20

Construction

Construction activities, although temporary in nature, can sometimes result in significant adverse impacts. A project's construction activities may affect a number of technical areas analyzed for the operational period, such as air quality, noise, and traffic. This chapter assesses the potential for the Proposed Project to result in significant adverse impacts during construction.

Introduction

This chapter provides an assessment of the potential for construction of the Proposed Project to result in significant adverse impacts during the construction period. The Proposed Project would consist of the development of a major mixed-use development on the Development Site, comprising approximately 3.7 million square feet (sf) of new construction, with destination entertainment that includes a music hall, hotel, a gaming facility,[1] convention and meeting space, restaurant and retail space, and office and community facility space. The Proposed Project would also include public park space—at least 20 acres of the Development Site would be improved with landscaping and other amenities for public recreation—and other public realm improvements as well as structured parking facilities to accommodate up to 13,750 spaces. The Proposed Project would be constructed in five continuous stages over a 60-month period, culminating in the opening of Areas of Development A and B at the end of 2030.

Principal Conclusions

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility. Construction at the

[1] The inclusion of a gaming facility is contingent upon receiving a gaming license from the New York State Gaming Commission. See Required Approvals section below.

Development Site would be subject to government regulations, such as the New York City Noise Control Code, described below in Construction Regulations and General Practices and would employ the general construction practices described below. The Proposed Project would also comply with the requirements of the New York City Noise Control Code.

Transportation

Traffic

The peak quarter of construction activities would occur during the first quarter of 2029. Based on shift schedules and construction worker and truck arrival/departure patterns, the 6 AM – 7 AM hour was identified for the AM construction peak hour and the 3 PM – 4 PM hour was identified for the PM construction peak hour. The projected construction activities would result in less traffic volumes than traffic projected for the operation of the Proposed Project. However, significant traffic impacts could still occur at some of the study area locations during construction, similar to impacts identified in **Chapter 14, Transportation**. In addition, construction worker trip patterns on gamedays when a Mets game is scheduled at the Development Site would vary from patterns typical of the operational period. The construction analysis considers two scenarios for construction worker trips: a non-gameday scenario where construction worker parking would be accommodated on-site, and a gameday scenario in which construction workers are directed to nearby parking facilities in downtown Flushing.

Forty-five~~one~~ intersections were identified for analysis during the AM and PM construction peak hours for the With-Action with Construction condition. On non-gamedays, construction activities for the Proposed Project would generate 810 construction worker auto trips and 48 construction truck trips during the AM construction peak hour, and 920 construction worker auto trips and 26 construction truck trips during the PM construction peak hour. On gamedays, construction activities would generate the same number of worker auto trips as during the non-gameday AM and PM construction peak hours. In order to avoid overlap with gameday ingress and egress traffic, most truck deliveries would largely occur in the morning hours; 64 truck trips would occur during the AM construction peak hour and 14 truck trips would occur during the PM construction peak hour. Construction trucks would be required to use NYCDOT-designated truck routes to get to the project area and would then use local streets to access the construction site.

On non-gamedays, construction traffic impacts were identified at two intersections during the AM construction peak hour, and six~~five~~ intersections during the PM construction peak hour. On gamedays, construction traffic impacts were identified at six intersections during the AM construction peak hour, and 11 intersections during the PM construction peak hour. Where impacts during construction may occur, measures similar to the ones recommended in **Chapter 21, Mitigation,** could be implemented prior to the commencement of the operation of the Project in order to alleviate congested traffic conditions. As shown in **Table 20-1,** on non-gamedays, with these measures in place, all intersections would be mitigated during the AM construction peak hour, and four~~three~~ intersections would remain unmitigated (or partially unmitigated) during the PM construction peak hour. On gamedays, three intersections would remain unmitigated during the AM construction peak hour, and eight intersections would remain unmitigated (or partially unmitigated) during the PM construction peak hour. Details on mitigation measures recommended during the AM and PM construction peak hours are discussed in **Chapter 21, Mitigation.**

Table 20-1 Construction Traffic Impact Mitigation Summary

	Non-Gameday		Gameday	
Intersections	**AM Construction Peak Hour**	**PM Construction Peak Hour**	**AM Construction Peak Hour**	**PM Construction Peak Hour**
No significant impact	43	39	39	37
Fully mitigated impact	2	2	3	3
Partially mitigated impact	0	0	0	2
Unmitigated impact	0	4	3	6

Note: Includes 34 signalized intersections and 11~~seven~~ unsignalized intersections in the Mitigated With-Action with Construction condition. This table has been updated for the FEIS.

Parking

Construction workers would generate an estimated maximum daily parking demand of 1,011 spaces during the Q1 2029 peak construction quarter. In the non-gameday scenario, this parking demand would be fully accommodated on-site, since workers would be able to utilize the Northfield Parking structure (Area of Development D) parking structure (with a capacity of 4,200 parking spaces) expected to be completed by the peak quarter. In the gameday scenario, this demand would be fully accommodated by off-street parking facilities in the downtown Flushing area. Overall, parking demand for construction workers would be accommodated by these facilities. Therefore, construction for the Proposed Project would not result in a parking shortfall.

Transit and Pedestrians

Based on U.S. Census data for the construction industry, it is anticipated that approximately 45 percent of construction workers would commute to the Development Site by public transportation or walk. During the first quarter of 2029 when construction worker volumes would be highest, construction would be expected to generate 2,407 daily construction workers with 1,083 workers expected to use public transportation. Similar to the traffic analysis, the 6 AM – 7 AM hour was identified for the AM construction peak hour and the 3 PM – 4 PM hour was identified for the PM construction peak hour. It is expected that the majority of construction workers (80 percent) would arrive during the AM construction peak hour and depart during the PM construction peak hour, and that they would generate approximately 866 construction worker trips by public transportation during the AM and PM construction peak hours.

On non-gamedays, construction workers would be able to park on-site, and workers traveling by public transportation or walk would enter the site along Roosevelt Avenue. As assessment of the level of service along key walking paths during construction was conducted. This analysis was conducted during the AM and PM construction peak hours for the crosswalks and north and south sidewalks at the intersection of Roosevelt Avenue and 126th Street/Seaver Way. No significant pedestrian impacts would result from construction activities in the non-gameday scenario.~~when distributed across different transit options including the No. 7 subway line and various MTA bus routes in the vicinity of the Proposed Project, the worker pedestrian and transit trips would be below the 200 pedestrian and transit *CEQR Technical Manual* thresholds for detailed analysis. Furthermore, the peak construction pedestrian and transit increments would take place when background pedestrian levels are lower than they would be in the 8 AM to 9 AM and 5 PM to 6 PM commuter~~

~~peak hours. Therefore, construction of the Proposed Project is not expected to result in any significant adverse pedestrian impacts in the non-gameday scenario.~~

On gamedays, construction workers would be accommodated offsite at parking facilities in downtown Flushing. Construction workers parking at these facilities would continue via transit or walking to access the site. An assessment of the level of service along key walking paths to and from these facilities during construction was performed. This analysis was conducted during the AM and PM construction peak hours for the crosswalks and north and south sidewalks at the intersection of Roosevelt Avenue and 126th Street/Seaver Way, similar to the non-gameday scenario. Significant pedestrian impacts would be expected at the east crosswalk during both the AM and PM construction peak hours, and the west crosswalk during the PM construction peak hour.

Air Quality

Construction of the Proposed Project would take five years to complete. The Proposed Project is comprised of several Development Areas, each with its own construction schedule. The future No-Action residential uses for the Willets Point Project Phases 1 and 2 Development are closest to Areas of Development B and D of the Proposed Project. Corona residences on the other side of the Grand Central Parkway are further away from the construction of Area of Development A. The construction schedule for Area of Development D is such that there would be a slight overlap of heavy construction while the nearby northern Willets Point Project Phase 2 Development residential uses would be open and occupied. Area of Development B construction would happen later when the Willets Point Project Phase 1 and 2 buildings across Seaver Way will be fully occupied. Construction practices in large-scale NYC construction projects include requirements from NYC Local Law 77 of 2003 (LL 77) and the NYC Air Pollution Control Code in order to reduce construction emissions. Specifically, As per LL77, the Proposed Project is committed to use the Best Available Technology (BAT) requirements on heavy diesel non-road equipment over 50 horsepower.

