop and is ADA accessible.

Our primary recruitment platform is our online careers page, with cross-posting of available positions at the Hotel and Gaming Trades Council Jobs Board and the Careers portal. Through our network of community partners RWNYC intends to supplement our online recruitment efforts with in-person access and support job seekers using career centers, workforce development groups, and job fairs.

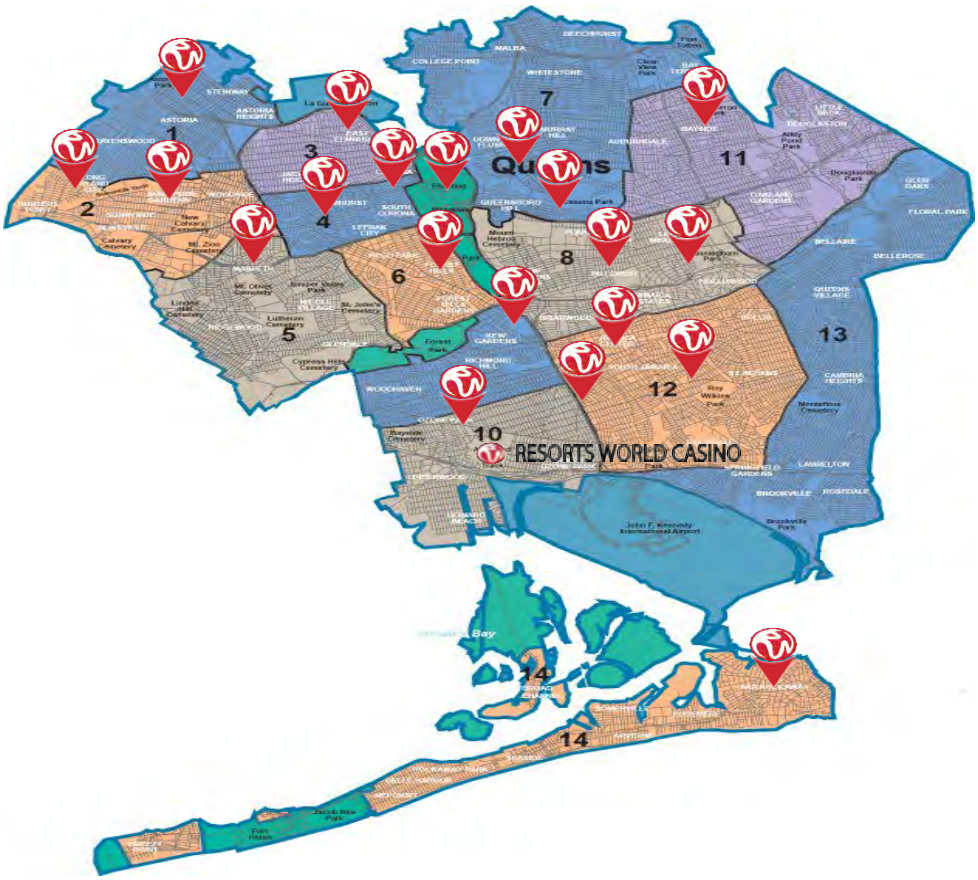
The Hiring Center will be staffed for extended hours, including nights and weekends to provide support and resources for job seekers, including guidance and information regarding current and future job openings. Job seekers can meet with us, learn about RWNYC as a company and employer, and learn about the upcoming career opportunities and events. Computer terminals will be readily available where individuals can apply for jobs, create a SkillSmart profile, and find

information regarding our skills development programs. We will provide personal support to individuals who need help navigating SkillSmart or other web-based job application tools.

RWNYC Hiring Hubs

We understand the importance of providing access to in-person support and computers where job seekers can receive assistance with applying for positions. Having multiple locations, in addition to the RWNYC Hiring Center, we facilitate access for more job seekers.

To meet this need, we will support a network of geographically strategic physical locations (Hiring Hubs) where individuals can gain access to a computer, receive support for job searches and use the hiring portal and other online career tools. We will leverage a combination of other Resorts World locations in New York State, career centers, cultural centers, and public libraries. We will provide training to representatives at the support hub locations and provide informational materials to support career seekers at each of these locations.



1. Resorts World Properties, New York State: RWNYC will have Hiring Hubs at both Resorts World Catskills and Resorts World Hudson Valley. The Human Resources offices are regularly staffed by Resorts World team members and will provide additional locations where applicants from upstate NY can access a computer, receive support, and speak with an HR representative about employment opportunities. We have multi-lingual representatives available for community members who may need support in a language other than English.

2. Local Career Centers: These centers serve unemployed individuals within our communities. A designated Career Center staff member will be trained by our team to support job seekers in using the RWNYC Application Portal and SkillSmart Technology.

A. **Workforce1** is a career center operated by NYC Small Business Services that operates primarily virtually but with physical locations in Queens, Brooklyn, and Manhattan. Workforce1 connects jobseekers with

opportunities, career advisement, interview & resume preparation, training, and financial counseling. RWNYC sends Workforce1 job openings to be shared through its database.

B. **Council for Airport Opportunity** is a nonprofit trade association that addresses the employment needs of communities surrounding New York and New Jersey Metropolitan airports, focusing on airport tenants and the aviation industry. While RWNYC does not strictly fit either of these categories, our proximity to JFK Airport, the busiest international airport in North America, fosters a close relationship with the aviation industry. RWNYC sends CAO job openings that it connects to qualified applicants through its prescreening process.

3. Local Community Centers Serving Diverse Populations: Similar to the Career Centers, we will train representatives at each of these locations to aid job seekers interested in a career with RWNYC.

a. Queens Community House
b. Commonpoint Queens
c. Chinese-American Planning Council
d. Sunnyside Community Services
e. Elmcor
f. Centro Espanol de Queens
g. Chinatown Manpower Project
h. Flushing Chinese Business Association

4. Local Public Libraries: Community members can access computers and the internet. We will provide the public libraries with clear, easy-to-use instructions for online RWNYC career tools.

a. Queens Borough Public Library
b. Queens Public Library at South Jamaica
c. Langston Hughes Library and Cultural Center
d. Queens Library at Queensboro Hill
e. Queens Public Library East Flushing
f. Queens Public Library at Kew Gardens
g. Queens Public Library at Hillcrest
h. Queens Public Library Bayside

i. Queens Public Library at Forest Hill

4. **Local College Career Center:** We have existing partnerships with the following CUNY Schools who assist prospective candidates with accessing our online job portal. Through these relationships, RWNYC shares relevant job opportunities and attends in-person career fairs that bring exposure to the gaming industry to many college students for the first time.

a. Kingsborough Community College Career Services
b. LaGuardia Community College Career Services
c. York College Career Services
d. Queens College Career Services
e. Queensborough Community College
f. Brooklyn Community College

School campus hiring events:

- **Lecture**: We will host lectures and shed light on our industry, and the variety of careers available.
- **Meet and Greet**: Let students meet with our team members to chat and ask questions.
- **Job Fair**: Partaking in a school job fair to attract a wide range of candidates and interests.
- **Mock Interviews**: We will help students prepare for real interviews with mock interviews on campus.

Outreach Programs and Job Fairs:

RWNYC conducts outreach programs and participates in job fairs to engage with unemployed and underemployed members of our community. Participation in local and regional job fairs has been paramount to our success in hiring a qualified and diverse workforce. Opportunities where our team of hiring managers and candidates interact are crucial to connecting with the local community. They provide incredible opportunities for individuals to learn about our organization, available career opportunities and career pathways. We adopt various marketing

tactics to ensure that virtually every potential candidate is reached, including publishing our opportunities in multiple languages. This multi-lingual campaign encompasses mail outreach, direct mail, telemarketing, website inclusion, social media promotions, on-property digital messaging, and cooperative TV and radio advertising.

Through the initiatives outlined above, we create avenues for the unemployed and under employed to access training, gain industry-specific skills, and secure meaningful employment. By supporting these targeted demographics through training and access to employment, RWNYC actively contributes to reducing unemployment rates, fostering economic growth, and creating pathways for career success.

WELCOME TO THE PARTY

Hiring Events

Casual mixers and hiring events

We will host a casual hiring mixer either on our own or in collaboration with our recruiting or community partners to get to know candidates before they apply. Events like these allow our hiring managers and candidates to get to know each other more personally.

Open house recruiting events

These events provide candidates with a unique insight into our business and help them better understand what it's like to work here. In addition, current Team members will be available to chat with potential future colleagues.

Job fair recruiting events

We will continue to attend job fairs. Providing candidates with:

- **Handouts**: printed resources for candidates to continue their research after the event.
- **Business Cards**: a clear point of contact to contact if they want more information, especially if they click with one of our team members or recruiters.
- **Activities**: casual and conversational with quick and fun activities.

Mass Hiring events

Mass hiring events will allow us to have all candidates interviewed at one big event, saving us time and energy reviewing application materials and coordinating phone and in-person interviews over several weeks or months. Instead, our team will be able to conduct interviews back-to-back in a single day. As a result, we can discuss top candidates when all the candidates are fresh in our team's minds. We have secured the Aqueduct Racetrack to conduct our Mass Hiring events.

A small sampling of career fairs we have hosted or attended include:

- Council for Airport Opportunity Job Fair
- SUNY Queens Educational Opportunity Center Job Fair
- NYC Business Solutions Queens Career Fair
- Office of Queens Borough President Virtual Recruitment Fair
- Resorts World NYC & Catskills Virtual Job Fair
- State Senator Joe Addabbo's Job Fairs (Virtual and on premises)
- NY Islanders Job Fair
- NYS Department of Labor Far Rockaway Community Career Fair

Our workforce diversity goals are reflected of the diversity in our community. We work with the New York Hotel and Gaming Council, AFL-CIO, the NYS Gaming

Commission, our community partners, and our local communities to achieve and exceed set goals for each department, front and back of the house, management, and line-level positions.

Team Member Referral Program

Resorts World New York City's Team Member Referral Program, where we believe that great team members know other great team members! This program aims to reward our existing team members for referring qualified candidates to join our team. By participating in this program, they will contribute to our organization's growth and have the chance to win exciting rewards and bonuses. Allowing us to build a stronger team together and create a positive work environment!

OUR NEIGHBORHOOD

The challenges facing the immediate neighborhoods surrounding RWNYC's property are the foundation of our strategy to attract, hire and train currently unemployed members of our community. According to the June 2023 Labor Market Briefing for The New York State Department of Labor, Queens County unemployment is 90 basis points higher than the State unemployment rate of 4.3%. Kings and Bronx County's unemployment rates are 6.2% and 7.6% respectively with the overall New York City region's rate sitting at 5.9%, 1.06 percentage points higher than the State's rate.

HOW WE GET THERE

Transportation

The MTA, New York City's 24-hour subway system, has 472 stations, more than any other metro system worldwide – 81 stations on seven main lines are in Queens. The A train – from 207th Street in Manhattan to Far Rockaway in Queens – is the longest line, more than 31 miles. The A, G, J/Z, and M routes connect Queens to

Brooklyn without going through Manhattan first. The F, M, N, and R trains connect Queens and Brooklyn via Manhattan, while the E, W and 7 trains connect Queens to Manhattan only. Depending on the direction, the L train briefly enters Queens at Halsey Street, connecting Queens to either Brooklyn or both Brooklyn and Manhattan. Trains on the M service go through Queens twice in the same trip; both of its full-length terminals, in Middle Village and Forest Hills, are in Queens.

The LIRR, also part of the MTA, operates 24 hours a day, 7 days a week, including holidays – carrying an average of 301,000 customers a day (80 million a year, adjusting downward for weekends) on about 735 scheduled trains. It is the busiest commuter rail hub in the United States. Most of its branches originate or terminate at Penn Station.

All but one of its branches (the Port Washington Branch) pass through Jamaica. The New York City area served by the LIRR is called the City Terminal Zone. Within that zone, Queens has stations in Long Island City, Hunterspoint Avenue (in Long Island City), Bayside, Forest Hills, Flushing, Woodside, and Kew Gardens – 22 Queens stations in all. There are also several stations where LIRR passengers can transfer to the subway.

About 100 local bus routes operate within Queens, and another 20 express routes shuttle commuters between Queens and Manhattan under the MTA New York City Bus and MTA Bus brands.

The NYC Ferry will extend ferry transportation to communities in the city traditionally underserved by public transit. The ferry serves the Queens neighborhoods of Rockaway and Astoria and Hunter's Point South.

Queens is connected to the Bronx by the Bronx–Whitestone Bridge, the Throgs Neck Bridge, the Triborough Bridge (also known as the Robert F. Kennedy Bridge), and the Hell Gate Bridge. In addition, Queens is connected to Manhattan Island by the Triborough Bridge, the Queensboro Bridge, and the Queens–Midtown Tunnel, as well as to Roosevelt Island by the Roosevelt Island Bridge.

The Q37 bus stops directly on the property.

Skybridge connects A-train directly to the property, which is ADA compliant.

RWNYC provides a free shuttle service from the A Train to the property.

RWNYC also provides a free shuttle from Jamacia Train Station to the property.

For Individuals who are diversly able and cannot use NYC Transit, buses or subway services, have access to the MTA's Access-A-Ride program and they are picked up and dropped off at the team member entrance.

For the safety and ease of our team members we provide a designated parking area, free of charge.

MOVING ON UP

Succession Management is about understanding the current talent within our organization and planning for the utilization of that talent in the future. Some of us may be inclined to seek out the continuous challenges of different facets of our exciting industry, while others may choose to contribute their talent to one specific discipline. Whatever the case, we are committed to providing learning experiences for those wanting to take advantage of such opportunities.

For many individuals, a work environment with opportunities for advancement and growth is key to feeling fulfilled and happy in the work environment. We will

provide a wide range of career pathways, with many of our leaders progressing from entry-level positions to executive leadership roles. RWNYC is committed to promoting from within the organization.

In the last six years, we have promoted 311 team members, of whom 46% are females, 74% are minorities and 34% are female minorities. Establishing transparent career paths with measurable criteria within the hotel and gaming facility is crucial for fostering team member growth, increasing motivation, and ensuring fairness. RWNYC has and intends to continue to establish transparent career paths with measurable criteria that lead to increased responsibility and higher pay grades and are designed to allow team members to pursue career advancement and promotion.

With a broad scope and depth of positions, there are and will continue to be clear paths designed that will encourage and enable team members to advance in the organization based on their performance and interest(s).

Our multifaceted approach to career pathing involves several key components:

- We will continue to develop and communicate clear career paths for new positions that outline various job levels, responsibilities, and required qualifications.
- We rely on the interactions between our team members and their supervisors and managers. Through these interactions we are able to gauge their performance, ability and desire to advance.
- Continue to use established measurable criteria for career advancement and promotion, such as skills assessments and training program completion.
- Continue to regularly review and update career paths and criteria to ensure they align with industry standards, team member aspirations, and organizational needs.
- Provide team members with a clear understanding of the steps needed to advance their careers within the organization.