Based on the emission intensity analysis and in consultation with NYCDEP, construction of two Development Areas—Area of Development A with the highest emissions, and Area of Development B with the closest residential receptors—were selected for dispersion modeling. The results of the quantitative on-site construction analysis indicate that the Proposed Project would not exceed annual NO_2, 24-hour PM_{10}, and 1-hour and 8-hour CO NAAQS. In addition, the maximum predicted 8-hour CO concentration would be well below and incremental concentrations of $PM_{2.5}$ would not exceed the City's *de minimis* criteria. Construction-related trips at the off-site intersections would be less than the Project-generated trips under the With-Action operating conditions and would not be expected to significantly impact air quality levels. Therefore, no significant adverse construction air quality impacts are anticipated from the Proposed Project.

Noise

Construction of the Proposed Project is predicted to result in elevated noise levels at several of the analyzed receptors. The screening shows that with the exception of one noise receptor, the predicted construction noise level would not be considered a significant adverse impact under the *2021 CEQR Technical Manual*. While such increases in noise may be noticeable at times, predicted noise level increments would be moderate and would occur over a limited duration.

At one receptor located to the east of the Development Site, as part of the Willets Point Project Phase 2 Development (Receptor R04), detailed construction noise modeling was performed.

Construction is predicted to result in noise level increases more than 5.0 dBA up to approximately 8.7 dBA for 9 months at residential receptors in the Willets Point Phase 2 development. This proposed residential building in the Willets Point Project Phase 2 Development will have insulated glass windows with OITC rating of 35 and alternate means of ventilation, thereby improving the window/wall attenuation provided by the building façade and allowing for the maintenance of a closed-window condition as presented in the Willets Point Phase 2 Development Project Final Second Supplemental Environmental Impact Statement (FSSEIS), February 23, 2024. Therefore, maximum interior noise levels during construction would be in the mid- to high-40s dBA for the peak months of construction, and low-40s dBA during most of the construction period, which is no more than approximately 3 dBA greater than the recommended noise level threshold for residential use according to the *CEQR Technical Manual* noise exposure criteria. For most of the construction period, interior noise levels due to construction would be in the low-40s dBA in Willets Point Phase 2 development. Noise levels in the mid-40s dBA are comparable to typical noise levels in a residential building setting.

Per New York City Noise Control Code regulations, the Proposed Project would be required to prepare a Construction Noise Mitigation Plan, which may identify more control measures that would further reduce construction noise levels. Also, the construction management team has committed that no noise intensive equipment would be operating during a game time (for Citi Field and for the future soccer stadium) or after 10 PM. Therefore, the predicted levels of construction noise were determined not to rise to the level of a significant adverse impact at any noise receptors.

Other Technical Areas

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

In terms of historic resources, the Proposed Project could have an impact on the Mets-Willets Point Subway Station and IRT Interlocking Tower (eligible for listing in the State and National Registers of Historic Places [S/NR]) from construction vibrations from the Proposed Project buildings, some of which would be located within 90 feet of the resource. In addition, construction vibrations from the Proposed Project could have a direct impact on the Passerelle Bridge (S/NR eligible), which also is within 90 feet of the Proposed Project. In order to avoid or minimize impacts such as vibrations, the New York State Historic Preservation Office has indicated that a Construction Protection Plan would need to be developed and implemented for the Mets-Willets Point Subway Station IRT Interlocking Tower and the Passerelle Bridge. With the implementation of a Construction Protection Plan, no significant adverse impact as a result of construction vibration is expected on historic and cultural resources.

With respect to hazardous materials, the completion of a RAP and CHASP would be memorialized through the assignment of an (E)-Designation on the Development Site to ensure investigation, mitigation, and remediation of any hazardous materials would be completed in a safe, and comprehensive manner. Compliance with the (E)-Designation would preclude the potential for significant adverse hazardous materials impacts to occur during construction and operation of the Proposed Project.

With respect to water and sewer Infrastructure, the Proposed Project would require a State Pollutant Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. In

addition, the Applicant will be required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that meets criteria set forth by NYSDEC. With the implementation of a SWPPP, there would be no significant adverse impacts to water resources due to construction of the Proposed Project.

Methodology

This construction assessment follows the guidelines set forth in the *CEQR Technical Manual* and the Final Scope of Work. As discussed in **Chapter 1, Project Description** and above, the Applicant would construct a major mixed-use development over five primary construction stages. Construction resulting from the Proposed Actions is projected to last up to 60 months and the new development would be fully operational, with all trip-generating elements opening at the end of 2030, the build year. Therefore, because construction activities would cumulatively exceed a two-year period and involve the simultaneous construction of multiple structures, an assessment of the potential for construction activities to result in adverse environmental effects was warranted to examine potential construction effects in the areas of hazardous materials, transportation, air quality, and noise.

Construction Regulations and General Practices

Construction Oversight

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility, as follows.

- The New York City Department of Buildings (DOB) has primary oversight of construction. DOB oversees compliance with the New York City Building Code to ensure that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both workers and the general public during construction. Areas of oversight include installation and operation of equipment such as cranes and lifts, sidewalk sheds, safety netting, and scaffolding.
- The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code, reviews and approves any needed Remedial Action Plans (RAPs) and associated Construction Health and Safety Plans (CHASPs) as well as the removal of fuel tanks and abatement of hazardous materials. DEP also regulates water disposal into the sewer system and reviews and approves any rerouting of wastewater flow.
- The New York City Fire Department (FDNY) has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials.
- The New York City Department of Transportation Office of Construction Mitigation and Coordination (DOT OCMC) reviews and approves any traffic lane and sidewalk closures.
- New York City Transit (NYCT) is responsible for bus stop relocations and subsurface construction within 200 feet of a subway, if needed.
- The New York City Landmarks Preservation Commission approves studies and testing to prevent loss of archaeological resources and to prevent damage to architectural resources.

- The New York State Department of Environmental Conservation (NYSDEC) regulates disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. NYSDEC also regulates discharge of water into rivers and streams.
- The New York State Department of Labor (DOL) licenses asbestos workers.
- The New York State Department of Transportation (NYSDOT) reviews and approves any traffic lane closures on its roadways, should any be necessary.
- The U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, however, much of its responsibility is delegated to the state level.
- The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

Construction Hours

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate: (1) emergency conditions; (2) public safety; (3) construction projects by or on behalf of City agencies; (4) construction activities with minimal noise impacts; and (5) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. The DOB issues these work permits, and for new building construction, like the proposed development, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work would typically end at 4:00 PM, with some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours.

Construction Practices

Access, Deliveries and Staging Area

Access to construction sites would be controlled. Work areas would be fenced off, and limited access points for workers and construction-related trucks would be provided. Typically, worker vehicles would not be allowed into the construction area, and workers or trucks without a need to be on the site would not be allowed entry. After work hours, the gates would be closed and locked. Security guards may patrol the construction site after work hours and over weekends to prevent unauthorized access.

Material deliveries to the site would be controlled and scheduled. To aid in adhering to the delivery schedules, as is normal for building construction in New York City, flaggers would be employed at each of the construction site's access points. Flaggers are typically supplied by either the subcontractor on-site at the time or by the construction manager. The flaggers control trucks entering and exiting the project site so that they would not interfere with one another. In addition, they provide an additional traffic aid as trucks enter and exit the on-street traffic streams.

Lane and Walkway Closures

Temporary curb-lane and sidewalk closures are typical for construction projects in New York City. To manage such closures, a Maintenance and Protection of Traffic (MPT) plan is developed consistent with DOT requirements. DOT OCMC reviews and approves MPT plans, and the implementation of the closures would also be coordinated with DOT OCMC. In general, construction managers for major projects on adjacent sites also coordinate their activities to avoid delays and inefficiencies.

Public Safety

A variety of measures are employed to ensure public safety during construction at sites within New York City. Examples include the use of sidewalk bridges to provide overhead protection for pedestrians passing by the construction site and the employment of flaggers to control trucks entering and exiting the construction site, to provide guidance to pedestrians, and/or to alert or slow down the traffic. Other safety measures include following DOB requirements during the installation and operation of tower cranes to ensure safe operation of the equipment and the installation of safety nettings on the sides of the project as the superstructure advances upward to prevent debris from falling to the ground. These safety measures are required as part of a Site Safety Plan reviewed and approved by DOB.

Rodent Control

Construction projects in New York City typically include provisions for a rodent (i.e., mouse and rat) control program with provisions for this formalized in construction contracts for the development. Rodent control programs are typically carried out throughout construction, beginning with surveying and baiting appropriate areas prior to construction and providing for proper site sanitation and maintenance during construction. Signage is posted, and coordination is conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides are permitted, and the contractor is required to implement the rodent control program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

Air Emissions Reduction Measures

In addition to the measures described above, the evaluation performed in this section assumes a combination of emission reduction measures that are mandated by law and are common practice in large-scale New York City construction projects, and follow the requirements included in NYC Law 77 and the NYC Air Pollution Control Code. These measures are listed below in the Air Quality section.

Noise Reduction Measures

Noise from construction activities and some construction equipment is regulated by the NYCDEP Noise Control Code. The NYCDEP Noise Code (Section 24-228) limits noise from non-impulsive construction equipment to a maximum of 85 dBA as measured 50 feet from the source. The code also limits noise from paving breakers, such as jackhammers, to 95 dBA at a distance of one (1) meter and requires that a pneumatic discharge muffler be used that provides an insertion loss of 5 dBA.

In addition, the NYCDEP Noise Control Code limits construction activities to weekdays between the hours of 7:00 AM and 6:00 PM and requires that a Construction Noise Mitigation Plan be implemented. For construction on weekends or weekdays between 6:00 PM and 7:00 AM, NYCDEP

Noise Code requires after hours work authorization. In accordance with the NYCDEP Noise Code §24-223, the afterhours work must be conducted in compliance with the Construction Noise Mitigation Plan, shall not exceed 7 dBA above ambient sound levels within a residential receptor, and must involve activities with minimal noise impact. Project-specific noise control measures are described in the Construction Noise Mitigation Plan and can include a variety of source and path controls, such as the following:

- The contractor would self-certify that all construction tools and equipment have been maintained to not generate excessive or unnecessary noise and that the noise emissions would not exceed the levels specified in Subchapter 5 of the NYC Noise Control Code and Table 22-1 of the *CEQR Technical Manual*. Table 19-12 shows the noise levels for typical construction equipment.
- All construction equipment would be equipped with necessary noise reduction equipment, including mufflers. All equipment with internal combustion engines would be operated with the doors closed, including noise-insulating materials, and at the lowest engine speed allowable.
- Where feasible, practical, and safe, the use of back-up alarms would be minimized and/or quieter back-up alarms would be installed in accordance with OSHA standards.
- Vehicles would not be allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163.
- The contractor shall utilize a training program to inform workers on methods that can minimize construction noise.
- For impact equipment, such as pile drivers and jackhammers, the quietest equipment shall be selected taking into consideration the structural and geotechnical conditions.
- In general, the quietest equipment and methods shall be used for excavators, dump trucks, cranes, auger drills, and concrete saws to the extent feasible and practical.

The following path noise controls would be implemented to the extent feasible, practical and safe as required by the New York City Noise Code:

- The DOB regulations require a perimeter barrier or "construction noise barrier" at a height of at least 8-feet when the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid perimeter noise barrier made of wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.
- Should noise complaints occur during construction, the contractor shall use path noise control measures such as temporary noise barriers and jersey barriers.

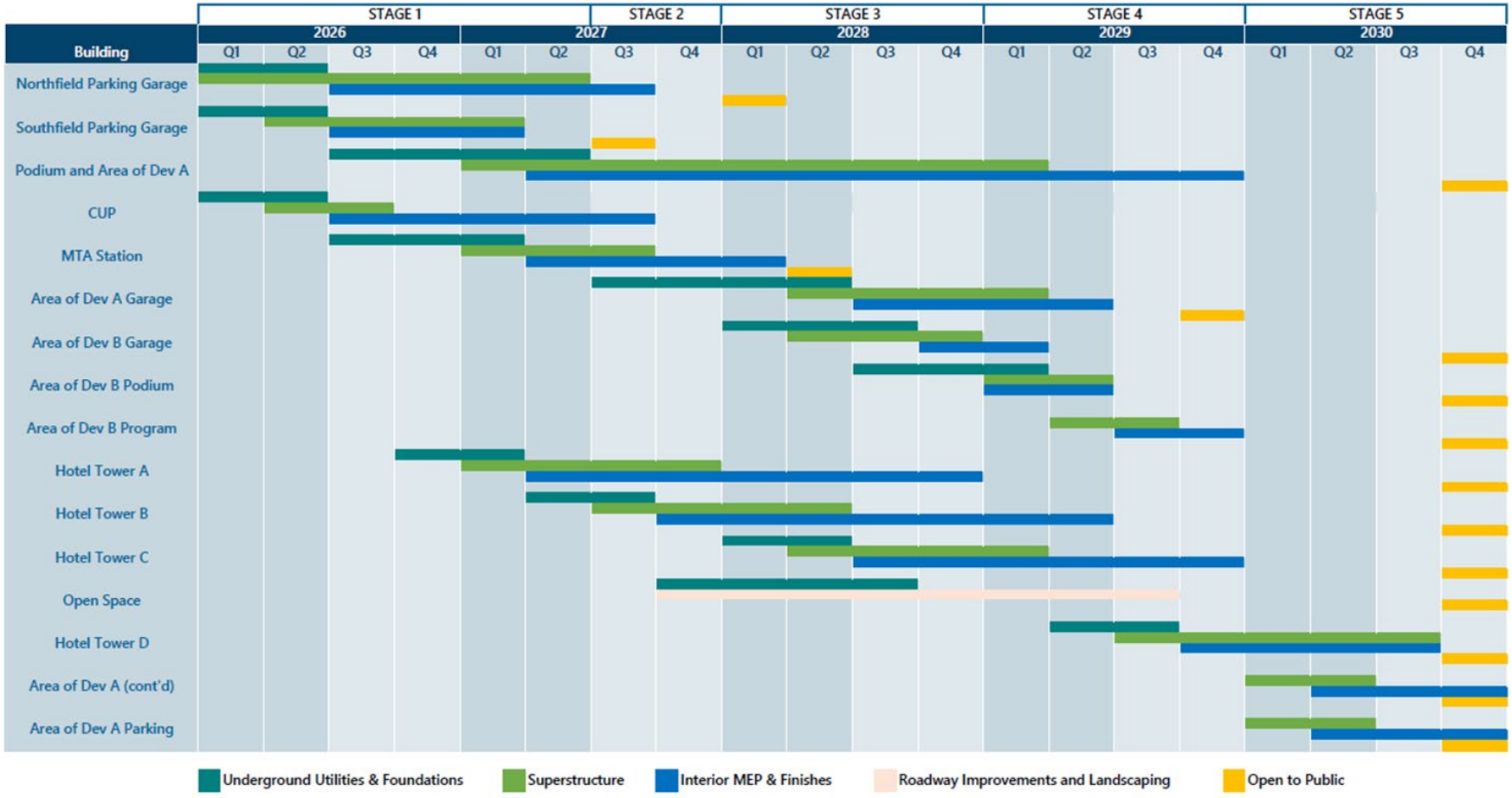
Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.

Construction Description

Construction Schedule

Figure 20-1 shows the anticipated construction schedule for the Proposed Project as well as the sequencing of construction stages as currently anticipated. The details of the construction schedule are described further below.

Figure 20-1 Anticipated Construction Schedule



No-Action Condition

Absen Absent the Proposed Project, the Development Site would remain in its existing condition. No construction would occur under the No-Action condition.

With-Action Condition

As discussed above and in **Chapter 1, Project Description**, in the future With-Action condition, the Applicant proposes to redevelop the Development Site with approximately 3.7 million square feet (sf) of new construction, including destination entertainment that includes a music hall, hotel, a gaming facility, convention and meeting space, restaurant and retail space, as well as office, community facility space, and 20 acres of public park space. In addition, the Proposed Project would include transportation improvements to the adjacent Mets – Willets Point subway station and roadways surrounding the site, as discussed in **Chapter 14, Transportation.**

As shown in **Figure 20-1**, construction of the Proposed Project under the With-Action condition is anticipated to begin in early 2026 (Q1 2026) and is expected to be completed in December 2030 (Q4 2030) with a 60-month total construction period. Construction would begin in Q1 2026 with the Northfield (Area of Development D) and Southfield (Area of Development C) Parking Garages, which would be complete and open to the public by Q1 2028 and Q3 2027, respectively. The program and podium for the Area of Development A would begin in Q3 2026[2] and end in 2029 Q4. MTA Station improvements would begin in Q3 2026,end in Q1 2028, and open to the public in Q2 2028. The Area of Development A garage would begin in Q3 2027,end in Q2 2029, and open to the public Q4 2029. The Area of Development B garage would begin in Q1 2028 and end in Q1 2029; it would be open to the public in Q4 2030. The podium for the Area of Development B would begin in Q3 2028 and end in Q2 2029. The program for the Area of Development B would begin in Q2 2029 and end in Q4 2029; it would be open to the public in Q4 2030. Hotel Tower A would begin in Q4 2026 and end in Q4 2028. Hotel Tower B would begin in Q2 2027 and end in Q2 2029. Hotel Tower C would begin in Q1 2028 and end in Q4 2029. Open space landscaping and siteworks would begin in Q4 2027 and end in Q3 2029; it would be open to the public Q4 2030. Hotel Tower D would begin in Q2 2029 and end in Q3 2030; it would be open to the public Q4 2030. Final construction on the Area of Development A program and parking, which includes the incorporation of Hotel Tower D, would begin in Q1 2030 and end in Q4 2030, when the construction of all elements of the Proposed Project are complete.