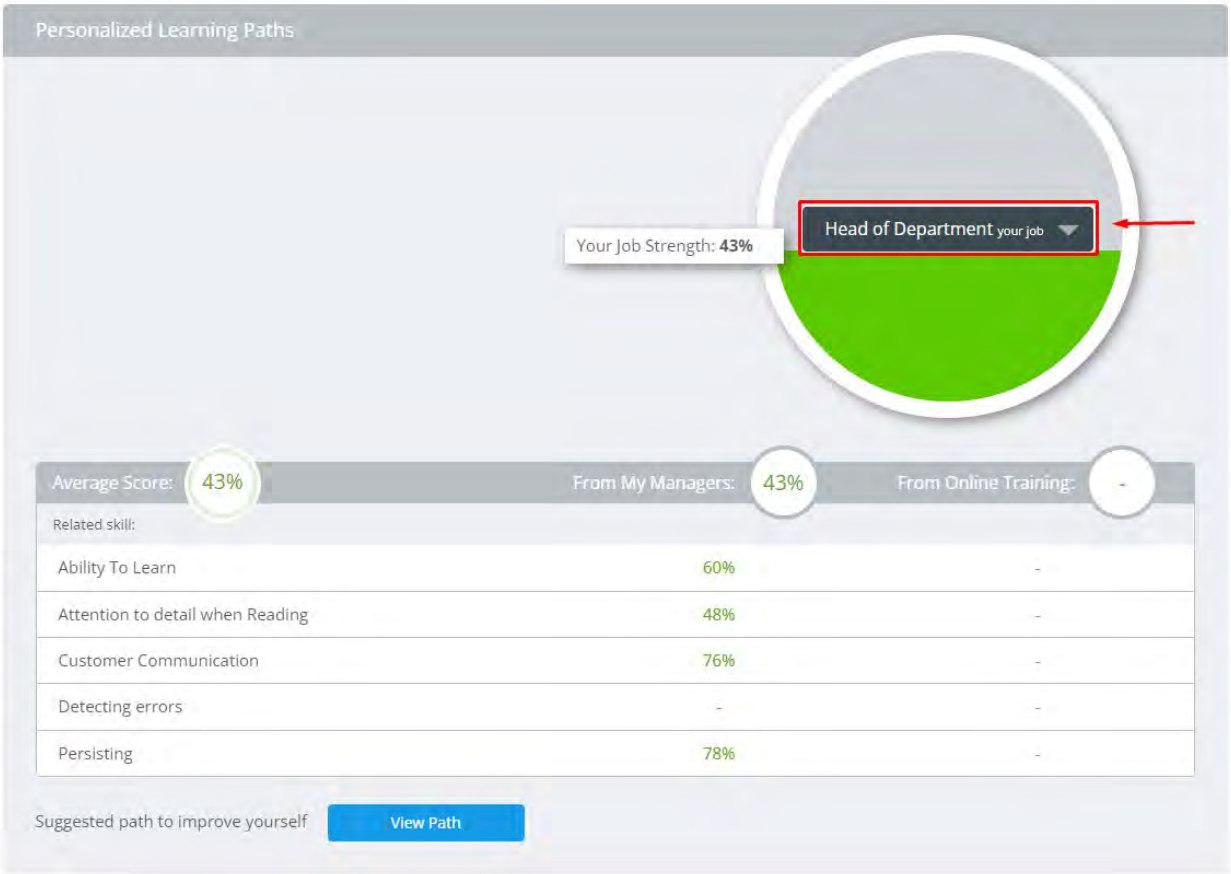
UKG Career Pathing Module

Resorts World New York City is committed to the professional growth and development of its team members and UKG Skill Pathing Modules are a valuable resource in this journey. These modules are designed to empower our team members by providing a structured and accessible platform for enhancing their skills, knowledge, and career opportunities.

The UKG Skill Pathing Modules offer several key benefits to our team members. Firstly, they enable team members to identify and assess their current skill sets and competencies, allowing for a personalized development roadmap tailored to their career aspirations. Secondly, these modules offer a diverse range of courses covering various job functions, industry trends, and leadership skills. Finally, the modules promote continuous learning by offering self-paced, flexible learning opportunities that can be accessed online, making it convenient for our team members to balance work and professional development.

Example of Skill Pathing Module:

Personalize your journey!



To make the most of these modules, our team members engage in skill assessments, access relevant learning materials, and track their progress throughout their learning journey. This not only empowers them with new skills but also supports their career growth within Resorts World New York City.

UKG Skill Pathing Modules are a valuable resource for our team members, providing a structured and accessible means to enhance their skills, knowledge, and career opportunities. Resorts World New York City is committed to investing in the growth and development of its team members, and these modules represent a significant step towards achieving that goal.

WHO'S UP NEXT

UKG Succession Planning Modules are a strategic tool to identify, nurture, and develop future leaders within our organization. We are committed to fostering talent from within and ensuring a bright future for both our team members and our company. We celebrate supporting our team members as they embark on their journey of personal and professional growth, ultimately shaping the future of our organization.

We place a high value on the development and advancement of team members. UKG Succession Planning Modules help to support our team members' career growth and the long-term success of our organization and serve as a strategic tool for identifying and preparing our talented team members for key leadership roles within the company.

This tool provides a structured framework for assessing the potential of our team members, helping us identify individuals with the skills and capabilities to take on critical roles in the future. Succession planning modules also offer targeted development plans for team members, ensuring they receive the training, mentorship, and experiences needed to excel in leadership positions. These plans are personalized and designed to align with both individual career aspirations and the company's strategic objectives.

Our team members can expect a comprehensive approach to succession planning that includes talent assessment, mentoring, and the opportunity to gain exposure to leadership roles. By engaging with these modules, they not only invest in their own career growth but also contribute to our continued success and stability.

TRAINING AND EDUCATION

With the right attitude and aptitude, team members can be trained to work in any job they are passionate about. Each operational department has a designated Training Manager to provide team members with on-the-job training.

in eCornell online training courses for management development. We have an offering of over 150+ classes. Some examples are:

- eCornell: Becoming a Powerful Leader
- eCornell: Leading Across Cultures
- eCornell: Leading Organizational Change
- eCornell: Interpersonal Communication Skills
- eCornell: Addressing Workplace Behavior Issues
- eCornell: Fostering a Coaching Culture
- eCornell: Women in Leadership
- eCornell: Diversity and Inclusion at Work

In addition to on-the-job skills training, we will provide leadership training for all supervisors and above. We will enroll supervisors and above

- eCornell: Diversity and Cross-Cultural Teams
- eCornell: Generational Diversity
- eCornell: Workplace Disability Inclusion

We also have access to training courses through Grovo, some examples of classes we offer are:

- What Is Cultural Intelligence? (Grovo)
- Overcoming Personal Bias Around Disability (Grovo)
- Model Disability-Inclusive Behavior in Your Workplace (Grovo)

The training program provides a strong foundation for new leaders and reinforces effective leadership skills for tenured managers.

Career Opportunities: Summary and Timelines

We will have ample career opportunities with 5,000 plus available positions, ranging from slots, table games, casino cage, surveillance, player development, community development, security, front office, guest services, valet, housekeeping, sales, food and beverage, facilities, EVS, finance, payroll, IT, Human Resources, warehouse, and purchasing. Each position is full-time and will provide competitive pay, benefits, and a roadway for career development. We will use a wide range of outreach partners to communicate job availability and required skills for each position to potential candidates.

Phase One

CAREER OPPORTUNITIES SUMMARY

Italic indicates 10+ positions
* Indicates 50+ positions
Bold indicates 100+ positions

Casino - 1750+
Director Slot Tech
Floor Mgr Slots
Floor Mgr Slots Tech
Slot Ambassador
Slot Technician I
Slot Technician II
Slot Technician III
SVP Table Games
VP Table Games
Director Table Games
Manager Table Games
Asst Manager TG
Pit Manager Table Games
Dual Rate Pit Mgr TG
Flr Mgr Table Games
Dual Rate TG Supervisor
Dealer I
Dealer II
Dealer III
Scheduling Coor TG
Director Poker
Pit Manager Poker
Dual Rate Pit Mgr Poker
Dealer - Poker
Floor Mgr Cage
Cage Cashier*
Main Banker
Manager Casino Credit
Credit Executive
VP Surveillance
Manager Surveillance
Shift Manager Surv.
Surveillance Operator
Surveillance Tech II
Floor Mgr Count Room
Count Room Coordinator

Security and Property Operations - 75+
Carpenter
General Laborer
Floor Mgr EVS
Public Area Cleaner
Heavy Duty Cleaner
Floor Manager Wardrobe
Seamstress
Wardrobe Attendant
VP Security
Floor Manager Security
Security Officer

Finance, Administration and IT - 20+
Accountant II
Payroll Specialist
Payroll Clerk II
AP Specialist
Internal Auditor I
Internal Auditor III
Systems Administrator
PC Tech I
PC Tech III
HR Generalist I
HR Generalist II
Recruiter II
Floor Manager Warehouse
Warehouse Attendanct
Buyer II
Manager Revenue Audit
Revenue Auditor
Director Corporate Finance
Manager Corporate Finance

Food and Beverage - 75+
Beverage Server*
Service Bartender
Bar Back

Marketing / Player Development - 45+
Director PD New Business
Director PD Property
Player Development Exec
Executive Casino Host
Casino Host I
Director PD New Business
Player Development Exec
Exec Casino Host - Asian
Casino Host I - Asian
Comm Dev Specialist II
Mgr Promo/Events

Phase Two

CAREER OPPORTUNITIES SUMMARY

Italic indicates 10+ positions
* Indicates 50+ positions
Bold indicates 100+ positions

Casino - 950+
Floor Mgr Slots
Floor Mgr Slots Tech
Slot Ambassador
Slot Technician I
Slot Technician II
Slot Technician III
Pit Manager Table Games
Dual Rate Pit Mgr TG
Flr Mgr Table Games
Dual Rate TG Supervisor*
Dealer I
Dealer II
Dealer III
Scheduling Coor TG
Dealer - Poker
Director Cage
Cage Cashier
Main Banker
Credit Executive
Surveillance Operator
Surveillance Tech I
Floor Mgr Count Room
Count Room Coordinator

Hotel & Retail 350+
Manager Front Desk
Floor Mgr Front Desk
Night Auditor
Guest Service Agent
Bellman
Manager Transportation
Floor Mgr Transportation
Valet Attendant
Key Booth Attendant
Executive Housekeeper
Floor Mgr Housekeeping
Guest Room Attendant
Houseperson
Floor Mgr Wardrobe
Seamstress
Wardrobe Attendant
Manager Hotel Sales
Sales Coordinator
Manager Retail
Floor Mgr Retail
Retail Clerk

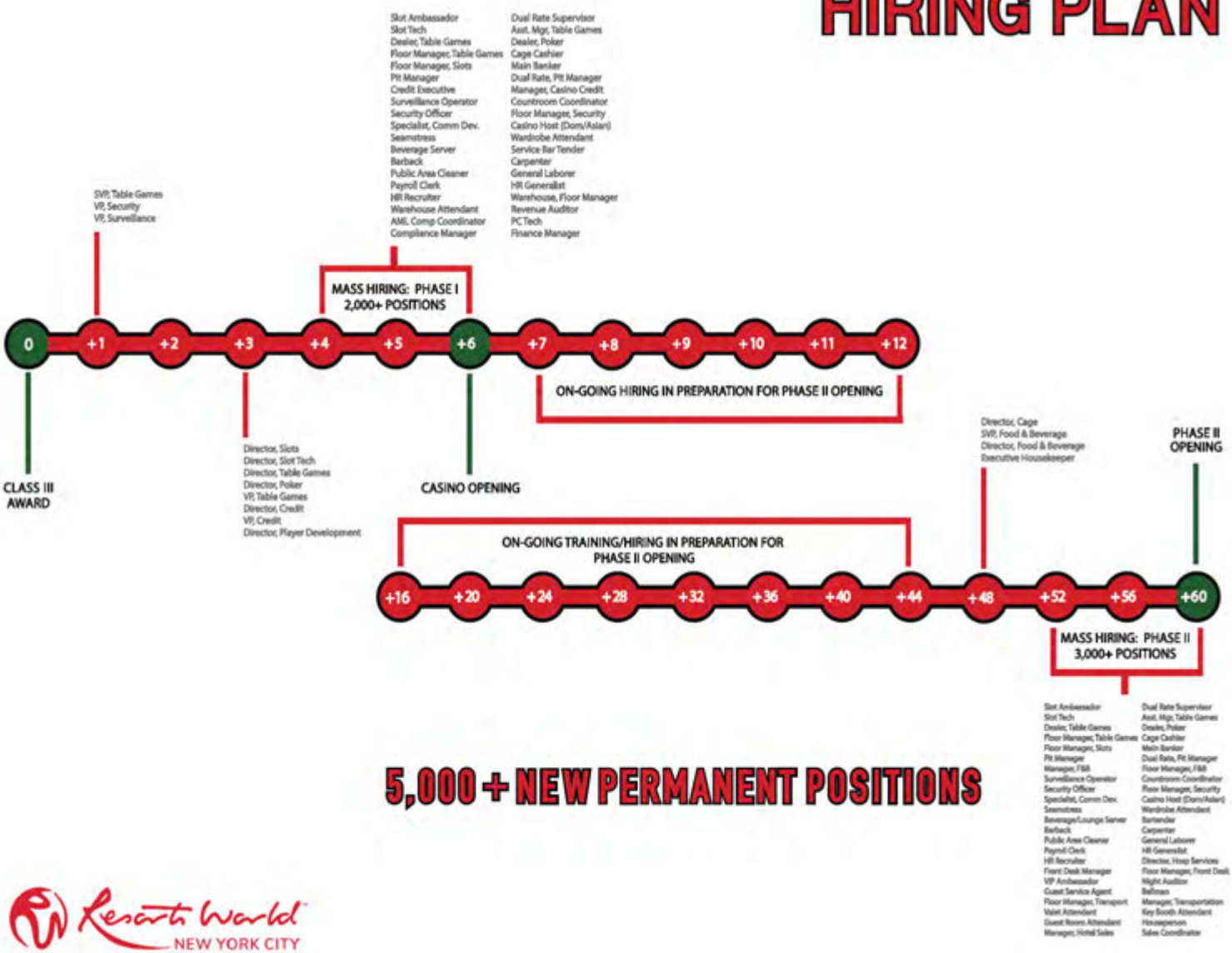
Finance, Administration and IT - 25+
Senior Accountant
Accountant I
Accountant II
Payroll Clerk II
AP Specialist
AP Clerk II
Internal Auditor I
Internal Auditor III
Systems Admin II
PC Tech I
PC Tech II
Digital and AV Tech
HR Generalist I
HR Generalist II
Recruiter II
Floor Manager Warehouse
Warehouse Attendant
Buyer I
Buyer II
Revenue Auditor

Facilities, Security and Property Operations 120+
Painter
General Laborer
Manager EVS
Public Area Cleaner
Heavy Duty Cleaner
Floor Manager Security
Security Officer*

Marketing / Player Development - 50+
Director Hospitality Svcs
Manager VIP Services
VIP Ambassador
Director PD New Business
Director PD Property
Player Development Exec
Executive Casino Host
Casino Host I
Director PD New Business
Player Development Exec
Exec Casino Host - Asian
Casino Host I - Asian
Community Development Specialist

Food and Beverage 650+
SVP Food & Beverage
Director F&B
Manager F&B
Manager Fine Dining
Floor Mgr Food
Server
Line Server - Food Court
Line Server - Barista
Soda Fountain Employee
Restaurant Host
Bus Person
F&B Attendant
Food Runner
VP Culinary
Executive Chef
Executive Sous Chef
Room Chef
Asian Room Chef
Specialty Room Chef
Floor Mgr Sous Chef
Floor Mgr Sous Chef - Asian
Cook I
Cook - Asian
Cook - Exhibition
Cook - Food Court
Cook - Line
Executive Steward
Floor Mgr Stewarding
Steward - Kitchen Worker*
Director Beverage
Floor Mgr Beverage
Beverage Server
Lounge Server
Bartender
Bar Back*

HIRING PLAN



5,000 + NEW PERMANENT POSITIONS

Resorts World NEW YORK CITY

BUILDING OUR HOUSE

Supporting our Team Members

- Equal Pay and Benefits: Ensure that compensation, benefits, and opportunities are provided equitably regardless of background. Routinely monitor and address pay gaps through bi-weekly compensation committee meetings.

- Diverse Leadership and Representation: Expand diversity in leadership roles. Team members who see leaders who look like them, feel valued and represented.

- Online Team member Resource Groups (TRGs): Our online team member engagement and communication tool allows for spaces where team members can connect, share experiences, and collaborate on initiatives that promote inclusion (e.g., LGBTQ+, women, racial and ethnic groups)

- Discounted Day Care: We partner with the Perks at Work Program to provide, at a discounted rate, access to community life services, including Day Care. We recognize that providing access to these discounted services supports team member retention, improves focus and productivity, enhances access to workforce training programs, promotes work-life balance and well-being, and attracts a diverse talent pool.

- Diversity, Equity, Inclusion and Belonging (DEIB) Committee:
  The DEIB committee helps team members understand and appreciate different cultural perspectives to reduce misunderstandings and foster a more inclusive environment.

- Flexible Work Arrangements:
  When aligned with business needs, RWNYC provides flexible work arrangements that accommodate diverse needs, such as religious holidays, family responsibilities, and cultural practices.

- Language Support:
  RWNYC's team members have varying levels of English proficiency. Through our online team member engagement and communication tool,

team members can communicate with one another in their own language or through auto-translation software. Further language support is offered through English as a Second Language (ESL) classes.

- Safe Reporting Channels:
  RWNYC has partnered with a third-party provider to establish an Ethics and Whistleblower Hotline, available 24 hours a day and accessible in multiple languages. This is an additional safe channel for team members to report incidents of discrimination, harassment, or bias.

- Free meals: Team Members are entitled to a free hot meal on every shift in our Team Member Dining Room.

- Feedback and Team member Surveys: RWNYC seeks feedback from team members about their experiences within the company. We use this feedback to identify areas for improvement and take action accordingly.

- Support for Work-Life Balance:
  RWNYC recognizes that team members may face unique challenges and we offer resources to help them manage work-life balance effectively.

Employee Assistance Program

As part of RWNYC's existing benefits, we offer team members assistance that provides confidential services, with no cost to Team Members, to assist team members in addressing a variety of personal concerns. It is a health and well-being concierge service where team members are connected to a contact who guides them to clinical, wellness, financial, legal or counseling resources 24 hours a day, seven days a week.

These services are confidential and include help to resolve a broad range of issues including:

Relationship/marriage problems
Stress/emotional Issues
Family issues
Alcohol and drug dependency
Life changes
Financial issues: Budgeting, credit issues and financial planning
Child and elder care assistance

Homelessness
Domestic Violence
Suicidal thoughts
Legal Assistance
Problem Gaming

RWNYC understands that mental health and wellbeing is of the utmost importance. To help our team members with self-care, we host wellness clinics, offer healthy food options in the team dining room. In order to guide our team members to receive the care they need, we have an open door policy when a team member has any issues pertaining to their wellbeing. We have partnered with local gyms, healthy eating and nutrition businesses, mindfulness and wellness online classes, and a myriad of other services that help our team members maintain their peace of mind.

COMMUNICATION IS KEY

BEEKEEPER

We have partnered with Beekeeper, a mobile-first frontline employee communication app. As a result, our team members have a better way to connect, engage and collaborate with each other and our leaders.

Help team members get more done with an accessible one-stop shop for information.

Information When and Where You Need It

Real-time communication

Deliver instant chat campaigns and surveys, share videos and files in news streams, and collaborate via text or voice in 1:1 and group chats.

Inline translation

News streams, comments, chat messages, surveys, and safety campaigns can all be translated into the recipient's native language.

FAQ chatbots

Free up time for your frontline managers — answer thousands of FAQs specific to your company on-demand in any language with a chatbot.

Automate Processes

Extend and automate workflows across systems to build our digital workplace for frontline teams.

Onboarding workflows

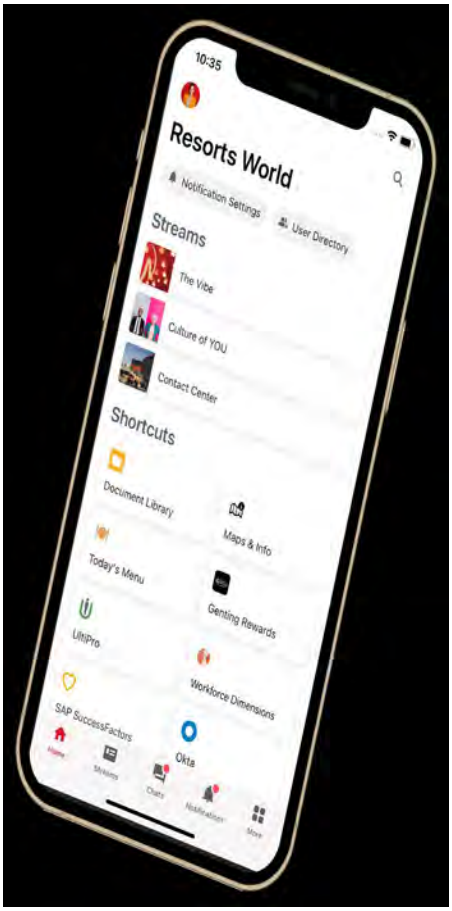
Built-in workflow capabilities for faster onboarding.

Easy Onboarding

New employees get set up on the app and connect with their team faster via SMS, QR code, or email.

Follow up fast

Send reminders and follow-ups messages to non-responders.



Training Programs

- ***Orientation and Onboarding***

  We are dedicated to developing our employees, beginning with orientation, when we meet the needs of the employees first, we ultimately meet the needs of the guests.

  Before starting work and after completing the hiring and licensing process required for a position, new team members attend the paid mandatory orientation program provided by the Human Resources Department.

  Department heads conduct departmental orientation programs to welcome and assimilate new employees to the department; subjects covered in orientation include work schedule, breaks, uniform care, safety, etc.

- Training as an ongoing process requires skill assessment at various points during a team member's career. That skill assessment determines additional training to either improve skills or enhance already existing skills.

- ***Current Training Programs:***
  - Harassment training is conducted for new hires and existing team members annually.
  - Human Trafficking.
  - Diversity, Equity, Inclusion, and Belonging Classes.
  - Succession Planning
  - T.I.P.S. training is conducted once a quarter.
  - Two certified T.I.P.S. trainers are on the property.
  - Manage compliance to T.R.A.C. reporting standard.
  - C.P.R./First Aid training, where applicable
  - O.S.H.A training
  - Fire Safety & Active Shooter training
  - A.D.A. training, where applicable.
  - Problem Gambling and Responsible Gaming Training.
  - Supervisory Skills Training for Union and nonunion supervisors focusing on communication, coaching, and feedback.

- Cybersecurity Training class.
- Labor Relations Training Series, inclusive of discipline and conflict resolution.

Our approach to supporting our team members is holistic, we are dedicated to enhancing all aspects of our team members and their families' lives. We offer industry-competitive compensation and benefits, including:

• Generous PTO policy

• Medical Insurance

• Dental Insurance

• Vision Insurance

• Other Insurance (life, short- and long-term disability) (Team Member, Spouse, Children)

• Retirement Benefits

• Commuter Benefits

• Team Member Events and Volunteer Opportunities

• Free Meals at the Employee Dining Room

OUR PERKS-AT-WORK PROGRAMS

Access to 30,000+ national & local employee discounts. Over 20 different categories ranging from Electronics, Home Appliances, Food & Groceries, Car Buying, Travel, Fitness, and more.

Through Perks -at-Work we have strategically partnered with vendors to provide discounts in all areas to benefit our team members and the businesses in our community.

WE SUPPORT OUR NEIGHBORHOOD

Our community involvement extends RWNYC's commitment to diversity beyond the workplace. We encourage team members to participate in community outreach programs that support their diverse communities. Notable volunteer projects include park restoration with the City Parks Foundation, beach cleanups with the

American Littoral Society, food delivery with Citymeals on Wheels, environmental stewardship with Queens Botanical Garden, and grounds maintenance at GallopNYC. In addition to fostering team building among participants, our team member volunteer program gives us a way to give back to the community.

To further support the communities in which our Team Members reside, RWNYC provides financial investment in the form of philanthropic giving to non-profit organizations. Key partners in this category include the Queen's Chamber of Commerce, Greater Jamaica Development Corporation, and Queens Economic Development Corporation. Our financial support assists these organizations with job readiness initiatives and upskilling opportunities.

RESORTS WORLD GIVES

Established in 2011, Resorts World Gives is our corporate philanthropic program, encompassing all charitable giving by Resorts World New York City.

The mission of Resorts World Gives is to invest in the economic and social progress of our properties' communities. To date, we have donated over $5 million to more than 200 local organizations.

Resorts World Gives (“RW Gives”), our corporate philanthropic program stands as a beacon of community engagement and social responsibility. The team's commitment goes beyond traditional corporate philanthropy, extending into meaningful community outreach initiatives that make a tangible impact. Team members actively participate in local volunteer programs, dedicating their time and expertise to uplift our community. Furthermore, RWNYC channels financial resources into projects that support our Five Pillars of Giving. This holistic approach reflects the company's dedication to creating positive change, fostering a sense of unity and shared responsibility. Through strategic partnerships and direct engagement, RW Gives exemplifies a genuine commitment to building a better future for all.

Our Five Pillars of Giving

- **Community & Economic Development**

The foundation of our giving philosophy lies in building up the areas we do business in. We do this by partnering with youth programs, food rescue programs, and economic organizations. Through investment, we also aim to improve the quality of education and technology access to underserved communities.

We support City Harvest through volunteerism and donations. City Harvest helped start the food rescue movement. Neighbors across New York City rely on City Harvest to help fill their plates with fresh, nutritious food. They rescue millions of pounds of food and deliver it, free of charge, to hundreds of food pantries and soup kitchens across the five boroughs to help feed New Yorkers experiencing food insecurity.

Health & Wellness

A community means nothing without its people, so we remain committed to improving and maintaining the well-being of our employees, guests, and partners. Our partnerships with local hospitals are more than just a check—we volunteer and provide meals as well. Under this initiative, we recognize our role in combating problem gambling. We partner with national and local organizations to provide resources to those affected.

RWNYC is the major sponsor of our community's first cancer center, in cooperation with Memorial Sloan Kettering Cancer Center. Located in Jamica Hospital Medical Center. In addition, our team members routinely volunteer to read to patients in the children's ward of Jamaica Hospital Medical Center and provide needed resources to enhance the healing environment. Recognized as one of the leading hospitals in Queens New York since 1891, Jamaica Hospital Medical Center has proudly served the community for over a century. They continue to meet the needs of our diverse communities by providing a wide range of quality healthcare services.

- **Environment**

Being a good neighbor means doing your part in maintaining the environment we all share. Resorts World Gives partners with nature refuges, city parks, botanical gardens, and environmental organizations to

contribute to our planet's well-being. We also participate in clean energy initiatives to offset our waste and emissions.

Our team members replant the tropical spring garden at the Queens Botanical Garden which is an urban oasis where people, plants, and cultures are celebrated through inspiring gardens, innovative educational programs, and real-world applications of environmental stewardship.

- **Civic & Public Affairs**

We believe in the power of change. New ideas and new programs are essential for progress to happen. Resorts World Gives works with local leaders and civic associations to foster this progress.

During one of the most challenging times of our generation, we were a designated COVID testing site, and later a vaccination site. During other challenging times, such as Superstorm Sandy and Hurricane Ida, we hosted emergency response teams.

- **Arts & Culture**

Leveraging New York's position as a worldwide leader in arts and culture, Resorts World Gives is in a unique position to partner with premier tourism and arts councils, entertainment organizations, diversity initiatives, and beautification projects.

❤️‍🩹 The Resorts World Red Wall Gallery highlights works of art by local artists, individually and through community organizations. The collaborations have produced thirty-two exhibits, with ten created by minorities and twelve by females. Resorts World markets and advertises the Red Wall Gallery exhibits to our guests, who can purchase the artworks by visiting the artist website or using QR codes for more information.

The Red Wall Gallery provides both artists and organizations with the opportunity to showcase their work in a space with the

potential to reach over 16,000 guests per day. The gallery has featured exhibits with the following organizations: Louis Armstrong Museum featuring Queens NY Jazz Legends, Jamaica Center for Arts and Learning featuring artist Emmett Wigglesworth, Queens Botanical Gardens featuring Flowers of the Garden, Danny Simmons Gallery curating works of nine female artists for Women's History Month, other non-profit collaborations, including American Littoral Society, Queens Center for Progress, Queens Historical Society, HeartShare, and Chinese Freemasons.

Our love for our neighbors extends beyond our philanthropic efforts. We also spotlight and support our neighbors through our Community Partners Program where Team members and Genting Rewards Card holders receive discounts on purchases. This Program gives marketing and advertising exposure and support to local businesses by incentivizing team members and guests to prioritize patronizing these establishments. Click here **https://rwnewyork.com/community-partners/** or *See Exhibit 3 for a list of our Community Partners.*

PROGRAM FOR COMMUNITY SUPPORT

Our Corporate Social Responsibility efforts operate through the Resorts World Gives (RWG) program. RWG supports organizations, projects, and programs that create opportunities for economic and social progress. Contributions seek to support established, innovative, and efficient non-profit organizations with clearly articulated goals that have proven successful at improving the neighborhoods of Queens, and their surrounding areas. We have supported the following organizations.

100 Black Men
100 Suits for 100 Men
106 Precinct Community Council
A Better Jamaica, Inc
ABIS The Advancement of Blacks in Sports
Adams Street Foundation
Advocates for Children
Ali Forney Center

Alley Pond Environmental Center
Alliance for Flushing Meadow Corona Park
Alpha Phi Alpha
Alzheimer's Association
American Cancer Society
American Littoral Society
Anna House/Belmont Child Care Association
Angels on the Bay
Association for a Better New York (ABNY)
Autism Speaks
Barclays Center Cares
BK Style Foundation
Black Spectrum Theatre
Belmont Child Care Association, Inc
Boys & Girls Club of Metro Queens
Bridge & Tunnel Officers Benevolent Association
Brooklyn Junior Autistic Golfers Academy
Brooklyn Public Library
Brooklyn Chamber of Commerce
Brooklyn Legal Services Corporation A
Brooklyn Lions Club
BTOBA Scholarship Fund, Inc
Caribbean Media Group, Inc
Candid Worldwide
CCI at Baruch College/CUNY
CCHAYA Community Development Corp.
Center for the Women of New York
Chinese American Planning Council
Chinese Community Center
Chinese Freemasons Athletic Club
City & State NY
City Harvest
City Meals on Wheels
City Parks Foundation
City Year
Comets Club International
Community Board 10
Community Club International
Community Youth Services
Cooke Center for Learning and Development, Inc
Consulate General of Jamaica
Coro New York Leadership Center
Deerfield Area Association
Divya Jyoti Association
Dress for Success
Dominick Murray 21 Memorial Foundation
Dominicio-American Society of Queens
Downtown Flushing Transit HUB BID
Elmcor Youth & Adult Activities
Extreme Kids & Crew
FDNY Foundation
Festival of Cinema NYC
FJC - Queens Book Festival
Flushing Chinese Business Association
Flushing Council on Culture & the Arts
Flushing Town Hall
Food Bank of the Hudson Valley
Freedom Hall Church of God, Inc
Friends of Fire Fighters Inc
Friends of the Otsvill School, Inc
Fashion Week Brooklyn Foundation
Futures in Education for Brooklyn & Queens
Gallop NYC
Garden of Hope
Gift of Giving Foundation Corp
Greater Jamaica Development Corporation
Greater New York Councils Boy Scouts
Greater Queens Links
Greater Whitestone Taxpayers Community Center
Greater Woodhaven Development Corp
Guides Association of NYC
Habitat for Humanity of Greater Newburgh
Heartshare Human Services of New York
Heartshare St. Vincent's Services
Her Justice
Hong Kong Dragon Boat Festival
Hussle Up Inc
Inner City Handball Association
Inwood Charities Fund
International Society of Cosma of Damiano JDRF Walk-A-Thon
Indochina Sino-American Community Center (ISACC)
Jack Kohler-Suanhacky Campership Association

Jamaica Center Improvement BID
Jamaica Center for Arts & Learning
Jamaica Hospital Medical Center (Medyis Health Network)
JFK Airport Chamber of Commerce
JobsFirst NYC
Keep Memory Alive
King Manor Museum
Kingsborough Community College
Kiwanis Club of Howard Beach
Kiwanis Club of Levittown Inc
LGBT Network
Library Action Committee of Corona East Elmhurst
Life's WORC
Lincoln Center for the Performing Arts
Local 45 Scholarship Fund
Locust Grove Civic Association
Long Island Childrens Museum
Long Island City Partnership
Louis Armstrong House Museum
Madison Square Park Conservancy
Majority Baptist Church
Make A Wish Foundation - NY & Western NY Chapter
Make the Road New York
Medisys Health Network
Met Council
Million Trees NYC
Museum Of Chinese in America
NAACP Jamaica Branch
National Action Network
National Council on Problem Gambling
National Realty Club
Nativity of the Blessed Virgin Mary
Neighborhood Housing Services of Jamaica, Inc
Neighborhood Technical Assistance Clinic
New Hamilton Beach Civic Association
New Wave Dance Youth & Community Development, Inc
New York Association of Black Journalists
New York Cares
New York City Audubon
New York Chinese Cultural Center
New York Council on Problem Gambling NYCPG
New York Families of Autistic Children
New York Foundation for the Arts - NYFA
New York Restoration Project - NYRP
NYFAC Foundation
NYC & Company Foundation
NOBLE - National Organization of Black Law Enforcement
No Longer Empty
North Babylon Community Youth Services
One Brooklyn Fund, Inc
One Stop Richmond Hill Community Center
Oratorio Society of Queens
Our Lady of Grace Ministry of Care & Services
Ozanam Geriatric Foundation
Ozone Park Civic Association
Partnership for Parks
Pearls & Ivy Foundation of Queens, Inc
Photoaccess
Police Athletic League
Puerto Rican Bar Association Scholarship Fund, Inc
Quality Services for the Autism Community (QSAC)
Queens Botanical Gardens
Queens Centers for Progress
Queens Chamber of Commerce
Queens College Foundation (Kupferberg Center for the Arts)
Queens Community House (Forest Hills Community)
Queens Council on the Arts
Queens Council Greater NY
Queens County Farm Museum
Queens Economic Development Corporation
Queens Museum
Queens Public Library Foundation
Queens Theatre
Queens World Film Initiative, Inc
Queensboro Dance Festival
Richmond Hill Block Association
Rise-Up Empowerment Through the arts (NYPD)
River Fund
Rockaway Development & Revitalization Corp
Royal People Group Inc
Rush Philanthropic Arts Foundation
Russo's on the Bay

Samaritan Daytop Foundation
Sanctuary for Families
School Sisters of Notre Dame Educational Center
Sisterhood of Destiny
Showing Hearts Foundation Inc
Sikh Coalition
Southeast Queens Chamber of Commerce
South Ozone Park Civic Association West
St John's Episcopal Hospital
Spoons Across America
Suny EOC - Queens One Jamaica Center
Sutphin BID
Swim Strong Foundation
Team Jamaica Bickle
The Business Council of New York State
The Chocolate Factory Museum
The Cleveland Clinic Foundation
The Cooke Center for Learning
The Links Foundation, Inc
The Museum of Chinese in America
The NY Firefighters Burn Center Foundation
The Studio Museum in Harlem
The Queens Federation of Churches
Thelma Hill Performing Arts Center
Toys for Tots
Trey Whitfield Foundation
United Black Men of Queens
United Brotherhood of Carpenters and Joiners Local 45
Universal Hip Hop Museum
Variety Boys & Girls Club of Queens
Visons Services for the Blind and Visually Impaired
West Hamilton Beach Fire Department
Women's Weekend Film Challenge
YCPN
YMCA of Greater New York
YMCA Flushing
YMCA Jamaica
York College Foundation
Youth & Tennis Academy
Youth America, Inc

Social and Traditional Media

Social and Traditional Media

Social and traditional media makes us available to a wider audience of candidates, which helps us find the strongest applicants. But, even when it doesn't directly result in a new hire, advertising helps with brand awareness.