Mets – Willets Point Subway Station

The Mets – Willets Point subway station would remain accessible throughout construction. Service to the station will not be interrupted and any temporary closures along certain passageways or elements needed through construction would be conducted in coordination with the MTA. All transit improvements would be completed by Q2 2028, prior to the end of construction.

Roadway Improvements

The construction of roadway and highway improvements would be sequenced such that existing traffic movements would be maintained during peak periods throughout the construction of the Proposed Project. A significant portion of the roadway improvements would be constructed outside

[2] Precast construction staging for the program and podium for the Area of Development A would begin in Q1 2026.

the bounds of existing roadway limits. The balance of road construction work would generally be completed outside of standard business hours and no existing roadway segments would be taken offline prior to the completion and connection of new improvements complete. Maintenance and Protection of Traffic Plans (MPT) would be developed and finalized following the publication of the~~between the DEIS and~~ FEIS, and would include the following features:

Stadium Place North and Southfield Parking Structure

Construction of improvements at the intersection of Shea Road and Stadium Place North, as well as the segment of the Southfield parking structure access road adjacent to the structure would occur in Stage 1 and be completed by Stage 2. The remainder of the Southfield access road from Stadium Place South to its entry at the parking structure would begin in Stage 4 and be completed in Stage 5.

Northern Boulevard and 126th Street/Seaver Way

Intersection improvements realigning the eastbound right turn from Northern Boulevard onto 126th Street/Seaver Way would begin in Stage 4 and be completed by Stage 5.

Olmsted Drive at Shea Road and Stadium Place South

Construction for intersection improvements including the widening of Olmsted Drive between Shea Road and Stadium Place South would occur in Stage 4 and be completed by Stage 5.

Shea Road

Shea Road modifications have been coordinated to ensure minimal disruption to traffic patterns and commuter convenience. Shea Road will remain open through construction; however, since the roadway will need to be fully reconstructed, the existing four lanes will need to be temporarily reduced, during certain stages of construction.

Construction along Shea Road would be staged such that northbound Shea Road would be closed first, and southbound Shea Road would be converted to two-way operations. Upon completion, the roadway configuration would reverse, with southbound Shea Road under construction and northbound Shea Road converted to two-way operations. For short periods during Stage 2, parts of Shea Road would operate as one lane in each direction, versus two lanes in existing operations. This reduction in capacity would be a temporary condition and work would be coordinated to avoid conflicts with gameday traffic. On non-gamedays, existing traffic volumes, which do not exceed 500 vehicles per hour along Shea Road can be fully accommodated by one operational lane in each direction. Intersections along Shea Road from Stadium Place North to Boat Basin Place would operate at LOS C or better during all non-gameday peak hours.

In Stage 2, the realignment of Shea Road by the Northfield parking structure and Boat Basin intersection would be constructed to facilitate accessibility to the parking structure upon its completion in Stage 3. It is expected that this work would result in the largest reduction in capacity; however, MPT plans would maintain that at last one lane remain operational in each direction. This reduction would not occur for the entirety of Stage 2, but only for a short period of time within the stage as improvements are integrated into the network.

On gamedays during pre-game to post-game activity (spanning ingress and egress to Citi Field), the configuration during the temporary phase within Stage 2 would be staged so that two lanes are provided in each direction. Any lane closures required during this stage would not be active during

the hours preceding or following the games for ingress or egress conditions. Closures would occur sequentially and would be staged such that they occur overnight or during periods of low demand on gamedays (e.g. early mornings for an evening game). As is standard practice for the staging of repaving of roadway enhancements, work zones will be established in short, sequential segments to minimize the disruption of overall traffic flow during these off-peak periods.

The Applicant will coordinate construction during all stages, including the repaving and restriping along Shea Road in Stage 2, and any new data collection or analyses that may be required by OCMC.

Porte Cochere

New roadway improvements during Stage 3 to accommodate the Porte Cochere ramps, as well as ramps to and from westbound Grand Central Parkway do not require the closure of existing roadways. Specifically, construction of the Porte Cochere can be completed during short-duration overnight closures. During Stage 3, the Porte Cochere would undergo partial construction, which would also include a temporary disconnect adjacent to the existing Shea Road on-ramp to Grand Central Parkway westbound. Once the on-ramp is relocated, the Porte Cochere entrance ramp would be completed in Stage 4. The Porte Cochere exit ramp would be entirely constructed during Stage 4. The construction of the overbuilt of the Porte Cochere crossing over Shea Road, as well as the roadway leading to the Area of Development A, would occur concurrently during Stages 3 and 4.

Grand Central Parkway Ramps

The construction sequence would begin with the new entrance ramp to the westbound Grand Central Parkway (by Marina Road) in Stage 3. Once this work is complete, the existing entrance ramp from Shea Road to the Grand Central Parkway would be closed and traffic would be rerouted to the new ramp. Highway improvements during Stage 3 also include the widening of the Grand Central Parkway exit ramp to Shea Road; this work would be done while maintaining the existing exit ramp, by completing the adjacent widening work and realigned intersection and rerouting traffic to the new ramp.

Partial construction of the ramp to the Whitestone Expressway and pedestrian bridge crossing the Whitestone Expressway would begin in Stage 3 and continue in Stage 4.

Construction Activities

For conservative analysis purposes it is assumed that no construction will take place on-site in absence of the Proposed Actions. Construction of the Proposed Project under the Proposed Actions would be subject to government regulations and oversight detailed above and would employ the general construction practices described above. No building demolition is required for the Proposed Project due to the location within a parking lot.

Construction Stages

Construction activities for the Proposed Project would occur in five general stages:

Stage 1 is anticipated to begin in Q1 2026 and is expected to be completed in Q2 2027 with a duration of 18 months. During this stage, excavation, foundation, and structural work for the Northfield parking garage, Southfield parking garage, Area of Development A and Podium, and Hotel Tower A would commence. Work for the MTA station improvements will also begin during this

stage. Lot A and portions of Lot E and the existing Southfield parking lot would no longer be available for use during this stage.

Stage 2 is anticipated to begin in Q3 2027 and is expected to be completed in Q4 2027 with a duration of 6 months. During this stage, the superstructure work for Hotel Tower B and the excavation and foundation work for the open space would commence. The Southfield parking garage would be completed and open to the public by this stage, and the Northfield parking garage would be in the interior fit out phase. Lot A and portions of Lot C, E, and the existing Southfield parking lot would not be available for use during this stage.

Stage 3 is anticipated to begin in Q1 2028 and is expected to be completed in Q4 2028 with a duration of 12 months. During this stage, superstructure work for Hotel Tower C, offsite roadways, onsite roadways, paths, and elevated pedestrian structures would commence. Work for the Area of Development B podium and program would have also commenced. By the end of Stage 3, MTA station improvements would be complete. The Northfield parking garage would be completed and open to the public by the beginning of Stage 3. Existing parking Lots A, C, D, E, F, G, and the existing Southfield parking lot would not be available for use during this stage.

Stage 4 is anticipated to begin in Q1 2029 and is expected to be completed in Q4 2029 with a duration of 12 months. This stage consists of the construction of Hotel Tower D and the continued work on interiors, exteriors and roofing work for Area of Development A podium and program, Hotel Towers B and C, landscaping, open space, and the Area of Development B podium and program. Roadwork for proposed roadway improvements as part of the Proposed Project would also be underway during this stage. The Area of Development B parking structure would be completed and open to the public by this stage. Lot B, the bus lot, and the existing Stadium View parking would not be available for use during this stage.

Stage 5 is anticipated to begin in Q1 2030 and is expected to be completed by the Proposed Project's build year in Q4 2030with a duration of 12 months. Activities during this stage include continued work on interiors, exteriors and roofing for Hotel Tower D, and final work for the area of Development A parking. By the end of Stage 5, all construction activities would be complete, and the Proposed Project would be open to the public.

As noted above, parking space availability would vary for the duration of the construction. **Table 20-2** below outlines the parking spaces available during each construction stage compared to existing conditions and considers the existing on-site, off-site, and new parking to be provided as part of the Proposed Project. As shown in the table, the parking deficit would be a maximum of 2,000 parking spaces during Stage 1. This deficit would only occur on a limited number of gamedays during the year (about 16 days) when there is a game that generates a parking demand greater than approximately 6,000 parking spaces. During this stage, the Mets would implement Travel Demand Management (TDM) measures to facilitate traffic operations during construction to reduce on-site parking demand during high-attendance events at Citi Field, by using off-site parking, transit, rideshare and micro-mobility options. The Applicant will continue to coordinate with NYC DOT's OCMC to include any Traffic Enforcement Agent (TEA) deployment and Variable Message Signage (VMS) placement plans, as well as any other improvements for both gameday and non-gameday conditions during construction. Gameday conditions during earlier stages of construction continue to be an ongoing coordination as part of development gameday operations during all stages of construction.

Construction workers would be fully accommodated on-site on non-gamedays; on gamedays, regardless of the construction stage, workers would park off-site at nearby parking facilities in the Flushing area. Access patterns to the remaining parking during this phase would be identical to access under existing conditions. Access to the Northfield and Southfield parking structures, which would replace existing surface parking for Mets parking, would be the same throughout construction as under the fully operational phase of the Proposed Project.

Table 20-2 Construction Parking Availability

	Available Parking Spaces					
	Existing	**Stage 1**	**Stage 2**	**Stage 3**	**Stage 4**	**Final**
On-Site Parking Spaces						
Lot A	807	0	0	0	0	0
Lot B	413	413	413	413	0	0
Lot C	822	822	460	0	0	0
Lot D	539	539	539	0	0	0
Lot E	1,490	725	0	0	0	0
Lot F	851	851	851	0	0	0
Lot G	532	532	532	0	0	0
Bus Lot	40	40	40	40	0	0
Truck West	21	21	21	21	0	21
Mets Player's Lot	74	74	74	74	74	74
Southfield	1,575	1,147	300	0	0	0
Off-Site Parking Spaces						
Stadium View (East)	279	279	279	279	279	279
Stadium View (West)	120	120	120	120	0	0
Marina Lot (East)	585	585	585	585	585	585
Marina Lot (West)	200	200	200	200	200	200
Future Proposed Site Parking Spaces						
Area of Development A Tower						1,595
Area of Development A Podium						3,905
Northfield Parking Structure				4,200	4,200	4,200
Southfield Parking Structure			2,901	2,901	2,901	2,901
Southfield Surface Lot						250
Area of Development B Parking Structure					402	825
On-Site Parking Spaces	7,164	5,164	6,131	7,649	7,577	8,271
Off-Site Parking Spaces	1,184	1,184	1,184	1,184	1,064	1,064
Mets On-Site Parking	**7,164**	**5,164**	**6,131**	**7,649**	**7,577**	**8,271**
Mets Total Parking	**8,348**	**6,348**	**7,315**	**8,833**	**8,641**	**9,335**
Mets Total Parking Delta (Complete to Existing)	-	**(2,000)**	**(1,033)**	**485**	**293**	**987**
Area of Development A Parking	-	-	-	-	-	5,500

For each building being constructed within the Development Site, general construction phasing can be categorized by excavation and foundation, superstructure, interiors and finishing. Details of these phases are described below.

Excavation and Foundation

Excavation and foundation is the first phase of construction to prepare the site for construction work. Regarding excavation activities, where necessary, sheeting is installed to stabilize soil around the excavation area and excavators are then used to excavate soil. The soil is loaded onto dump trucks with front-end loaders for transport to a licensed disposal facility or for reuse on any portion of the development site that needs fill.

Water from rain and snow collected in the excavation area during construction would be removed as necessary using a dewatering pump. If dewatering is required, testing would be performed to ensure compliance with DEP sewer discharge permit/approval requirements and, if necessary, pretreatment would be conducted prior to discharge to the sewer.

Alongside excavation, construction of the new building's foundation and below-grade elements begins. Foundation work for the larger developments within the site would include pile driving and columns and concrete walls would be built to the grade level. As part of the foundation construction, concrete would be poured starting in select areas. Delivery trucks would enter the site from 126th Street/ Seaver Way, Shea Road, or Roosevelt Avenue depending on the construction phase.

Superstructure

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 interior structure includes construction of the building's elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; and restroom areas. Construction of the exterior involves the installation of the façade (exterior walls, windows, and cladding and the roof).

During this phase, steel would be erected, concrete would be poured, precast concrete elements would be set, and masonry block would be set for the core and the superstructure. The podium for each building would be cast in place or steel. Cranes would be mobilized and erected and electric hoists would be installed and operated to facilitate these activities, including the delivery of various materials to the site.

Equipment used during this phase typically includes the cranes and hoists, air compressors, generators, delivery and concrete trucks, concrete pumps, concrete trowels, welding equipment, and a variety of handheld tools. Space for concrete and spray fireproofing operations and other deliveries would be provided within the site with access from126th Street/Seaver Way, Shea Road, or Roosevelt Avenue depending on the construction phase. The mobile cranes would also be brought into the site, and temporary construction elevators (hoists) would also be constructed for the delivery of materials and vertical movement of workers when necessary. Superstructure activities would also require the use of the cranes, welders, and a variety of trucks. One to three cranes per structure would be needed depending on the construction phase for superstructure activities.

Interiors and Finishing

Interior fit-out activities include the construction of interior partitions, installation of lighting fixtures and interior finishes (i.e., flooring, painting, etc.); mechanical and electrical distribution work; and lobby finishes. In addition, final cleanup and touchup of the proposed building and final building systems (i.e., electrical system, fire alarm, plumbing, etc.) testing and inspections are part of this phase of construction.

Equipment used during interior construction typically includes exterior hoists, compressors, delivery trucks, and a variety of small hand-held tools. This phase of construction is typically the quietest and does not generate fugitive dust since this work occurs within the building with the façades substantially complete.

This phase of construction is also when the construction protection measures (fencing, sidewalk enclosures, bridges, temporary sidewalks, remaining scaffolding, etc.) around or within the construction site begin to be removed. This phase of construction would also include punch list completion activities, which are typically small tasks that were not completely finished, and project commissioning to ensure compliance with contract requirements.

Number of Construction Workers and Material Deliveries

Construction is labor intensive, and the number of workers varies with the general construction task and/or building size. Likewise, material deliveries and removals generate truck trips, and the number also varies depending on the task and/or the building size. **Table 20-3** shows the estimated number of daily workers and trucks to the Development Site per quarter (i.e., three-month period) of each calendar year for the duration of construction activities. These represent the average number of daily workers and trucks within each quarter. The average number of 1st shift workers would be approximately 1,124 workers per day, with a peak of 2,107 workers per day occurring in the first quarter of 2029. An average of 69 trucks per day is anticipated during the first shift, and a maximum of 125 trucks per day is anticipated during the fourth quarter of 2027. The average number of 2nd shift workers would be approximately 222 workers per day, with a peak of 300 workers per day occurring from the third quarter of 2027 to the second quarter of 2027. An average of 23 trucks per day is anticipated during the second shift, and a maximum of 35 trucks per day is anticipated during the second quarter of 2028 and second quarter of 2029.

Table 20-3 Average Number of Daily Construction Workers and Trucks by Quarter

	2026				2027				2028			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Shift 1												
Workers	634	872	1,095	1,147	1,188	1,197	1,349	1,522	1,891	1,989	1,806	2029
Trucks	21	57	52	22	46	69	98	125	88	100	99	86
Shift 2												
Workers	158	218	274	287	297	295	300	300	300	300	300	300
Trucks	19	38	29	11	17	22	29	34	30	35	28	24

	2029				2030			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Shift 1								
Workers	2,107	1,594	1,015	365	132	125	160	257
Trucks	106	113	102	64	15	12	16	13
Shift 2								
Workers	300	300	254	91	33	31	40	64
Trucks	32	35	29	18	6	4	5	6

Assessment of Project Construction

In accordance with the *CEQR Technical Manual* guidelines, this preliminary assessment evaluates the effects associated with the Proposed Projects' construction related activities—including transportation, air quality, noise, and vibration—on sensitive receptors located near the area of construction, as well as construction related effects on existing nearby historic architectural resources.