We are excited to grow the RWNYC team and to provide career paths to a local and diverse group of individuals. Resort World New York City's success is greatest when we bring a local and diverse group of individuals together to create an incredible hospitality experience for our guests.

Appendix B: Phase I ESA

ASTM E 1527-13 PHASE I ENVIRONMENTAL SITE ASSESSMENT

60.27-Acre Portion of Resorts World New York City Casino
110-00 Rockaway Boulevard

Block 11543, Lot 2

Jamaica, Queens County, New York

PREPARED FOR

Resorts World NYC and
Resorts World Catskills
110-00 Rockaway Boulevard
Jamaica, NY 11420
Attn: Mr. Robert DeSalvio

PREPARED BY

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New York, NY 10118
(212) 857-7350

July 20, 2023

VHB Project No. 20995.01

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Executive Summary

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C. (VHB) was engaged by Resorts World NYC and Resorts World Catskills (Client) to perform a Phase I Environmental Site Assessment (ESA) of a 60.27-acre portion of the Resorts World New York City Casino located at 110-00 Rockaway Boulevard, Jamaica, Queens County, New York (hereinafter referred to as the subject property). The subject property is further defined by Queens County as Block 11543, Lot 2.

The subject property consists of 60.27-acres of land and is located in an urban area characterized by mixed-use development. The subject property is developed with two commercial buildings, Hyatt Regency Hotel and the Resorts World Casino. Asphalt-paved parking lots are located in the northern and western portions of the subject property. A six-level parking garage is connected to the northern facade of the Resorts World Casino building. The subject property is located in the Jamaica section of Queens County, New York, and can be accessed from Aqueduct Road to the west and Rockaway Boulevard to the north. The subject property is located in a commercial zoning district (C8-1) that can generally be characterized with automotive and other heavy commercial services that often require large amounts of land. Typical uses include automobile showrooms and repair shops, warehouses, gas stations and car washes. VHB prepared this Phase I ESA to provided environmental due diligence in support of the potential purchase of the subject property.

This Phase I ESA has been completed using the American Society of Testing and Materials (ASTM) E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (the Standard) and the All Appropriate Inquiries (AAI) Final Rule at 40 Code of Federal Regulations (CFR) Part 312 as guidance.

The purpose of this Phase I ESA is to identify, to the extent feasible pursuant to the processes prescribed in ASTM E1527-13, Recognized Environmental Conditions (RECs) in connection with the subject property.

The Phase I ESA shall include the following elements:

- User's Responsibilities
- Physical Setting Resources
- Government Records

- Historical Records
- Site Reconnaissance
- Owner/Operator/Occupant Interviews
- Local Government Officials Interviews
- Evaluation and Report

The Client is the sole User of this Phase I ESA (User). Pursuant to Section 3.2.98 of the Standard, "the User has specific obligations for completing a successful application of this practice as outlined in Section 6" of the Standard.

VHB has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13 for the subject property. Any exceptions to, or deletions from, this practice will be described described in Section 7 and/or **Appendix A** of this report. As per the Standard, the following "non-scope considerations" were not included in this evaluation (please note this list is not intended to be all-inclusive): asbestos-containing building materials, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, lead-based paint, lead in drinking water, mold, regulatory compliance, and wetlands.

Recognized Environmental Conditions (RECs)

The following RECs were identified:

- REC No. 1 – Adjoining Properties
- REC No. 2 – North Nearby Property

Historical Recognized Environmental Conditions (HRECs)

This assessment has revealed no evidence of HRECs in connection with the subject property.

Controlled Recognized Environmental Conditions (CRECs)

This assessment has revealed no evidence of CRECs in connection with the subject property.

Business Environmental Risks (BERs)

The following BERs were identified:

- BER No. 1 – Urban Historic Fill
- BER No. 2 – Historical Agricultural Use

The Phase I ESA should be read in its entirety to gain a comprehensive understanding of the findings presented in this Executive Summary.

1

Introduction

1.1 Purpose and Scope of Work

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C. (VHB) was engaged by Resorts World NYC and Resorts World Catskills (Client) to conduct a Phase I Environmental Site Assessment (Phase I ESA) for an 60.27-acre portion of the Resorts World New York City Casino identified by the New York City Department of Finance (NYCDOF) as 110-00 Rockaway Boulevard, (Block 11543, Lot 2) in Jamaica, Queens County, New York (hereinafter referred to as the subject property) as shown on **Figure 1**. It is VHB's understanding from the Client that the purpose of this Phase I ESA is to provide environmental due diligence in support of the acquisition of the subject property.

This Phase I ESA has been completed using the American Society of Testing and Materials (ASTM) E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (the Standard) and the All Appropriate Inquiries (AAI) Final Rule at 40 Code of Federal Regulations (CFR) Part 312 as guidance. Resorts World NYC and Resorts World Catskills is the User of this report as defined by the Standard. Pursuant to Section 3.2.98 of the Standard, "the User has specific obligations for completing a successful application of this practice as outlined in Section 6" of the Standard. This Phase I ESA is subject to the terms of the agreement dated January 9, 2023, between VHB and the Client (Agreement). Other than those limitations expressly provided in **Appendix A** and/or specified in Section 7, completion of the Phase I ESA was not subject to additional assumptions, limitations, or exceptions to the Standard.

The objective of this Phase I ESA is to identify, to the extent feasible pursuant to the process described in the Standard, Recognized Environmental Conditions (RECs) in connection with the subject property. The Phase I ESA was completed following the Standard as guidance. RECs are defined in the Standard as "*the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions*" and are defined by Section 3.2.22 of the Standard as *"a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."*

A Controlled REC (CREC) is a REC "resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the

issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

Historical RECs are "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

Per the Agreement between VHB and the Client, the scope of services to complete this Phase I ESA consisted of the following main components:

- an inquiry by an "Environmental Professional" as defined by the Standard;
- interviews with present owners, operators, and occupants in an effort to gather any specialized knowledge or experience with regard to the subject property;
- a review of historical sources, including, but not limited to, chain of title documents, aerial photographs, building department records, and land use records to determine previous uses and occupancy since first development;
- searches for recorded environmental cleanup liens against the facility that are filed under federal, state or local law;
- a review of federal, state, or local government records; and
- a visual inspection of the facility and surrounding properties.

As per ASTM E 1527-13, the following "nonscope considerations" were not included in this evaluation: asbestos-containing materials (ACMs), biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, lead-based paint (LBP), lead in drinking water, mold, radon, regulatory compliance, and wetlands. Since ASTM E 1527-13 does not require that these inspections be conducted, said inspections were not performed as part of this Phase I ESA.

1.2 User Reliance

This Phase I ESA was completed solely for the Client and the User, subject to the terms, conditions and limitations referenced herein and as issued in connection with the Agreement and the provisions thereof. Any use or reliance upon information provided in this report without the specific written authorization of the Client and VHB shall be at such party's sole risk.

2

Subject Property Description

2.1 Subject Property Location, Ownership, and Description

The approximate center of the subject property is located at 40° 40′ 21.51″ north latitude and 73° 49′ 50.53″ west longitude. The subject property is further defined by the New York City (NYC) Tax Maps as 110-00 Rockaway Boulevard in the Jamaica section Queens County, New York, Block 11543, Lot 2. The subject property lot shape can be described as irregular.

According to information obtained from the New York City Zoning and Land Use (ZoLa) database, the subject parcel consists of 60.27-acres of land and is located in an urban area characterized by mixed-use development. The subject property is developed with two commercial buildings, Hyatt Regency Hotel and the Resorts World Casino. Asphalt-paved parking lots are located in the northern and western portions of the subject property. A six-level parking garage is connected to the northern facade of the Resorts World Casino building.

A Subject Property Location Map is provided as **Figure 1**, an aerial photograph is included as **Figure 2**, a tax map depicting the property boundaries is included as **Figure 3**, and a topographic map showing the topography of the subject property and the surrounding area is provided as **Figure 4**.

2.2 Subject Property and Vicinity General Characteristics

The subject property is located in the Jamaica section of Queens County, New York, and can be accessed from Aqueduct Road to the west. The subject property is located in a commercial zoning district (C8-1) that can generally be characterized with automotive and other heavy commercial services that often require large amounts of land. Typical uses include automobile showrooms and repair shops, warehouses, gas stations and car washes. The topography of the subject property is relatively flat. The closest named surface water body is Jamaica Bay located approximately 1.75 miles south of the subject property.

2.3 Description of Structures, Roads, and Other Site Improvements

The subject property is currently developed with two commercial buildings, Hyatt Regency Hotel and the Resorts World Casino. Asphalt-paved parking lots are located in the northern and western portions of the subject property. A six-level parking garage is connected to the northern facade of the Resorts World Casino building. The northern

boundary of the subject property connects to Rockaway Boulevard and a residential neighborhood. The eastern boundary of the subject property connects to the Aqueduct Racetrack. The southern boundary of the subject property connects to a parking lot and the New York Racing Association (NYRA) Aqueduct building. The western boundary of the subject property connects to the Long Island Railroad and a residential development.

The table below presents the properties and features surrounding the subject property:

Direction	Adjoining	Surrounding
North	› Rockaway Boulevard, and a residential development.	› Mixed-Use Properties
South	› A three-story building (New York Racing Association) and a parking lot.	› Residential-Use Properties
East	› Aqueduct Racetrack.	› Residential-Use Properties
West	› Long Island Railroad and a residential development.	› Residential-Use Properties

2.4 Physical Setting

Subject property-specific physical setting information was obtained from several resources. These may include the most recent USGS 7.5-Minute Topographic Map (**Figure 4**), State Bedrock Geology Maps, State Surficial Geology Maps, National Cooperative Soil Survey Maps, State Surface Water Maps, and/or State Bedrock Aquifer Maps. The United States Department of Agriculture (USDA) Web Soil Survey (WSS) online applications was used, in addition to information provided within the Environmental Data Resources, Inc. (EDR) database report.

2.4.1 Topography

Topography of the subject property is relatively flat with an average elevation of approximately 7 feet above mean sea level. Rainfall is expected to run off impervious surfaces to storm water drains which were observed within the on-site parking lots.

2.4.2 Geology/Soil

Queens County is underlain by geological formations known collectively as the Piedmont Province. The rocks of the Piedmont Group are predominantly of Late Triassic and Early Jurassic age (230 to 190 million years old). They rest on a large elongated crustal block that dropped downward in the initial stages of the opening of the Atlantic Ocean. The sediments are composed of material caused by the erosion of adjacent uplands, which were deposited along rivers and in lakes within basins. These sediments became compacted to form conglomerate, sandstone, siltstone, and shale. They commonly have a reddish-brown color. The subject property is underlain by the Cambrian Manhattan Formation.

According to the Soil Survey for Queens County, the soils at the subject property are classified as Urban land, outwash substratum (UoA) with zero to three percent slopes. Typical UoA soils derive from asphalt over human-transported material and are characterized as having a very high runoff class with very low capacity to transmit water. A typical UoA soil profile consists of cemented material from zero to 20 inches below grade and of gravelly

sand from 20 to 72 inches below grade. An on-site investigation would be necessary to determine classes of soil present on the subject property.

2.4.3 Hydrology

Groundwater flow is best determined using site-specific groundwater elevation data and may be affected by surface topography, hydrology, and characteristics of the soil and nearby wells. Based on a review of information provided in this report, groundwater flow is presumed to flow to the south in the direction of Jamaica Bay. In the absence of site-specific data, other sources of information are typically used to determine flow direction including surface topographic information and hydrogeologic information collected from nearby properties. Detailed investigations involving the installation and gauging of on-site monitoring wells would be required to ascertain the groundwater flow direction on the subject property.

3

User Provided Information and Interview

To qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the User(s) and/or Grantee(s) or a party on behalf of the User(s) and/or Grantee(s) must collect the following information, if applicable, and should make the information available to the Environmental Professional upon request:

- Land Title Records and Judicial Records for Environmental Liens and Activity and Use Limitation (AUL)
  - A search for the existence of environmental liens and AULs that are filed or recorded against the subject property. This can be completed with transaction-related title insurance documentation such as preliminary title reports and/or title commitments. Another option is title search information reports such as Condition of Title, Title Abstracts, and AUL/Environmental Lien Reports. The information gathered from these searches should identify environmental covenants, environmental easements, land use covenant and agreements, declaration of environmental land use restrictions, environmental land use controls, environmental use controls, environmental liens, or any other recorded instrument that restricts, affects, or encumbers the title to the subject property due to restrictions or encumbrances associated with the presence of hazardous substances or petroleum products.
- Specialized knowledge or experience of the person seeking to qualify for the Limited Liability Protections;
- Relationship of the purchase price to the fair market value of the property if it were not contaminated;
- Commonly known or reasonably ascertainable information about the property; and
- The degree of obviousness of the presence or likely presence of contamination at the property and the ability to detect the contamination by appropriate investigation.

VHB provided the User Questionnaire to the User Representative for Resorts World NYC and Resorts World Catskills. The User Questionnaire specifically requests information related to each of the six items listed above. Information obtained from User Questionnaire responses have been incorporated throughout this report and is provided in **Appendix B**.

4

Records Review

VHB conducted a review of environmental databases and available files to identify potential environmental concerns at the subject property and properties in the vicinity that have had a release or pose a threat of release of petroleum and/or hazardous substances that may potentially impact the quality of environmental media at the subject property. VHB reviewed federal and state environmental databases supplied by Environmental Data Resources, Inc. (EDR) of the subject property and the area within a one-mile radius of the subject property.

In addition to the review of state and federal government databases. VHB accessed the United States Environmental Protection Agency (USEPA) Envirofacts online database, the New York State Department of Environmental Conservation (NYSDEC) Spills database and NYSDEC Petroleum; Bulk Storage (PBS) database to obtain information regarding the subject property. VHB submitted online requests to the NYSDEC and New York City Department of Environmental Protection (NYCDEP) via their online portal for information regarding environmental conditions at the subject property. The results of the records review are summarized below.

4.1 Standard Environmental Record Sources

EDR provided a report dated January 11, 2023, summarizing available and reasonably ascertainable information from standard environmental record sources at the minimum distances required in the Standard. A copy of the EDR report is provided as **Appendix C**.

A summary of the EDR findings is included in the table below and following sections.

Record Source	Search Radii	Site Listed	Number Sites Within Search Distance
NY Leaking Underground Storage Tanks (NY LTANKS)	0.125 mile	No	2
	0.25 mile	No	5
	0.50 mile	No	15
NY Underground Storage Tanks (NY UST)	0.125 mile	No	4
	0.25 mile	No	4
US Brownfields Site	0.50 mile	No	1

Record Source	Search Radii	Site Listed	Number Sites Within Search Distance
NY Spills Information Database (NYSPILLS)	0.125 mile	No	17
NY Chemical Bulk Storage (CBS)	0.25 mile	No	1
NY CBS Aboveground Storage Tank (AST)	0.25 mile	No	1
FINDS sites	0.125 mile	Yes	2
ECHO sites	0.125 mile	Yes	1
PFAS ECHO sites	0.125 mile	No	1
NY DRYCLEANERS	0.125 mile	No	1
NY MANIFEST sites	0.125 mile 0.25 mile	No No	22 28
NJ MANIFEST sites	0.125 mile 0.25 mile	No No	6 5
Resource Conservation and Recovery Act Non-Generator/ No Longer Generated (RCRA NonGen/NLR) database	0.125 mile 0.25 mile	No No	18 25
Resource Conservation and Recovery Act Large Quantity Generator (RCRA-LQG)	0.125 mile 0.25 mile	Yes No	3 6
Resource Conservation and Recovery Act Small Quantity Generator (RCRA-SQG)	0.125 mile	No	2
Resource Conservation and Recovery Act Very Small Quantity Generator (RCRA-VSQG)	0.125 mile 0.25 mile	No No	1 2
NY Solid Waste Management Facilities (SWF/LF)	0.50 mile	No	2
EDR Historic Auto	0.125 mile	No	14
EDR Historic Cleaner	0.125 mile	No	2
NY State Hazardous Waste Sites (NY SHWS)	1.0 mile	No	2
NY Above-ground Storage Tank (NY AST)	0.125 mile 0.25 mile	No No	7 6

The EDR report provides search results of other federal, state, and local databases which are not listed as *Standard Environmental Resources* in the Standard. The subject property was listed in five databases, as described in the following section.

4.1.1 Summary of Subject Property Records

According to the EDR environmental database search, the subject property was identified in the Facility Index System (FINDS), Enforcement and Compliance History Online (ECHO), NY MANIFEST, NJ MANIFEST, Resource Conservation and Recovery Act Large Quantity Generator (RCRA-LQG) databases under the following listings:

Resorts World Casino New York City
110 Rockaway Boulevard
South Ozone Park, NY 11420

Resorts World
110-00 Rockaway Boulevard
South Ozone Park, NY 11420

Resorts World Las Vegas
110-10 Rockaway Boulevard
South Ozone Park, NY 11420

The subject property was identified in the FINDS and ECHO databases under Registry ID No. 110054815642.

According to the NY MANIFEST and NY MANIFEST databases, the subject property was identified under EPA ID No. NYR000179689 for the transport of lead waste in 2011.

Resorts World Casino New York City was identified in the RCRA-LQG database under EPA ID No. NYR000179689 as a large quantity generator of ignitable waste, corrosive waste, and spent non-halogenated solvents as of April 3, 2013.

4.1.2 Summary of Nearby Properties of Interest

Based on preliminary information from the EDR report, five nearby properties were deemed to require additional review to evaluate the potential to impact environmental conditions at the Site. In addition to the EDR report, available records were reviewed electronically via USEPA Envirofacts, NYSDEC Spills and PBS databases. Information obtained during the additional reviews is summarized below.

110-00 Rockaway Boulevard, Queens, New York

The south adjoining property was identified in the RCRA-Very Small Quantity Generator (VSQG), NY MANIFEST, NY Underground Storage Tank (UST), NY Above-ground Storage Tank (AST) and EDR Historic Auto databases under the following listings:

Aqueduct Racetrack
110-00 Rockaway Boulevard
South Ozone Park, NY 11420

Shore Shot Transmissions
110-00 Rockaway Boulevard
South Ozone Park, NY 11420

Aqueduct Racetrack was identified in the RCRA-VSQG database under EPA ID No. NYN008022493 as a conditionally exempt small quantity generator of corrosive waste as of May 17, 2010.

According to the NY MANIFEST database, the south adjoining property was identified under EPA ID No. NYN008022493.

Aqueduct Racetrack was identified in the NY UST and NY AST databases under NYSDEC Petroleum Bulk Storage (PBS) ID No. 2-258342 as an active facility with one in-service 4,000-gallon gasoline UST, one in-service 4,000-gallon diesel fuel UST, one in-service 240-gallon waste oil AST, and one in-service 525-gallon diesel fuel AST. Five 550-gallon diesel-fuel USTs were closed by removal on November 1, 1998, one 250-gallon waste oil UST was closed by removal on October 7, 1999, and two 20,000-gallon fuel oil USTs were closed by removal on October 1, 2008.

According to the EDR Historic Auto database, the south adjoining property (Shore Shot Transmissions) was identified as an "Automotive Transmission Repair Shops" between 2005 and 2008.

98-20, 98-21 and 98-31 Linden Boulevard, Queens, New York

According to the EDR environmental database search, the west adjoining property was identified in the EDR Historic Auto and NY AST databases under the following listings:

Technical Auto & Truck Repair Service
98-20 Linden Boulevard
Jamaica, NY 11417

Coviello Paul
98-30 Linden Boulevard
Ozone Park, NY 11417

Mo Auto Repair Inc.
98-21 Linden Boulevard
Ozone Park, NY 11417

According to the NY Historic Auto database, the west adjoining property (Technical Auto & Truck Repair Service) was identified as a "Gasoline Service Station" between 1987 and 1994, and a "General Automotive Repair Shop" between 1994 and 2014. The west adjoining property (Coviello Paul) was identified as a "Gasoline Service Station" between 1969 and 1975, and a "General Automotive Repair Shop" between 1994 and 2007.

According to the NY AST database, Mo Auto Repair, Inc. was identified under NYSDEC PBS ID No. 2-609480 for one closed by removal 275-gallon waste oil AST on December 11, 2006.

135-36 and 135-38 Centerville Street, Queens, New York

According to the EDR environmental database search, the west adjoining property was identified in the FINDS, ECHO, NY MANIFEST, RCRA No Longer Generating (NonGen/LNR), NY AST and NY SPILLS databases under the following listings:

Sonny's Auto Service
135-36 Centerville Street
Ozone Park, NY 11417

Former Auto Body Shop
135-38 Linden Boulevard
Ozone Park, NY 11417

According to the FINDS and ECHO databases, Sonny's Auto Service was identified under Registry ID No. 110004353459.

According to the NY MANIFEST database, Sonny's Auto Body was identified under EPA ID No. NYD038651824.

Sonny's Auto Service was identified in the RCRA NonGen/LNR database as of January 01, 2007, under EPA ID No. NYD038651824 for no longer generating ignitable waste. Sonny's Auto Service was registered as a historic generator of ignitable waste on July 8, 1999, June 1, 2006, and January 1, 2007; and a small quantity generator ignitable waste on August 7, 1986.

According to the NY AST database, 135-36 Centerville Street was identified under NYSDEC PBS ID No. 2-610164 for one closed by removal 550-gallon gasoline AST on December 15, 2006.

The west adjoining property (Former Auto Body Shop) was identified in the NY SPILLS database under NYSDEC Spill Incident No. 0513162 on February 15, 2006, when contaminated soil was identified during the removal of three 550-gallon gasoline tanks along the eastern property boundary. The contaminated soil was remediated and NYSDEC closed the spill case on March 31, 2006.

137-32 Centerville Street, Queens, New York

According to the EDR environmental database search, the southwest adjoining property was identified in the EDR Historic Auto and NY UST databases under the following listings:

Frank Isopo Inc.
137-32 Centerville Street
Ozone Park, NY 11417

Frank Isopo Operating Corp.
137-32 Linden Boulevard
Ozone Park, NY 11417

According to the NY Historic Auto database, the southwest adjoining property was identified as a "Gasoline Service Station" between 1976 and 2001, and a "General Automotive Repair Shop" between 1992 and 1993.

According to the NY UST database, the southwest adjoining property was identified under NYSDEC PBS ID No. 2-085731 for one closed-in-place 3,300-gallon gasoline UST on February 1, 1998.

106-14 Rockaway Boulevard, Queens, New York

According to the EDR environmental database search, the north nearby property was identified in the EDR Historic Cleaner database under the following listing:

Weekes Shondel
106-14 Rockaway Boulevard
Jamaica, NY 11417

According to the EDR Historic Cleaner database, the north nearby property at 106-14 Rockaway Boulevard is located 0.07 miles upgradient of the subject property and was identified as a "Dry Cleaning Facility" between 2000 and 2009.

4.1.3 Orphan Summary

Sites with minimal address information that may be in proximity to the subject property are listed separately in the database report as "Orphan Sites." The EDR Orphan Summary Report has listings for eight properties included in certain federal or state environmental databases but reported by EDR to be unmapped due to insufficient address information. The listings of the orphan sites within the database search were reviewed, cross-referencing available address information with facility names. Upon review, it was determined that the orphan sites do not appear to be associated with the subject or adjoining properties.

4.1.4 EDR Findings

The subject property was identified in the FINDS, ECHO, NY MANIFEST, NJ MANIFEST, and RCRA-LQG databases.

The south adjoining property (Aqueduct Racetrack) was identified in the RCRA-VSQG, NY MANIFEST, NY UST and NY AST databases. The south adjoining property (Shore Shot Transmissions) was identified in the EDR Historic Auto database.

The west adjoining property (98-20, 98-21 and 98-31 Linden Boulevard) was identified in the EDR Historic Auto and NY AST databases. The west adjoining property (135-36 and 135-38 Centerville Street) was identified in the FINDS, ECHO, NY MANIFEST, RCRA No Longer Generating (NonGen/LNR), NY AST and NY SPILLS databases.

The southwest adjoining property (137-32 Centerville Street) was identified in the EDR Historic Auto and NY UST databases.

The north nearby property (106-14 Rockaway Boulevard) was located in the EDR Historic Cleaner database.

Numerous other surrounding properties were identified as aforementioned; however, the regulatory-listed sites are unlikely to impact the subject property for one or more of the following reasons:

- The listed property was judged to be too distant to likely impact the subject property;
- The listed property was topographically downgradient or sidegradient of the subject property;
- The listed property is separated from the subject property by a hydrologic barrier, such as a river; and/or,
- The property was listed as engaging in an activity that requires environmental registration but for which no violation was documented, such as a registered underground storage tank with no documented leak, or was issued a "Case Closed" status by the NYSDEC.

4.2 Regulatory Agency Review

In addition to the review of state and federal government databases, as discussed in Section 4.1 above, VHB accessed the USEPA Envirofacts Database, NYC ZoLa database, NYSDEC's Spill Incident Database and PBS Database for information concerning environmental issues at the subject property and adjoining properties. VHB also provided communications to the NYSDEC and the NYCDEP via their online portals to request information concerning environmental issues at the subject property. (Refer to **Appendix D** – Government Records.)

4.2.1 Subject Property

USEPA

On January 20, 2023, a review of available information on the USEPA Envirofacts database identified the following environmental records regarding the subject property.

- *Detailed Facility Report, Reports World Casino New York City, 110 Rockaway Boulevard, South Ozone Park, New York*

  The Detailed Facility Report identified the subject property as an active Large Quality Generator (LQG) under Facility Registry Service (FRS) ID No. 110054815642 and RCRA Handler ID No. NYR000179689. The generated waste shipped off-site was listed as ignitable waste, corrosive waste and lead. The compliance status was listed as "No violations identified".

NYSDEC

VHB submitted a Freedom of Information Law (FOIL) request to NYSDEC on January 11, 2023. VHB received a response from NYSDEC on January 27, 2023, stating responsive records for the subject property were not identified.

NYCDEP

VHB submitted a FOIL request to NYCDEP on January 11, 2023. VHB received a response from NYCDEP on January 14, 2023, stating a diligent search for records responsive to the request did not locate such records.

New York City Zoning & Land Use (ZoLa)

The City Planning Commission approved amendments to the New York City Zoning Maps which may include environmental designations of certain tax lots that have physical or historical evidence of uses related to hazardous materials. The "E" designations shown on the zoning maps function as indicators of the environmental review that must be conducted when the lots are developed in accordance with the regulations of the rezoned district. The City Planning Commission's rezoning actions, including environmental designations, were made effective upon the City Council's approval of the Zoning Map Amendment. Based upon a review of the ZoLa database on January 19, 2023, the subject property was not assigned an E-Designation.

New York City Department of Buildings (DOB)

On January 19, 2023, VHB searched for available information on the NYCDOB database. Records identified that the subject property had 28 open DOB violations. The violations include failure to file annual boiler inspection reports, elevator compliance, truck striking a structure, and construction violations between 2010 and 2019.

4.2.2 Nearby Properties

110-00 Rockaway Boulevard, Queens, New York

Since the south adjoining property (Aqueduct Racetrack) was identified in the RCRA-VSQG, NY MANIFEST, NY UST and NY AST databases, and (Shore Shot Transmissions) was identified in the EDR Historic Auto databases, VHB accessed the NYSDEC's online Spill Incident and PBS Databases on January 20, 2023. A review of available information identified Aqueduct Racetrack in the NYSDEC PBS database under ID No. 2-258342 as an active facility with one in-service 4,000-gallon gasoline UST, one in-service 4,000-gallon diesel fuel UST, one in-service 240-gallon waste oil AST, and one in-service 525-gallon diesel fuel AST. Five 550-gallon diesel-fuel USTs were closed by removal on November 1, 1998, one 250-gallon waste oil UST was closed by removal on October 7, 1999, and two 20,000-gallon fuel oil USTs were closed by removal on October 1, 2008.

Based on the lack of evidence of an on-going release incident or corrective action at the south adjoining property, requests for additional information were not submitted to NYSDEC or NYCDEP.

98-20, 98-21 and 98-31 Linden Boulevard, Queens, New York

Since the west adjoining property was identified in the EDR Historic Auto and NY AST databases, VHB accessed the NYSDEC's online Spill Incident and PBS Databases on January 20, 2023. A review of available information identified Mo Auto Repair, Inc. in the NYSDEC PBS database under ID No. 2-609480 for one closed by removal 275-gallon

waste oil AST on December 11, 2006. Based on the lack of evidence of an on-going release incident or corrective action, requests for additional information were not submitted to NYSDEC or NYCDEP.

135-36 and 135-38 Centerville Street, Queens, New York

Since the west adjoining property was identified in the FINDS, ECHO, NY MANIFEST, RCRA NonGen/LNR, NY AST and NY SPILLS databases, VHB accessed the NYSDEC's online Spill Incident and PBS Databases on January 20, 2023. A review of available information identified Sonny's Auto Service in the NYSDEC PBS database under ID No. 2-610164 for one closed by removal 550-gallon gasoline AST on December 15, 2006.

The west adjoining property (Former Auto Body Shop) was identified in the NYSDEC Spill Incident database under ID No. 0513162 for an unknown amount of gasoline spilled on February 15, 2006, affecting the groundwater. NYSDEC subsequently closed the spill case on March 31, 2006. Based on the lack of evidence of an on-going release incident or corrective action at the west adjoining property, requests for additional information were not submitted to NYSDEC or NYCDEP.

137-32 Centerville Street, Queens, New York

Since the southwest adjoining property was identified in the EDR Historic Auto and NY UST databases, VHB accessed the NYSDEC's online Spill Incident and PBS Databases on January 20, 2023. A review of available information identified Frank Isopo Operating Corp. in the NYSDEC PBS database under ID No. 2-085731 for one closed-in-place 3,300-gallon gasoline UST on February 1, 1998. Based on the lack of evidence of an on-going release incident or corrective action at the west adjoining property, requests for additional information were not submitted to NYSDEC or NYCDEP.

106-14 Rockaway Boulevard, Queens, New York

The north nearby property located 0.07 miles upgradient of the subject property was identified in the EDR Historic Cleaner database as a "Dry Cleaning Facility" between 2000 and 2009. Based on a review of NYSDEC's online Spill Incident and PBS Databases accessed on January 20, 2023, records for the north nearby property were not identified. Based on the lack of evidence of an on-going release incident or corrective action at the north nearby property, requests for additional information were not submitted to NYSDEC or NYCDEP.

4.2.3 Property Records

VHB accessed the NYCDOF's Automated City Register Information System (ACRIS), available at http://a836-acris.nyc.gov/CP/, to locate deed information for the subject property. The table below summarizes the available deed information for the subject property. The ACRIS search results and the most recent deeds are provided in **Appendix E.**

110-00 Rockaway Boulevard, Block 11543, Lot 2

Grantor	*Grantee*	*Deed Date*
New York Racing Assn Inc.	Port Authority NY	February 11, 1992
New York Racing Assn Inc.	Home Depot USA Inc.	December 17, 1992
The New York Racing Association Inc.	The People of the State of New York	September 12, 2008

4.3 Prior Environmental Investigations

VHB requested copies of prior environmental documents for the subject property, as available. Documentation regarding prior environmental investigations at the subject property was not provided.