Transportation

Construction activity would extend from 2026 through 2030 and would generate construction worker vehicle and truck traffic. Because the construction period would be longer than two years ("long-term" per the *CEQR Technical Manual)*, an evaluation of construction sequencing and worker and truck projections was completed in order to identify potential construction traffic impacts. Construction trip projections were developed and assigned through the study area through key access routes to the Development Site, and a detailed traffic analysis was performed for 45~~41~~ intersections for the AM and PM construction peak hours within the traffic study area. The construction analysis considers two scenarios for construction worker trips: a non-gameday scenario where construction worker parking would be accommodated on-site, and a gameday scenario in which construction workers are directed to nearby parking facilities in downtown Flushing. The conclusions of this analysis are presented below.

Construction Worker Modal Splits

The number of projected construction worker vehicles per day was developed for the construction quarters based on the 2000 Census reverse journey to work data for the construction industry (for Queens census tracts 381, 383.01, 383.02, 399, 401, 403, 415, 851, 867, 871, 875, and 899). Based on this information, it is anticipated that construction workers would primarily drive to the Development Site (approximately 55 percent with an average auto occupancy of 1.15), with a smaller percentage of construction workers traveling via bus or subway (approximately 45 percent).

Peak Daily Vehicle Trips by Quarter

Based on the above mode share and vehicle occupancy assumptions, the peak quarter for construction activities was identified. As shown in **Table 20-4**, the peak quarter of construction activity would occur during the first quarter of 2029 and construction activities would generate approximately 2,578 daily vehicle trips (2,854 daily PCE trips[3]).

Table 20-4 Average Number of Daily Number of Construction PCE Trips by Quarter

	2026				2027				2028			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Auto Trips	758	1,042	1,310	1,372	1,420	1,428	1,578	1,744	2,096	2,190	2,014	2,228
Truck Trips	108	240	185	73	134	193	260	319	238	270	254	219
Vehicle Trips	866	1,282	1,495	1,445	1,554	1,621	1,838	2,063	2,334	2,460	2,268	2,447
PCE Trips	975	1,522	1,679	1,517	1,688	1,814	2,098	2,381	2,571	2,730	2,522	2,666

	2029				2030			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Auto Trips	2,302	1,812	1,214	436	158	150	192	306
Truck Trips	276	295	263	166	42	33	42	37
Vehicle Trips	2,578	2,107	1,477	602	200	183	234	343
PCE Trips	2,854	2,403	1,739	767	242	216	277	381

Traffic Analysis

Peak-Hour Construction Worker Vehicle and Truck Trips

Construction activities would be expected to occur on weekdays and Saturdays and would typically occur in two shifts – a 7 AM to 3 PM first shift and a 3 PM to 11 PM second shift that would have a lower level of construction activities compared to the main shift. For conservative analysis purposes, first shift workers departing were assumed to overlap with second shift workers arriving. This provides a highly conservative analysis of worst-case conditions for the PM construction conditions.

Auto trips associated with construction worker travel would typically occur during the hours before and after the daily work shift. For analysis purposes, each worker vehicle arriving for the first shift would arrive in the morning and depart in the afternoon; those arriving for the second shift would

[3] Since larger vehicles such as trucks typically make up a significant portion of construction traffic, a passenger car equivalent (PCE) 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.

arrive in the afternoon and depart in the late-night hour. Construction truck trips would typically be distributed throughout the day depending upon the specific types of construction activities taking place; most trucks would remain in the area for short durations. Each truck delivery was assumed to result in one "in" trip and one "out" trip during the same hour. In order to avoid overlap in Mets patron ingress and egress on gamedays, second shift deliveries would be delivered with first shift deliveries on gamedays and would not enter or exit the site later than 4 PM.

For construction workers arriving during the first shift, 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 first shift) and the same percentage of departure trips occurs immediately following the end of the shift (the 3 PM to 4 PM hour). For trucks arriving during the first shift, deliveries are usually spread throughout the 7 AM to 3 PM period, but the peak activity (approximately 25 percent) is anticipated to occur during the 6 AM to 7 AM hour. Similar assumptions were made for the second shift start at the 3PM to 4 PM hour.

On non-gamedays, the estimated number of vehicle trips generated by construction activities during the Q1 2029 peak quarter would be 858 vehicle trips (906 PCEs) during the AM peak hour (6 AM to 7 AM) and 946 vehicle trips (972 PCEs) during the PM peak hour (3 PM to 4 PM). The non-gameday peak construction hourly trip projections for this peak quarter are summarized in **Table 20-5**.

On gamedays, the estimated number of vehicle trips generated by construction activities during the Q1 2029 peak quarter would be 874 vehicle trips (938 PCEs) during the AM peak hour and 934 vehicle trips (948 PCEs) during the PM peak hour. The gameday peak construction hourly trip projections for this peak quarter are summarized in **Table 20-6**.

In comparison, upon completion, the Proposed Project would generate 1,330 vehicle trips (1,443 PCEs), 3,441 vehicle trips (3,554 PCEs), and 4,233 vehicle trips (4,251 PCEs) during the non-gameday weekday AM, midday, and PM peak hours, respectively, as shown in **Table 20-7**.

Table 20-5 Non-Gameday Construction Vehicle Trips by Hour (Q1 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	810	0	24	24	834	24	858	858	48	906
7 AM – 8 AM	201	0	11	11	212	11	223	223	22	245
8 AM – 9 AM	0	0	11	11	11	11	22	22	22	44
9 AM – 10 AM	0	0	11	11	11	11	22	22	22	44
10 AM – 11 AM	0	0	11	11	11	11	22	22	22	44
11 AM – 12 PM	0	0	11	11	11	11	22	22	22	44
12 PM – 1 PM	0	0	11	11	11	11	22	22	22	44
1 PM – 2 PM	0	0	5	5	5	5	10	10	10	20
2 PM – 3 PM	0	51	5	5	5	56	61	10	61	71
3 PM – 4 PM	114	806	13	13	127	819	946	140	832	972
4 PM – 5 PM	29	154	5	5	34	159	193	39	164	203
5 PM – 6 PM	0	0	5	5	5	5	10	10	10	20
6 PM – 7 PM	0	0	5	5	5	5	10	10	10	20
7 PM – 8 PM	0	0	3	3	3	3	6	6	6	12
8 PM – 9 PM	0	0	3	3	3	3	6	6	6	12
9 PM – 10 PM	0	0	3	3	3	3	6	6	6	12
10 PM – 11 PM	0	0	0	0	0	0	0	0	0	0
11 PM – 12 AM	0	114	0	0	0	114	114	0	114	114
12 AM – 1 AM	0	29	0	0	0	29	29	0	29	29
1 AM – 2 AM	0	0	0	0	0	0	0	0	0	0

Table 20-6 Gameday Construction Vehicle Trips by Hour (Q1 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	810	0	32	32	842	32	874	874	64	938
7 AM – 8 AM	201	0	14	14	215	14	229	229	28	257
8 AM – 9 AM	0	0	14	14	14	14	28	28	28	56
9 AM – 10 AM	0	0	14	14	14	14	28	28	28	56
10 AM – 11 AM	0	0	14	14	14	14	28	28	28	56
11 AM – 12 PM	0	0	14	14	14	14	28	28	28	56
12 PM – 1 PM	0	0	14	14	14	14	28	28	28	56
1 PM – 2 PM	0	0	7	7	7	7	14	14	14	28
2 PM – 3 PM	0	51	7	7	7	58	65	14	65	79
3 PM – 4 PM	114	806	7	7	121	813	934	128	820	948
4 PM – 5 PM	29	154	0	0	29	154	183	29	154	183
5 PM – 6 PM	0	0	0	0	0	0	0	0	0	0
6 PM – 7 PM	0	0	0	0	0	0	0	0	0	0
7 PM – 8 PM	0	0	0	0	0	0	0	0	0	0
8 PM – 9 PM	0	0	0	0	0	0	0	0	0	0
9 PM – 10 PM	0	0	0	0	0	0	0	0	0	0
10 PM – 11 PM	0	0	0	0	0	0	0	0	0	0
11 PM – 12 AM	0	114	0	0	0	114	114	0	114	114
12 AM – 1 AM	0	29	0	0	0	29	29	0	29	29
1 AM – 2 AM	0	0	0	0	0	0	0	0	0	0