4.4 Historical Use Information

VHB reviewed the historical use information for the subject property and nearby properties for conditions that have the potential to environmentally impact the subject property.

4.4.1 Sanborn® Fire Insurance Maps (Sanborns)

Sanborn maps are a uniform series of large-scale detailed maps, dating from 1867, that depict the commercial, industrial, and residential sections of cities. These maps historically assisted fire insurance agents in determining the degree of hazard associated with a particular property. Sanborn maps are currently used to track the changing landscape and property uses.

EDR was engaged to provide historical Sanborn maps of the subject and adjacent properties. VHB performed a review of historical Sanborn maps available from EDR (1901, 1911, 1927, 1950, 1963, 1970, 1982, 1986, 1988, 1989, 1991, 1992, 1993, 1994, 1995, 1999, 2001, 2002, 2003, 2004, 2005, and 2006) to identify information regarding past uses of the subject property and surrounding properties to determine if historical usage represented an environmental risk. The Sanborn maps for the year 1970 was not used in the summary below due to insufficient information. The following is a summary of information provided within the aforementioned Sanborn maps.

Summary of Sanborn Maps

Year(s)	Description	
1901	Subject Property:	The subject property appears developed with several one and two-story structures identified as "Grandstand, Betting Shed, Member Club, and Queens County Jockey Club – Aqueduct Racecourse".
	Surrounding Area:	The "New York and Rockaway Beach Railroad" is depicted adjacent to the west of the subject property. Residential dwellings are depicted to the south and west of the subject property.

Year(s)	Description	
1911, 1927	Subject Property:	The subject property appears similar to the 1901 Sanborn map.
	Surrounding Area:	Residential development is depicted to the south and to the west of the subject property.
1950	Subject Property:	The subject property appears developed with its present-day three-story structure identified as "Queens County Jockey Club – Aqueduct Racecourse – Built in 1941".
	Surrounding Area:	The "Long Island Railroad" is depicted adjacent to the west of the subject property. The Aqueduct Racetrack is depicted to the east of the subject property.
1963, 1982, 1986, 1988, 1989, 1991, 1992, 1993, 1993, 1994, 1995, 1999, 2001, 2002, 2003, 2004, 2005, 2006	Subject Property:	The subject property appears similar to the 1950 Sanborn Map; however, an additional one-story structure identified as "Club" is depicted. A parking lot is depicted adjacent to the west of the "Club".
	Surrounding Area:	Residential development is depicted to the north and to the west of the subject property. The Aqueduct Racetrack is depicted to the east of the subject property.

The Sanborn Maps are provided in **Appendix F.**

4.4.2 Aerial Photography

Aerial photographs of the subject property and vicinity for the years 1924, 1951, 1954, 1962, 1966, 1975, 1976, 1980, 1985, 1994, 2006, 2011, 2015 and 2019 were obtained from EDR and reviewed and summarized below. The aerial photograph for the year 1976 was not used in the summary below due to poor resolution quality.

Year(s)	Description	
1924	Subject Property:	The subject property appears developed with several structures and agricultural fields.
	Surrounding Area:	The east adjoining property appears developed with a racetrack. The present-day railroad track is visible to the west of the subject property. The north and west adjoining properties appear developed with agriculture fields and residential dwellings. The south adjoining property appears developed with a structure that is connected to the railroad track. The present-day location of Rockaway Boulevard is visible to the north of the subject property.
1951, 1954	Subject Property:	The subject property is depicted with several structures in the northern and western portions of the property.
	Surrounding Area:	Residential developments are visible to the north and to the west of the subject property. The south adjoining property appears redeveloped with four new structures. The racetrack visible on the east adjoining property appears redeveloped.
1962, 1966,	Subject	The subject property appears developed with one of its present-day buildings and

Year(s)	Description	
1975, 1980, 1985, 1994, 2006	Property: Surrounding Area:	in its current configuration. The south adjoining property appears developed with its present-day building and parking lot. The remaining adjoining properties appear similar to the 1954 aerial photograph.
2011, 2015	Subject Property: Surrounding Area:	The subject property appears similar to the 2006 aerial photograph; however, the present-day Aqueduct Road and parking garage are visible. The remaining adjoining properties appear similar to the 2006 aerial photograph.
2019	Subject Property: Surrounding Area:	The subject property appears similar to the 2015 aerial photograph; however, an addition to the existing structure is visible along the western façade. The subject property parking lots are visible in their present-day configuration. The remaining adjoining properties appear similar to the 2015 aerial photograph. .

The Aerial Photographs are provided in **Appendix G.**

4.4.3 Topographic Maps

VHB obtained historical U.S. Geological Survey (USGS) topographic maps from EDR to further evaluate site history. Topographic maps of the subject property and vicinity for the years 1897, 1898, 1900, 1947, 1957, 1966, 1979, 1994, 2013, 2016 and 2019 were reviewed. The maps were examined to determine development and construction on the subject property. The topographic maps are described as follows:

Year(s)	Description	
1897, 1898, 1900	Subject Property: Surrounding Area:	The subject property is depicted with several structures in the northeast portion of the property and one structure along the western boundary of the property. The Long Island Railroad is depicted along the southwest boundary of the subject property. The Aqueduct Racetrack is depicted on the east adjoining property. The present-day location of Rockaway Boulevard is depicted along the northern boundary of the subject property.
1947	Subject Property: Surrounding Area:	The subject property is depicted with structures in the southwest and northern portions of the property. The adjoining properties to the north and to the west are shaded black, indicating developed land. The south and east adjoining properties appear similar to the 1900 Topographic map.
1957	Subject Property: Surrounding Area:	The subject property appears similar to the 1947 Topographic map; however, a structure is now depicted in the southeast portion of the property. The north and west adjoining properties are shaded pink, indicating densely developed land. The south adjoining property is depicted with a structure. The east adjoining property appear similar to the 1947 Topographic map.
1966, 1979, 1994	Subject Property: Surrounding Area:	The subject property appears similar to the 1957 Topographic map; however, its present-day structure is depicted. The north and west adjoining properties are shaded pink, indicating densely developed land. The south adjoining property appears undeveloped. The east

Year(s)	Description	
		adjoining property is depicted with a redeveloped "Aqueduct Racetrack".
2013, 2016, 2019	Subject Property: Subject Property:	With the exception of schools, hospitals, police stations, fire stations, and post offices, developed land use, including structures, is not depicted on the topographic maps. The subject property is shaded white, indicating developed land. The adjoining properties are shaded white indicating developed land.

Summary of Topographic Maps

Copies of the topographic maps are provided in **Appendix H.**

4.4.4 City Directory Abstract

The City Directory Abstract provided by EDR was reviewed; the provided address and owner or business name information from available City Directory data for the subject property and general surrounding area including adjoining properties. City Directory reports for the subject property and surrounding properties were provided for the years 1934 through 2017. Since the subject property consists of a 60.27-acre portion of land located at 110-00 Rockaway Boulevard, the EDR City Directory listings provided for this address refer to the subject property and the south adjoining property. On-site and adjoining property listings identified from the directories have been summarized below.

110-00 Rockaway Boulevard	Year(s)	Source
Sam Houston Race Park, Tri-State Grey Hound Park, The Woodlands, and Southland Grey Hound Park.	1999	Cole Information Services
Interstate Ind Corp, Hoosier Park Ltd, Richard Dutrow Jr, Dryland Grey hound Park, Nebraska HBPA, Aqueduct Raceway, Way Off Track Betting, and The Woodlands.	2000	
Aqueduct Raceway, Richard Demolla, Richard Dutrow.	2005	Hill-Donnelly Information Services
Everest Broadband, Rudy Rodriguez, New York Racing Association Inc, Amtote International, and Resorts World Casino.	2014	Cole Information Services
Network Infrastructure Inc, Everest Broadband, Five Star Electric, New York Racing Association Inc, Amtote International, Aqueduct Raceway, and Resorts World Casino.	2017	

The north adjoining property at 110-19 Rockaway Boulevard identified commercial tenant (Ozone Park Animal Clinic) in 2014 and 2017. The north adjoining property at 110-01 Rockaway Boulevard was identified commercial tenants (Rex Pharmacy) in 1934 and (Kittys Beauty Salon) in 1967. Residential tenants were identified at 110-05, 110-11, 110-15, and 110-19 Rockaway Boulevard between 1967 and 2017.

The remaining adjoining property addresses were not researched by EDR. A copy of the EDR-City Directory Abstract is provided in **Appendix I**.

4.5 Summary of Historical Use Documentation

According to the historical data review, the subject property was first developed by at least 1897 with several structures in the northeast portion of the property and one structure along the western boundary of the property. By at least 1901, the subject property was identified as "Grandstand, Betting Shed, Member Club, and Queens County Jockey Club – Aqueduct Racecourse". By at least 1962, the subject property was developed with one of its present-day buildings. By at least 2011, the subject property is developed with its present-day structures.

The east adjoining property was developed with a "Racetrack" by at least 1897 and remained through at least 2017.

The north adjoining properties were first developed with agriculture fields and residential dwellings by at least 1924. Residential tenants were identified at 110-05, 110-11, 110-15, and 110-19 Rockaway Boulevard between 1967 and 2017.

The west adjoining property is developed with the "Long Island Railroad" by at least 1901. By at least 1911, a residential development is depicted.

The south adjoining property was first developed with a structure by at least 1924 and redeveloped with four new structures by at least 1951. By at least 1962, the present-day building and parking lot was developed. A commercial tenant identified as "Shore Shot Transmissions" was identified at the subject adjoining property in 2005.

4.6 Vapor Migration

VHB utilized the information listed for the properties identified in the federal and state database search, aerial photographs, and/or Sanborn maps to evaluate the migration potential of hazardous substances or petroleum products in subsurface vapor. These resources assisted in the evaluation of potential vapor migration on the subject property or to the subject property from surrounding properties that are or may be engaged in storage, handling, or usage of petroleum products and hazardous materials. Please note that an investigation per ASTM E 2600-10 was not conducted as part of this Phase I ESA.

- According to the historical data review, the subject property was first developed with structures by least 1897. Supporting documentation regarding the former heating source(s) of the former structures was not identified or provided to VHB; therefore, the potential exists for UST(s) to have been present at the subject property and represents a potential source of on-site vapor migration.
- According to the historical data review, the north nearby property at 106-14 Rockaway Boulevard is located 0.07 miles upgradient of the subject property and was identified as a "Dry Cleaning Facility" between 2000 and 2009. Therefore, the historic operations at the north nearby property represent a potential source of off-site vapor intrusion impact.

- According to the historical data review, the south adjoining property (Shore Shot Transmissions and Aqueduct Racetrack) was identified as an automotive transmission repair shop between 2005 and 2008 and in the NY UST and NY AST databases under NYSDEC PBS ID No. 2-258342 as an active facility with one in-service 4,000-gallon gasoline UST, one in-service 4,000-gallon diesel fuel UST, one in-service 240-gallon waste oil AST, and one in-service 525-gallon diesel fuel AST. Five 550-gallon diesel-fuel USTs were closed by removal on November 1, 1998, one 250-gallon waste oil UST was closed by removal on October 7, 1999, and two 20,000-gallon fuel oil USTs were closed by removal on October 1, 2008. The closure documentation for the USTs removed were not provided to VHB. The handling, storage, and/or disposal of materials and substances used during the historic and current operations are unknown. Therefore, the historic and current operations at the south adjoining property represents a potential source of off-site vapor intrusion impact.
- According to the historical data review, the west adjoining property at 98-20, 98-21 and 98-31 Linden Boulevard operated as a gasoline service station between 1969 and 1994, and a general automotive repair shop between 1994 and 2014. The handling, storage, and/or disposal of materials and substances used during the historic operations are unknown. Therefore, the historic operations at the west adjoining property represents a potential source of off-site vapor intrusion impact.
- According to the historical data review, the west adjoining property at 135-36 and 135-38 Centerville Street was identified as "Sonny's Auto Service" and registered as a historic generator of ignitable waste between 1986 and 2007 and identified in the NYSDEC Spill Incident database under ID No. 0513162 for an unknown amount of gasoline spilled on February 15, 2006, affecting the groundwater. NYSDEC subsequently closed the spill case on March 31, 2006. The handling, storage, and/or disposal of materials and substances used during the historic operations are unknown. Therefore, the historic operations at the west adjoining property represents a potential source of off-site vapor intrusion impact.
- According to the historical data review, the southwest adjoining property at 137-32 Centerville Street was identified as a gasoline service station between 1976 and 2001, and as a general automotive repair shop between 1992 and 1993. The handling, storage, and/or disposal of materials and substances used during the historic operations are unknown. Therefore, the historic operations at the southwest adjoining property represents a potential source of off-site vapor intrusion impact.
- The subject property is unlikely to be impacted by vapor migration from the remaining off-site adjoining properties, as no open spill cases, releases of hazardous substances and/or petroleum products were documented to date. However, the potential for vapor migration may exist from unknown or unclassified sources on site and/or upgradient or side gradient of the subject property.

5

Field Reconnaissance

5.1 Methodology and Limiting Conditions

The field reconnaissance involved inspecting reasonably accessible areas and did not involve subsurface investigations, investigations under debris piles, asphalt paving, gravel-covered areas, or other areas that could not be reasonably inspected without the use of specialty equipment such as heavy machinery or geophysical probing devices.

VHB conducted the field reconnaissance on January 17 and 19, 2023. VHB was accompanied by Mr. Andy Sorocco and Mr. Joe Insalaco, representatives of Resorts World Casino during the field inspection. At the time of the field reconnaissance, equipment and materials stored throughout both buildings limited VHB's ability to observe portions of the floor surface. VHB did not have access to the generator room at the Resorts World Casino and the hotel rooms at the Hyatt Regency; therefore, an inspection of these areas was not conducted during the field reconnaissance. A manhole was observed in a hallway of the Hyatt Regency basement. The use of the manhole is reportedly unknown and was unable to be opened at the time of the inspection. A pit and steel plate were observed along the western boundary of the subject property. The use of the pit is reportedly unknown and was unable to be opened at the time of the inspection. VHB did not have access inside a metal storage container observed along the western boundary of the subject property.

VHB's site observations of exterior portions of the subject property and information obtained at the time of the field reconnaissance are presented in the following sections. Photographs taken during the field reconnaissance are provided in **Appendix J**.

Observation	Observed or Suspected
Areas of product storage and use / Drums / Hazardous Substance and Petroleum Products Containers	VHB observed several 55-gallon plastic and metal drums containing hydraulic oil, engine oil and unknown contents in the boiler/mechanical room, the elevator rooms, and in the mechanical yard of the Resorts World Casino. All drums were observed in good condition and staining was not observed in the vicinity of the drums. In Flammable storage cages were observed in the mechanical yard containing several plastic gasoline containers.
Aboveground Storage Tanks (ASTs)	Three hydraulic oil ASTs associated with the freight elevators were observed in the Resorts World Casino basement. Three 6,000-gallon diesel fuel ASTs associated with back-up generators were observed east of the Resorts World Casino parking garage. Several ASTs of unknown contents were observed in the fire suppression room.

Observation	Observed or Suspected
Underground Storage Tanks (USTs)	VHB observed five vent-pipes within the Hyatt Regency loading dock and one vent-pipe adjacent to the fire protection boxes and hydrants along the western property boundary. Based on information provided by Resorts World, the vent pipes located in the loading dock are utilized as part of the septic sewer system and the vent pipe located adjacent to the fire protection boxes is utilized as part of the hydrant system.
Odors	None Detected.
Unidentified Substance Containers	VHB observed several 55-gallon drums of unknown contents in the mechanical room of the Resorts World Casino and in the mechanical yard. The drums were observed in good condition and stored on a spill containment pallet.
Transformers and any identified PCB-containing equipment	VHB observed four transformers in the mechanical yard. The transformers were located on a concrete slab and no staining was observed.
Heating/Cooling systems	Heat is supplied to the Resorts World Casino by a forced-air system fed by three gas-fired high-pressure boilers. Heat is supplied to the Hyatt Regency by a forced-air system fed by five gas-fired condensing boilers. Both buildings contained HVAC equipment on the roof, which cools the buildings.
Interior stains or corrosion	Not observed.
Interior drains, sumps, and below grade conveyances	Floor drains were observed in the janitors' closets, bathrooms and kitchens in both the buildings. A below grade pit was observed in the basement of the Hyatt Regency, which is reportedly used for spent grease. A sub-grade pit was observed adjacent to the fire protection boxes and hydrants along the western property boundary.
Exterior pits/ponds/lagoons	Not observed.
Stained soil or pavement	Not Observed.
Stressed vegetation	Not Observed.
Evidence of solid waste disposal on the subject property	The Resorts World Casino and the Hyatt Regency manage their facility's trash separately. Both facilities collect, compact, and outsource their trash to the City of New York Department of Sanitation (DSNY) at designated loading docks.
Evidence of fill materials	Not Observed.
Wastewater discharges	Not Observed.
Potable Water Supply	Potable water wells were not observed at subject property.
Wells	Not Observed.
Septic systems	Not Observed.
Evidence of spills/releases	Not Observed.
Hazardous waste	Not Observed.
Non-Hazardous waste	Not Observed.
Air Emissions	Not Reported.
Adjoining Properties	Adjoining properties were observed to have good housekeeping practices in use upon initial observation. Residential properties were observed to the north and to the west of the subject property. The MTA railroad station was observed to the west of the subject property and the New York Racing Association (NYRA) was observed to the south and to the east of the subject property.

Conditions observed in the table above are further discussed in the sections below.

5.2 Utilities

Heat is supplied to Resorts World Casino via forced-air systems which is fed by three gas-fired high-pressure boilers located in the mechanical room basement. Heat is supplied to the Hyatt Regency via forced-air systems which is fed by five gas-fired condensing boilers located along the east exterior façade of the building. Gas-Service is supplied to the subject property by National Grid. Municipal water and sewer services are provided by the municipality's NYC Department of Environmental Protection (NYCDEP).

5.3 Exterior Observations and Surface Conditions

The subject property encompasses 60.27-acres of land and is located in an urban area characterized by mixed-use development. The subject property is developed with two commercial buildings, Hyatt Regency Hotel and the Resorts World Casino. Asphalt-paved parking lots were observed in the northern and western portions of the subject property. A six-level parking garage was observed to the north of Resorts World Casino.

The northern boundary of the subject property connects to Rockaway Boulevard and a residential neighborhood. The eastern boundary of the subject property connects to the NYRA Aqueduct Racetrack. The southern boundary of the subject property connects to a parking lot and the NYRA Aqueduct building. The western boundary of the subject property connects to the MTA Railroad Station and a residential development.

5.4 Interior Observations

The Hyatt Regency Hotel's main entrance was located on the west side of the building. A restaurant, Sugar Factory, and a former ice cream parlor was located near the main entrance of the Hotel. The Hotel contained a basement floor, a main floor/lobby area, and eight floors containing hotel guest rooms. The basement floor contained janitors' closets, a laundry collection area, and multiple storage rooms for building operation and maintenance. The main floor contained the hotel lobby, three kitchens and a loading dock. Each of the eight guest room floors consisted of hotel rooms, an ice maker, and a janitor's closet. The building's HVAC units and elevator electrical equipment was located on the Hotel's roof.

The Resorts World Casino was accessible from an entrance located on the western side of the building, behind the Hyatt Regency Hotel, as well as the skybridge, which connects directly to the Aqueduct Racetrack MTA Station. The Resorts World Casino contained a basement and three floors. The basement floor contained two elevator rooms, two loading docks, a staff kitchen and cafeteria, a boiler/mechanical room, and a woodshop. The remaining space was used for management and building operations. The first and second floors were used for gambling. Both levels contained a bar centered in the middle of the floors. The first floor also contained a cafeteria area which was comprised of six fast food restaurants. The third floor was used for open events. The building's HVAC units were located on the Casino's roof.

6

Conclusions

VHB performed a Phase I ESA in general conformance with the scope and limitations of ASTM E 1527-13 for the 60.27-acre portion of the subject property located at 110-00 Rockaway Boulevard (Block 11543, Lot 2) in Jamaica, Queens County, New York. As per ASTM E 1527-13, the following "nonscope considerations" were not included in this evaluation: ACMs, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, LBP, lead in drinking water, mold, radon, regulatory compliance, and wetlands. Since ASTM E 1527-13 does not require that these inspections be conducted, said inspections were not performed as part of this Phase I ESA. This Phase I ESA revealed the following:

6.1 Recognized Environmental Conditions (RECs)

Based on the Phase I ESA, the following RECs were identified:

6.1.1 REC No. 1 – Adjoining Properties

According to the historical data review, the south adjoining property (Shore Shot Transmissions and Aqueduct Racetrack) was identified as an automotive transmission repair shop between 2005 and 2008 and in the NY UST and NY AST databases under NYSDEC PBS ID No. 2-258342 as an active facility with one in-service 4,000-gallon gasoline UST, one in-service 4,000-gallon diesel fuel UST, one in-service 240-gallon waste oil AST, and one in-service 525-gallon diesel fuel AST. Five 550-gallon diesel-fuel USTs were closed by removal on November 1, 1998, one 250-gallon waste oil UST was closed by removal on October 7, 1999, and two 20,000-gallon fuel oil USTs were closed by removal on October 1, 2008. The west adjoining property at 98-20, 98-21 and 98-31 Linden Boulevard operated as a gasoline service station between 1969 and 1994, and a general automotive repair shop between 1994 and 2014. The west adjoining property at 135-36 and 135-38 Centerville Street was identified as "Sonny's Auto Service" and registered as a historic generator of ignitable waste between 1986 and 2007 and identified in the NYSDEC Spill Incident database under ID No. 0513162 for an unknown amount of gasoline spilled on February 15, 2006, affecting the groundwater. NYSDEC subsequently closed the spill case on March 31, 2006. The southwest adjoining property at 137-32 Centerville Street was identified as a gasoline service station between 1976 and 2001, and as a general automotive repair shop between 1992 and 1993. The handling, storage, and/or disposal of materials and substances used during the historic operations at the adjoining properties are unknown. Therefore, the historic operations at the adjoining properties represent a potential source of impact to the subsurface.

6.1.2 REC No. 2 – North Nearby Property

According to the historical data review, the north nearby property at 106-14 Rockaway Boulevard is located 0.07 miles upgradient of the subject property and was identified as a "Dry Cleaning Facility" between 2000 and 2009. Therefore, the historic operations at the north nearby property represent a potential source of off-site impact to the subsurface.

Additional investigation is recommended to investigate the aforementioned RECs.

6.2 Business Environmental Risks (BERs)

The following business environmental risk represents a condition at the subject property that may have an environmentally driven impact on the current or planned use of the subject property but does not constitute an REC or de minimis condition as defined in the Standard. However, it is the Environmental Professional's opinion that this item should be considered when making decisions regarding the subject property.

6.2.1 BER No. 1 - Urban Historic Fill

Based upon the soil classification for the subject property, the potential exists for urban historic fill to be present beneath the subject property. Urban historic fill is commonly found throughout the New York City metropolitan area and can contain contaminants such as heavy metals and semi-volatile organic compounds. If identified, and required to be removed from the subject property, appropriate transportation and disposal/recycling procedures should be followed.

6.2.2 BER No. 2 - Historic Agricultural Use

Based upon a review of historical aerial photographs, the subject property was utilized as agricultural fields from at least 1924 through 1954. Therefore, the potential exists for pesticides, arsenic, and/or lead to have been used on the subject property. A soil investigation should be conducted at the discretion of the owner or other interested party if a change in use for the Site is planned.

6.3 Controlled Recognized Environmental Condition (CREC)

Based upon the findings of this Phase I ESA, CRECs were not identified.

6.4 Historic Recognized Environmental Condition (HREC)

Based upon the findings of this Phase I ESA, HRECs were not identified.

7

Data Gaps and Limitations

Other than those limitations expressly provided in **Appendix A** and/or specified herein, completion of this Phase I ESA was not subject to significant assumptions, limitations, or exceptions to the Standard.

7.1 Data Gaps and Limitations

VHB identified the following data gaps during the preparation of this Phase I ESA:

- At the time of the field reconnaissance, equipment and materials stored throughout both buildings limited VHB's ability to observe portions of the floor surface.
- VHB did not have access to the generator room at the Resorts World Casino and the hotel rooms at the Hyatt Regency; therefore, an inspection of these areas was not conducted during the field reconnaissance.
- A manhole was observed in a hallway of the Hyatt Regency basement. The use of the manhole is reportedly unknown and was unable to be opened at the time of the inspection.
- A pit and steel plate were observed along the western boundary of the subject property. The use of the pit is reportedly unknown and was unable to be opened at the time of the inspection.
- VHB did not have access inside a metal storage container observed along the western boundary of the subject property.
- Title and deed information was requested; however, title/deed information had not been provided by the time of report preparation.
- The site address of 100-00 Rockaway Boulevard was used for database searches and records requests. This address may also be associated with the south adjoining property (NYCRA Building), and it is unclear if some of the records identified were associated with the 60.27-acre portion of the subject property.

8

References/Informational Sources

Environmental Data Resources, Inc., Aerial Photo Decade Package, January 11, 2023

Environmental Data Resource, Inc. Radius Map Report with GeoCheck, January 11, 2023

Environmental Data Resources, Inc. Certified Sanborn Map Report, January 12, 2023

Environmental Data Resources, Inc. City Directory Image Report, January 11, 2023

Environmental Data Resources, Inc., Topographic Maps, January 11, 2023

United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey

9

Signature and Qualifications of Environmental Professionals

Environmental Engineer, Emily Rodriguez, conducted the field reconnaissance and Project Manager, Rachael Barr conducted the research and oversaw the completion of this Phase I ESA. Resumes for the environmental professionals are provided in **Appendix K**.

To the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR Part 312 and also meets the specific qualifications based upon education, training, and experience to assess a property as to its nature, history, and setting. We developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

This report has been prepared using information available through government agencies and private contacts at the time of the investigation. Should VHB receive additional information which may alter the characteristics enumerated within this report, VHB reserves the right to revise this report or issue an addendum statement.

This report has been prepared and is respectfully submitted by:

Rachael Barr

July 20, 2023

Rachael Barr
Project Manager/Environmental Scientist

Date

10

List of Acronyms

AAI	All Appropriate Inquires
ACRIS	Automated City Register Information System
ACM	Asbestos Containing Material
AST	Aboveground Storage Tank
ASTM	American Society of Testing and Materials
BER	Business Environmental Risk
CFR	Code of Federal Regulations
CREC	Controlled Recognized Environmental Condition
EDR	Environmental Data Resources, Inc
ESA	Environmental Site Assessment
FINDS	Facility Indexing System
FOIL	Freedom of Information Law
HREC	Historic Recognized Environmental Condition
LBP	Lead-based Paint
LQG	Large Quantity Generator
NYCDEP	New York City Department of Environmental Protection
NYCDOB	New York City Department of Buildings
NYCDOF	New York City Department of Finance
NYSDEC	New York State Department of Environmental Conservation
PBS	Petroleum Bulk Storage
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
SHWS	State Hazardous Waste Site
SQG	Small Quantity Generator
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VEC	Vapor Encroachment Condition
VOC	Volatile Organic Compound
ZoLa	Zoning and Land Use

Figures

Figure 1 - Subject Property Location Map

20995.01 | Queens, New York

January 19, 2023

110-00 Rockaway Boulevard
Block 11543, Portion of Lot 2
Queens, New York

Figure 2 - Aerial Photograph
20995.01 | Queens, New York

January 19, 2023

110-00 Rockaway Boulevard
Block 11543, Portion of Lot 2
Queens, New York

Figure 3 - Excerpt of New York City Tax Map

20995.01 | Queens, New York

January 19, 2023

0 1,000 2,000 3,000 Feet

110-00 Rockaway Boulevard
Block 11543, Portion of Lot 2
Queens, New York

Figure 4 - Topographic Map

20995.01 | Queens, New York

January 19, 2023

0 1,000 2,000 3,000 Feet

110-00 Rockaway Boulevard
Block 11543, Portion of Lot 2
Queens, New York

Path: \\vhb.com\gis\proj\NewYorkCity\20995.01 South Ozone Park Expan\Project\phase 1\fig 4 - topographic map.aprx (jnappi, 1/19/2023)

Appendix A
Limitations

Limitations

110-00 Rockaway Boulevard, Jamaica, Queens (Block 11543, Lot 2)

Queens County, New York

This report has been prepared for the sole and exclusive use of the Client and the Users. It is subject to and issued in connection with the Agreement and the provisions thereof. Any use or reliance upon information provided in this report, without the specific written authorization of the Client and VHB, shall be at the User's sole risk. VHB assumes no liability for use of this report by any person or entity other than the Client, for which it was prepared. Any potential future user of this document would be subject to VHB approval and such user's reliance on this document would be in accordance with the terms and conditions of the original contract.

In conducting this assessment, VHB has obtained and relied upon information from multiple sources to form certain conclusions regarding potential environmental issues at and in the vicinity of the Site. Except as otherwise noted, no attempt has been made to verify the accuracy or completeness of such information.

The objectives of the assessment described in this report were to assess the physical characteristics of the Site with respect to overt evidence of past or present use, storage, and/or disposal of oil or hazardous materials, as defined in applicable state and federal environmental laws and regulations, and to gather information regarding current and past operations and environmental conditions at and in the vicinity of the Site.

Where access was denied or conditions obscured, VHB makes no report on such areas.

No attempt has been made to assess the compliance status of any past or present Owner or Operator of the property with any federal, state, or local laws or regulations.

The findings, observations, and conclusions presented in this report are limited by the scope of services outlined in our Agreement, which reflects schedule and budgetary constraints imposed, by the Client for the current phase of environmental assessment. Furthermore, the assessment has been performed in accordance with generally accepted engineering practices and standards set forth in ASTM E 1527-13. No other warranty, expressed or implied, is made.

The assessment presented in this report is based solely upon information gathered to date. Should further environmental or other relevant information be developed at a later date, the Client should bring the information to the attention of VHB as soon as possible. Based upon an evaluation, VHB may modify the report and its conclusions.

The Environmental Data Resources, Inc. (EDR) Radius Map with GeoCheck was conducted under the Notice of Disclaimer/Waiver of Liability included in the summary report.

Appendix B
User-Provided Information

USER QUESTIONAIRE[1]

Date: 1/16/23
Property Address: 110-00 ROCKAWAY BLVD. JAMAICA, NY 11420
Questionnaire Completed By (Print Name): EDGAR CHOI
Signature:
Relationship to the Property: SVP DESIGN + CONSTRUCTION
Reason Phase I ESA is Being Performed:

USER SUPPLIED INFORMATION

(1.) Environmental Cleanup liens that are filed or recorded against the Site (40 CFR 312.25).
Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

NONE

(2.) Activity and land use limitations that are in place at the site or that have been filed or recorded in a registry (40CFR 312.26).
Are you aware of any AULs such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal tribal, state or local law?

UNKNOWN

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).
As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemical and processes used by this type of business?

THE EXISTING FACILITY WAS ORIGINALLY THE AQUEDUCT RACETRACK WHERE 2/3 OF THE FACILITY WAS CONVERTED TO A CASINO. THE TWO OPERATIONS WOULD NOT HAVE SPECIAL KNOWLEDGE OF CHEMICAL PROCESSES.

[1] In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments") the User must provide the above-listed information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

(4.) Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

UNKNOWN

(5.) Commonly known or reasonable ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example as user:

(a.) Do you know the past uses of the property?

PROPERTY WAS THE AQUEDUCT RACETRACK CONVERTED INTO CASINO, OFFICE SPACE, AND EVENT SPACE

(b.) Do you know the specific chemicals that are present or once were present at the property?

UNKNOWN

(c.) Do you know of spills or other chemical releases that have taken place at the property?

NONE

(d.) Do you know of any environmental cleanups that have taken place at the property?