Table 20-7 Comparison of Vehicle Trips – Construction vs. Operational Conditions

	Non-Gameday Construction Peak-Hour Trips		Gameday Construction Peak-Hour Trips		Operational Peak-Hour Trips		
	6 – 7 AM	3 – 4 PM	6 – 7 AM	3 – 4 PM	8 – 9 AM	1 – 2 PM	5 – 6 PM
Auto Trips	810	920	810	920	787	2,296	3,049
Taxi Trips	0	0	0	0	430	1,032	1,166
Charter Bus Trips	0	0	0	0	3	9	10
Truck Trips	48	26	64	14	110	104	8
Total Vehicle Trips	**858**	**946**	**874**	**934**	**1,330**	**3,441**	**4,233**
Total PCE Trips	**906**	**972**	**938**	**948**	**1,443**	**3,554**	**4,251**

Construction Traffic Volumes and Levels of Service

As noted above and as shown in the tables above, the construction peak hours are 6 AM to 7 AM, and 3 PM to 4 PM. During the peak quarter of construction, no sidewalk or curbside parking lane

closures are anticipated as all construction work and equipment would be accommodated within the Development Site. The re-aligned Shea Road at 126th Street/Seaver Way and 35th Avenue would be available for construction worker ingress and egress.

Since traffic volumes during the construction peak hours are expected to be less than the operational peak hours, and the roadway capacities are similar, construction activities would be expected to result in fewer or similar impacts as the operational analysis. However, construction activities during the peak quarter would result in changes in assignments to the construction vehicle trips along the roadway network, which may vary from those assumed for the operational analysis as these trips get closer to the site.

Based on the construction trip assignments, the following 39~~35~~ intersections included in the operational analysis were identified for analysis during the AM and PM construction peak hours for both the non-gameday and gameday scenarios. Intersections denoted in **bold** are new intersections along Shea Road providing direct access to the Proposed Project or are existing intersections that have been reconfigured to incorporate changes to the network along Shea Road to accommodate the Proposed Project.

- Northern Boulevard westbound at 126th Street/Seaver Way
- Northern Boulevard eastbound at 126th Street/Seaver Way
- Northern Boulevard at Prince Street
- Northern Boulevard westbound at Main Street
- Northern Boulevard eastbound at Main Street
- Northern Boulevard at Union Street
- Northern Boulevard at Parsons Boulevard
- Roosevelt Avenue at 114th Street
- Roosevelt Avenue at 126th Street/Seaver Way
- Roosevelt Avenue westbound at College Point Boulevard
- Roosevelt Avenue eastbound at College Point Boulevard
- Roosevelt Avenue at Prince Street
- Roosevelt Avenue at Main Street
- Roosevelt Avenue at Union Street
- Roosevelt Avenue at Parsons Boulevard
- 34th Avenue/Shea Road at 126th Street/Seaver Way
- **35th Avenue/Shea Road at 126th Street/Seaver Way**
- **Shea Road at Northfield Parking Structure North Access 1**
- **Shea Road at Northfield Parking Structure North Access 2**
- **Shea Road at Northfield Parking Structure South/North Access 3**
- **Shea Road at Mets Truck Loading**
- Shea Road at Boat Basin Place
- **Shea Road at Porte Cochere Exit Ramp**
- **Grand Central Parkway westbound exit ramp/Podium Parking West Access at Shea Road**
- 34th Avenue at 114th Street

- Northern Boulevard at 126th Place
- Roosevelt Avenue at Stadium Place North
- Roosevelt Avenue at Stadium Place
- Roosevelt Avenue at Stadium Place South
- Roosevelt Avenue at Citi Field Entrance 3
- Roosevelt Avenue at Southfield Parking Lot
- Shea Road at Citi Field Entrance 10
- Shea Road/Citi Field Entrance 8 at Boat Basin Place
- Shea Road at Citi Field Entrance 6 and 7
- Grand Central Parkway westbound exit ramp at West Park Loop/Shea Road
- 126th Street/Seaver Way at Citi Field Entrance 11
- 36th Avenue at 126th Street/Seaver Way
- **126th Street/Seaver Way at Citi Field Entrance 1**
- Marina Road at Boat Basin Place

For the purposes of the gameday scenario during which construction workers who drive to work would park at off-site parking facilities, the following 13 intersections were identified for analysis during the AM and PM construction peak hours, and are included in both the non-gameday and gameday scenarios for a consistent traffic network study area:

- Roosevelt Avenue westbound at Skyview Parking Garage
- Roosevelt Avenue eastbound at Skyview Parking Garage
- Union Street at 37th Avenue
- Prince Street at 39th Avenue
- Union Street at 39th Avenue
- College Point Boulevard at Tangram Parking Garage
- College Point Boulevard at 39th Street
- College Point Boulevard at 40th Road
- 37th Avenue at 138th Street
- 39th Avenue at Tangram Parking Garage
- 39th Avenue at 138th Street
- 39th Avenue at Flushing Commons (SP+) South Garage
- 40th Road at Skyview Parking Garage

Existing Conditions

Traffic volume data for the AM and PM construction peak hours were collected in September and October 2022, as well as May 2023, during which volumes for the operational transportation analysis were also collected. The additional 13 representative intersections in Flushing were collected in February 2024 for the gameday scenario during which construction workers who drive to work would park at off-site parking facilities. Traffic volume maps for the AM and PM construction peak hours are provided in **Appendix F**.

An assessment of traffic operations at the Proposed Project's operational traffic analysis locations selected for the construction analysis was conducted to confirm that roadway capacities during the AM and PM construction peak hour would be consistent with the Proposed Project's operational peak hours. At signalized intersections, signal timings were confirmed to be consistent between the 6 AM to 7 AM and 8 AM to 9 AM peak hours, and between the 5 PM to 6 PM and 3 PM to 4 PM peak hours. The number of travel lanes would also generally remain unchanged between the construction and operational peak hours during the construction period.

Forty-four of the 45 intersections analyzed during the AM and PM construction peak hours operate at overall acceptable level of service. The intersection of Northern Boulevard and Parsons Boulevard operates at LOS E during the AM construction peak hour and the intersection of Roosevelt Avenue and 114th Street operates at LOS E during the PM construction peak hour. Of the approximately 175 movements analyzed during the AM construction peak hour, four lane groups operate at unacceptable levels of service (i.e., LOS E or F). Of the 178 movements analyzed during the PM construction peak hour, 11 lane groups operate at unacceptable levels of service. Detailed traffic levels of service are provided in **Table F-1** of **Appendix F**.

No-Action without Construction Conditions

An annual growth rate of 0.50 percent per year was assumed for the first five years (years 2022 to 2027) and a growth rate of 0.25 percent per year was assumed for the subsequent years (year 2027 to 2029) as per the *CEQR Technical Manual* in order to estimate the background volumes for the 2028 No-Action without Construction condition. Vehicle trips for No-Action background development sites discussed in **Chapter 14, Transportation,** expected to be developed in the area and completed by the year 2029, were assigned to the roadway network. It is expected that roadway improvements projects identified in **Chapter 14, Transportation**, would also be completed by the year 2029. Traffic flow maps for the No-Action without Construction condition during the AM and PM construction peak hours are provided in **Appendix F.**

Under future No-Action conditions in year 2029, one intersection (Northern Boulevard and Parsons Boulevard) would operate at an overall unacceptable level of service (LOS E) during the AM construction peak hour, the same as in the existing conditions. Three intersections (Northern Boulevard at Prince Street and Parsons Boulevard, and Roosevelt Avenue at 114th Street) would operate at unacceptable overall levels of service during the PM construction peak hour, compared to one intersection in the existing conditions. Of the 176 lane groups analyzed during the AM construction peak hour, five movements would operate at unacceptable levels of service, compared to four lane groups in existing conditions. Of the 179 lane groups analyzed during the PM construction peak hour, 16 movements would operate at unacceptable levels of service, compared to 11 movements in existing conditions. Detailed traffic levels of service are provided in **Table F-2** of **Appendix F**.