UNKNOWN

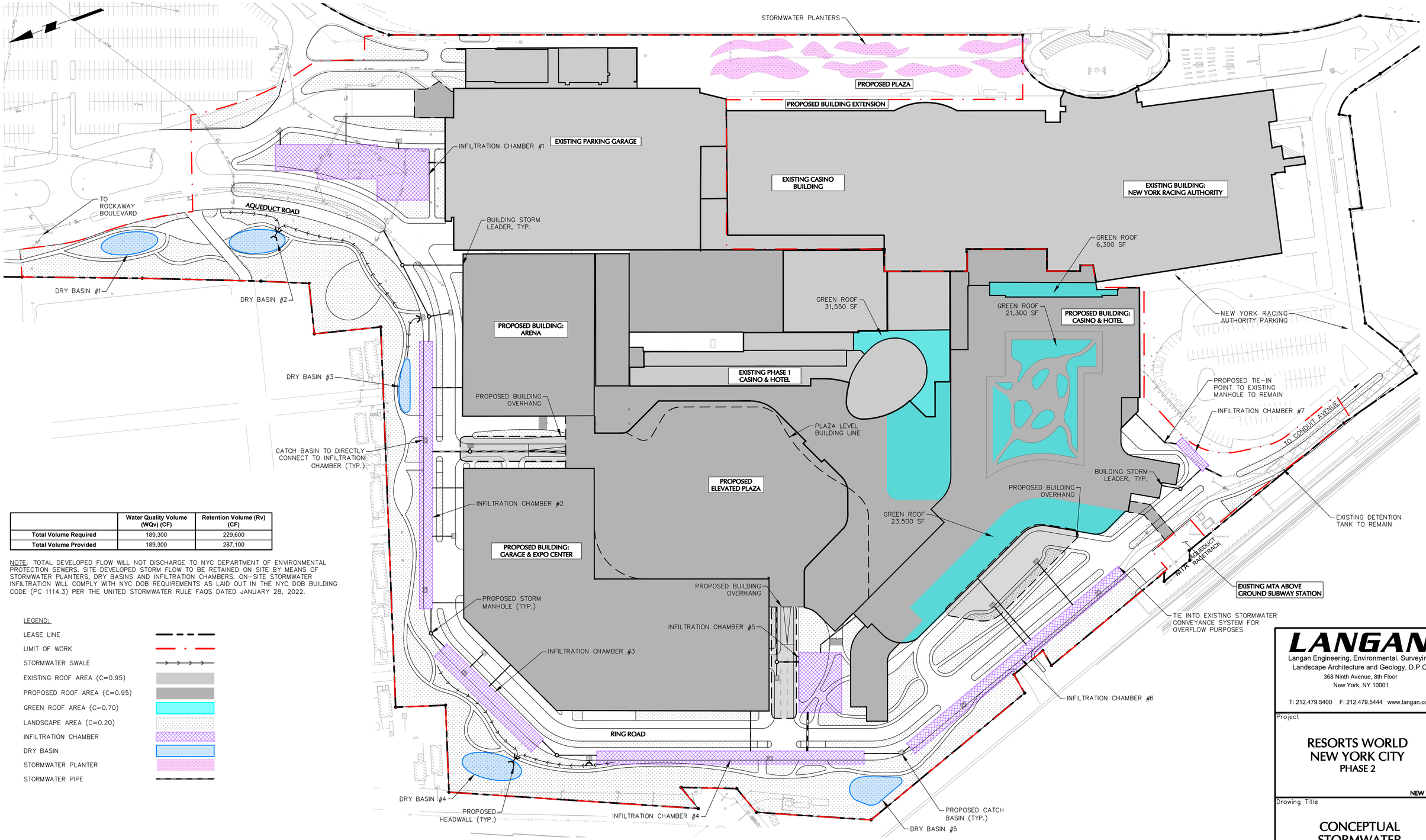
(6.) The degree of obviousness of the presence or likely presence of contamination at the property and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence of likely presence of contamination at the property?

UNKNOWN

NOTE: The Phase I ESA Appendices C through K can be provided upon request.

Appendix C: Conceptual Stormwater Management Plan



PLAN
SCALE: 1" = 80'

80 0 40 80
SCALE: 1 INCH = 80 FEET

	Water Quality Volume (WQv) (CF)	Retention Volume (Rv) (CF)
Total Volume Required	189,300	229,600
Total Volume Provided	189,300	287,100

NOTE: TOTAL DEVELOPED FLOW WILL NOT DISCHARGE TO NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION SEWERS. SITE DEVELOPED STORM FLOW TO BE RETAINED ON SITE BY MEANS OF STORMWATER PLANTERS, DRY BASINS AND INFILTRATION CHAMBERS. ON-SITE STORMWATER INFILTRATION WILL COMPLY WITH NYC DOB REQUIREMENTS AS LAID OUT IN THE NYC DOB BUILDING CODE (PC 1114.3) PER THE UNITED STORMWATER RULE FAQS DATED JANUARY 28, 2022.

LEGEND:

- LEASE LINE
- LIMIT OF WORK
- STORMWATER SWALE
- EXISTING ROOF AREA (C=0.95)
- PROPOSED ROOF AREA (C=0.95)
- GREEN ROOF AREA (C=0.70)
- LANDSCAPE AREA (C=0.20)
- INFILTRATION CHAMBER
- DRY BASIN
- STORMWATER PLANTER
- STORMWATER PIPE

GENERAL NOTES:

1. BACKGROUND INFORMATION SHOWN FROM SURVEY PROVIDED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE, AND GEOLOGY, D.P.C. PER PLAN TITLED "TOPOGRAPHIC SURVEY" LAST UPDATED 05/27/2021.
2. ADDITIONAL DRAINAGE, SITE, AND UTILITY INFORMATION SHOWN FROM PLANS PROVIDED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE, AND GEOLOGY, D.P.C. PER PLANS UNDER PROJECT OGS 3 SB835 – RCWCNYC HOTEL EXPANSION.
3. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. ARCHITECTURAL BACKGROUNDS SHOWN FROM ARCHITECTURAL PLANS PROVIDED BY PERKINS EASTMAN DATED 06/14/2024.

INFILTRATION CHAMBER NOTES:

1. GROUNDWATER LEVEL IS ASSUMED TO BE 10-FT BELOW GRADE. TO MEET NYC DEP REQUIREMENTS, THE BOTTOM OF GRAVEL IS ASSUMED TO BE 6-FT BELOW GRADE.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
368 Ninth Avenue, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project
RESORTS WORLD NEW YORK CITY
PHASE 2
NEW YORK

Drawing Title
CONCEPTUAL STORMWATER MANAGEMENT PLAN

Project No.	170433101
Date	04/23/2024
Drawn By	JY/DC
Checked By	CD

CSK-104

Sheet 5 of 7

Appendix D: Con Edison Service Letter

Brooklyn/Queens Major Services
30 Flatbush Ave.
Brooklyn, NY 11217

October 23, 2024

RE: Service availability
110-00 Rockaway Boulevard
MC-781125

Resorts World

Dear Andy Dorman,

We have reviewed your request to add additional service for new proposed area at 110-00, Rockaway Boulevard. Con Edison engineering has concluded we can accommodate the additional loads needed. If you have any questions please feel free to reach me at the below email address.

Sincerely,

Frederick Faust
Queens Manager (500)
BQ Energy Services
30 Flatbush Ave, Brooklyn
Email: FaustF@coned.com

Appendix E: SHPO Findings Statement

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

January 26, 2023

David Velez
Senior Environmental Project Planner
VHB
One Penn Plaza
Suite 715
New York, NY 10019

Re: OGS
Resorts World Casino Expansion
110-00 Rockaway Boulevard, South Ozone Park, NY 11420
16PR06744

Dear David Velez:

Thank you for continuing to consult with the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

We have reviewed your letter dated January 5th, 2023, as well as the supporting documentation illustrating the modification in scope, provided to our office on January 5th, 2023. Based upon our review, it is OPRHP's opinion that the proposed project continues to have no impact to archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places.

If you have any questions, I am best reached via e-mail.

Sincerely,

Olivia Brazee
Historic Site Restoration Coordinator
olivia.brazee@parks.ny.gov

cc: C. Dunderdale, OGS via e-mail only

Appendix F: Construction Noise Details Assumptions and Results

List of Tables

Construction Equipment by Quarter of Analysis

Table A-1 Construction Equipment by Quarter of Analysis – 2026

Equipment Type	Max Sound Level at 50 feet ($L_{max,}$ dBA)	Usage Factor	Number of Construction Equipment Pieces per Quarter			
			Q1 2026	Q2 2026	Q3 2026	Q4 2026
Grader	85	0.4	2	3	2	1
Excavator	85	0.4	6	9	6	3
Dozer	85	0.4	2	3	2	1
Manlift	85	0.2	1	3	2	1
Dump Truck	84	0.4	12	20	12	8
Crane	85	0.16	0	0	0	0
Concrete Trucks	85	0.4	0	1	1	1
Concrete Pumps	82	0.2	0	0	0	0
Trucks (Average per hour)*	N/A	N/A	2	9	13	12

*Average truck numbers per hour are based on the information provided in **Table 16-1,** assuming a 8-hour work day between 7:00am – 3:00pm

Table A-2 Construction Equipment by Quarter of Analysis – 2027

Equipment Type	Max Sound Level at 50 feet ($L_{max,}$ dBA)	Usage Factor	Number of Construction Equipment Pieces per Quarter			
			Q1 2027	Q2 2027	Q3 2027	Q4 2027
Grader	85	0.4	1	0	1	1
Excavator	85	0.4	3	0	3	4
Dozer	85	0.4	1	0	1	1
Manlift	85	0.2	1	0	0	0
Dump Truck	84	0.4	8	0	8	8

Crane	85	0.16	1	0	0	0
Concrete Trucks	85	0.4	1	1	2	3
Concrete Pumps	82	0.2	0	1	2	3
Trucks (Average per hour)*	N/A	N/A	4	3	3	7
*Average truck numbers per hour are based on the information provided in **Table 16-1,** assuming a 8-hour work day between 7:00am – 3:00pm						

Table A-3 Construction Equipment by Quarter of Analysis – 2028

Equipment Type	Max Sound Level at 50 feet ($L_{max,}$ dBA)	Usage Factor	Number of Construction Equipment Pieces per Quarter			
			Q1 2028	Q2 2028	Q3 2028	Q4 2028
Grader	85	0.4	0	0	0	0
Excavator	85	0.4	1	1	1	1
Dozer	85	0.4	0	0	0	0
Manlift	85	0.2	0	1	1	1
Dump Truck	84	0.4	1	0	0	0
Crane	85	0.16	0	1	2	2
Concrete Trucks	85	0.4	3	3	4	4
Concrete Pumps	82	0.2	3	3	4	4
Trucks (Average per hour)*	N/A	N/A	10	8	12	12
*Average truck numbers per hour are based on the information provided in **Table 16-1,** assuming a 8-hour work day between 7:00am – 3:00pm						

Table A-4 Construction Equipment by Quarter of Analysis – 2029

Equipment Type	Max Sound Level at 50 feet	Usage Factor	Number of Construction Equipment Pieces per Quarter

	($L_{max,}$ dBA)		Q1 2029	Q2 2029	Q3 2029	Q4 2029
Grader	85	0.4	0	0	0	0
Excavator	85	0.4	0	0	0	0
Dozer	85	0.4	0	0	0	0
Manlift	85	0.2	1	1	1	0
Dump Truck	84	0.4	0	0	0	0
Crane	85	0.16	1	1	1	0
Concrete Trucks	85	0.4	1	1	1	0
Concrete Pumps	82	0.2	1	1	1	0
Trucks (Average per hour)*	N/A	N/A	11	10	7	4
*Average truck numbers per hour are based on the information provided in **Table 16-1,** assuming a 8-hour work day between 7:00am – 3:00pm						

Table A-5 Construction Equipment by Quarter of Analysis – 2030

Equipment Type	Max Sound Level at 50 feet ($L_{max,}$ dBA)	Usage Factor	Number of Construction Equipment Pieces per Quarter			
			Q1 2030	Q2 2030	Q3 2030	Q4 2030
Grader	85	0.4	0	0	0	0
Excavator	85	0.4	0	0	0	0
Dozer	85	0.4	0	0	0	0
Manlift	85	0.2	0	0	0	0
Dump Truck	84	0.4	0	0	0	0
Crane	85	0.16	0	0	0	0
Concrete Trucks	85	0.4	0	0	0	0
Concrete Pumps	82	0.2	0	0	0	0
Trucks (Average per hour)*	N/A	N/A	2	1	1	0
*Average truck numbers per hour are based on the information provided in **Table 16-1,** assuming a 8-hour work day between 7:00am – 3:00pm						

Construction Noise Assessment Results

Table A-6 Construction Noise Assessment Results 2026

Receptor ID	Address	Existing Ambient Sound Level ($L_{Aeq,20min}$) dBA	Total Noise Level (Predicted + Existing) $L_{eq,1hr}$ dBA			
			Q1 2026	Q2 2026	Q3 2026	Q4 2026
R1	107th Street	58	67	68	62	59
R2	108th Street	58	63	65	63	60
R3	Sutter Ave	58	64	65	61	60
R4	106th Street	58	68	69	62	59
R5	Sutter Eve	58	64	68	67	61
R6	105 Street	58	68	69	61	59
R7	Centerville Street	58	62	63	60	59
R8	Project Property Line	58	68	69	61	59
R9	Boss Street	58	64	65	65	63
R10	Centerville Street	58	62	63	61	59
R11	Centerville Street	60	69	72	70	63
R12	Peconic Street	60	69	71	70	67
R13	Hawtree Street	60	65	67	67	65
R14	Hawtree Street	60	68	70	69	64
R15	Linden Blvd	60	63	64	63	61
R16	135th Road	60	63	67	67	62
R17	Pitkin Ave	60	69	71	70	65
R18	135th Drive	60	67	69	68	64
R19	Hawtree Street	60	66	68	67	64
R20	Hyatt Regency JFK Airport	60	72	74	70	66

Table A-7 Construction Noise Assessment Results 2027

Receptor ID	Address	Existing Ambient Sound Level ($L_{Aeq,20min}$) dBA	Total Noise Level (Predicted + Existing) $L_{eq,1hr}$ dBA			
			Q1 2027	Q2 2027	Q3 2027	Q4 2027
R1	107th Street	58	59	58	59	59
R2	108th Street	58	60	58	60	60
R3	Sutter Ave	58	59	58	58	58
R4	106th Street	58	59	58	59	59
R5	Sutter Eve	58	58	58	59	59
R6	105 Street	58	59	58	59	59
R7	Centerville Street	58	58	58	58	58
R8	Project Property Line	58	58	58	59	59
R9	Boss Street	58	58	58	61	61
R10	Centerville Street	58	58	58	59	59
R11	Centerville Street	60	60	60	62	62
R12	Peconic Street	60	61	60	68	68
R13	Hawtree Street	60	66	61	68	68
R14	Hawtree Street	60	68	62	70	70
R15	Linden Blvd	60	62	60	62	62
R16	135th Road	60	67	61	67	67
R17	Pitkin Ave	60	68	62	68	69
R18	135th Drive	60	66	61	68	68
R19	Hawtree Street	60	67	61	68	68
R20	Hyatt Regency JFK Airport	60	80	71	75	75

Table A-8 Construction Noise Assessment Results 2028

Receptor ID	Address	Existing Ambient Sound Level ($L_{Aeq,20min}$) dBA	Total Noise Level (Predicted + Existing) $L_{eq,1hr}$ dBA			
			Q1 2028	Q2 2028	Q3 2028	Q4 2028
R1	107th Street	58	59	59	59	59
R2	108th Street	58	59	59	59	59
R3	Sutter Ave	58	58	58	59	59
R4	106th Street	58	59	59	59	59
R5	Sutter Eve	58	59	59	59	59
R6	105 Street	58	59	59	59	59
R7	Centerville Street	58	58	58	58	59
R8	Project Property Line	58	59	59	59	59
R9	Boss Street	58	59	58	59	58
R10	Centerville Street	58	58	58	58	58
R11	Centerville Street	60	61	60	61	60
R12	Peconic Street	60	64	64	64	62
R13	Hawtree Street	60	64	64	63	63
R14	Hawtree Street	60	65	65	64	63
R15	Linden Blvd	60	60	60	60	61
R16	135th Road	60	63	63	62	62
R17	Pitkin Ave	60	64	63	62	64
R18	135th Drive	60	63	63	62	62
R19	Hawtree Street	60	64	63	62	62
R20	Hyatt Regency JFK Airport	60	71	64	63	67

Table A-9 Construction Noise Assessment Results 2029

Receptor ID	Address	Existing Ambient Sound Level ($L_{Aeq,20min}$) dBA	Total Noise Level (Predicted + Existing) $L_{eq,1hr}$ dBA
			Q4 2029
R1	107th Street	58	59
R2	108th Street	58	59
R3	Sutter Ave	58	59
R4	106th Street	58	59
R5	Sutter Eve	58	59
R6	105 Street	58	59
R7	Centerville Street	58	58
R8	Project Property Line	58	59
R9	Boss Street	58	58
R10	Centerville Street	58	58
R11	Centerville Street	60	60
R12	Peconic Street	60	60
R13	Hawtree Street	60	60
R14	Hawtree Street	60	60
R15	Linden Blvd	60	60
R16	135th Road	60	60
R17	Pitkin Ave	60	60
R18	135th Drive	60	60
R19	Hawtree Street	60	60
R20	Hyatt Regency JFK Airport	60	60