With-Action with Construction Condition

The traffic analysis roadway network reflects improvements completed by Stage 4, during which the peak quarter (Q1 2029) occurs. The majority of the roadway improvements for the full buildout of the Proposed Project are complete and connected to the existing roadway network, with the exception of the roadwork at Northern Boulevard and 126th Street/Seaver Way, and the eastbound approach for the Porte Cochere Exit Ramp, which are still under construction during this stage. It was assumed that revised signal timings or proposed new signals reflected in the operational analysis

would be in place during Stage 4 of construction activities, with timing and phasing modifications to optimize operations for construction related trips. As a result of these intersection geometric changes, a total of 45~~1~~ intersections were analyzed in the With-Action with Construction condition.

The With-Action construction analysis considers two scenarios for construction worker trips: a non-gameday scenario where construction worker parking would be accommodated on-site, and a gameday scenario in which construction workers are directed to nearby parking facilities in downtown Flushing.

On non-gamedays, construction activities would generate 810 construction worker auto trips and 48 construction truck trips during the AM construction peak hour, and 920 construction worker auto trips and 26 construction truck trips during the PM construction peak hour. On gamedays, construction activities would generate the same number of worker auto trips as during the non-gameday AM and PM construction peak hours; 64 truck trips would occur during the AM construction peak hour and 14 truck trips would occur during the PM construction peak hour. Construction trucks would be required to use NYCDOT-designated truck routes to get to the Project Area and would then use local streets to access the construction site. The results of these two scenarios are discussed in further detail below and in **Chapter 21, Mitigation**.

Non-Gameday With-Action Construction Scenario

As indicated in **Table F-3** and **Table F-4** in **Appendix F**, two of the 45~~41~~ analysis intersections would be significantly impacted during the AM construction peak hour, and six~~five~~ of the 45~~41~~ analysis intersections would be significantly impacted during the PM construction peak hour. The following intersections would be significantly impacted:

- The intersection of Northern Boulevard eastbound and 126th Street/Seaver Way would be significantly impacted during the PM construction peak hour.
- The intersection of Northern Boulevard and Union Street would be significantly impacted during the AM and PM construction peak hours.
- The intersection of Northern Boulevard and Parsons Boulevard would be significantly impacted during the AM and PM construction peak hours.
- The intersection of Roosevelt Avenue and 114th Street would be significantly impacted during the PM construction peak hour.
- The intersection of Roosevelt Avenue and 126th Street/Seaver Way would be significantly impacted during the PM construction peak hour.
- The intersection of Roosevelt Avenue and Prince Street would be significantly impacted during the PM construction peak hour.

Gameday With-Action Construction Scenario

Under this scenario, construction workers would be directed to utilize parking facilities in downtown Flushing and use alternative transportation modes (i.e. transit, walk) to and from these facilities to the Development Site. As part of this scenario, a number of nearby parking facilities were selected as reasonable locations for construction worker parking, including:

- Skyview Parking Garage located at 129 Roosevelt Avenue/131-27 40th Road.
- (SP+) Flushing Commons South Garage located at 38-18 Union Street

› Tangram West Garage located at 133-27 39th Avenue.

As indicated in **Table F-5** and **Table F-6** in **Appendix F**, six of the 45~~41~~ analysis intersections would be significantly impacted during the AM construction peak hour, and 11 of the 45~~41~~ analysis intersections would be significantly impacted during the PM construction peak hour. The following intersections would be significantly impacted:

› The intersection of Northern Boulevard at Prince Street would be significantly impacted during the AM and PM construction peak hours.
› The intersection of Northern Boulevard at Union Street would be significantly impacted during the AM and PM construction peak hours.
› The intersection of Northern Boulevard at Parsons Boulevard would be significantly impacted during the AM and PM construction peak hours.
› The intersection of Roosevelt Avenue and 114th Street would be significantly impacted during the AM and PM construction peak hours.
› The intersection of Roosevelt Avenue and 126th Street/Seaver Way would be significantly impacted during the PM construction peak hour.
› The intersection of Roosevelt Avenue westbound and Skyview Parking Garage would be significantly impacted during the AM and PM construction peak hours.
› The intersection of Roosevelt Avenue eastbound and Skyview Parking Garage would be significantly impacted during the AM construction peak hour.
› The intersection of Roosevelt Avenue and Prince Street would be significantly impacted during the PM construction peak hour.
› The intersection of Roosevelt Avenue and Union Street would be significantly impacted during the PM construction peak hour.
› The intersection of Union Street and 39th Avenue would be significantly impacted during the PM construction peak hour.
› The intersection of College Point Boulevard and 40th Road would be significantly impacted during the PM construction peak hour.
› The intersection of 39th Avenue at Flushing Commons (SP+) South Garage would be significantly impacted during the PM construction peak hour.

Deliveries

Construction trucks would be required to use NYCDOT-designated truck routes, including Roosevelt Avenue, 126th Street/Seaver Way and Shea Rd and service the construction site at the designated loading zones. The location of the loading zones is dependent on the specific stage of construction.

Curb Lane Closures and Staging

As part of the streetscape improvements along Roosevelt Avenue, no public sidewalk closures are anticipated. Construction phasing would maintain, at a minimum, the existing sidewalk width as streetscape improvements are integrated past the pedestrian right of way and into the property line of the Development Site.

Temporary closures for the above grade pedestrian/bicycle crossing (replacing the existing at-grade crosswalk at the ramp from the westbound Grand Central Parkway to the eastbound Whitestone

Expressway) are expected and would be concurrent with the roadway improvements during construction Stages 3 (12 months) and 4 (12 months). This may result in a temporary detour for this pedestrian/bicycle route.

Sidewalk and lane closures will be finalized as the MPT plans are developed and reviewed with NYC DOT. All lane and sidewalk closures during construction will require DOT's OCMC's review and approval.

Parking

Construction workers would generate an estimated maximum daily parking demand for 1,011 spaces during the Q1 2029 peak quarter for the Proposed Project. In the non-gameday scenario, this parking demand would be fully accommodated on-site, since workers would be able to utilize the Northfield parking structure (with a capacity of 4,200 parking spaces) expected to be completed by the peak quarter. In the gameday scenario, this demand would be fully accommodated by off-street parking facilities in the downtown Flushing area. A detailed inventory of the three representative parking facilities listed above was conducted during peak periods. **Table 20-8** presents the capacity and occupancy of these off-street parking facilities during the peak periods. The total capacity of the three facilities is 4,705 parking spaces, with a total occupancy of 401 parking spaces during the weekday AM period, 1,693 parking spaces during the weekday midday period, and 1,173 parking spaces during the weekday PM period. Overall, parking demand for construction workers during theQ1 2029 peak quarter would be accommodated by these facilities.

Prior to the completion of the Northfield parking structure in Stages 1 and 2, construction workers could continue to park at existing Mets lots that are still available during these stages (i.e. Lot A, portions of Lot C, R and the existing Southfield parking lot). It is expected that all construction workers could be accommodated between these facilities on non-gamedays. On gamedays, similar to the analysis conducted for the construction peak quarter, construction workers would be directed to park off-site, to facilities such as those identified above. Therefore, construction for the Proposed Project would not result in a parking shortfall.

Table 20-8 Existing Off-Street Parking Inventory

Map No.	Location	Capacity	Weekday AM Occupancy	Weekday Midday Occupancy	Weekday PM Occupancy
1	Skyview Parage Garage	2,577	279	1,034	788
			11%	40%	31%
2	(SP+) Flushing Commons South Garage	982	57	289	155
			6%	29%	16%
3	Tangram West Garage	1,146	65	370	231
			6%	32%	20%
Total		**4,705**	**401**	**1,693**	**1,174**
			9%	**36%**	**25%**

Transit and Pedestrians

Non-Gameday With-Action Construction Scenario

~~Based on census data for the construction industry, it is anticipated that approximately 45 percent of construction workers would commute to the Development Site by public transportation.~~ During the first quarter of 2029 when construction worker volumes would be highest, construction would be expected to generate 2,407 daily construction workers (1,083 workers would be expected to use public transportation or walk). It is expected that the majority of construction workers (80 percent) would arrive during the AM construction peak hour and depart during the PM construction peak hour, and they would generate approximately 866 construction worker trips by public transportation or walk during the AM and PM construction peak hours. These totals are well below the 2030 operational generated pedestrian increment trips.

Based on census data for the construction industry, it is anticipated that approximately 45 percent of construction workers would commute to the Development Site by public transportation or walk. Approximately 25 percent would travel by subway, specifically using the Mets – Willets Point No. 7 subway station. The proposed subway station improvements would be complete by the Q1 2029 construction peak quarter and allow for workers to directly enter the site from the station without traversing street level pedestrian elements. The remaining 20 percent (which results in approximately 174 construction worker trips) would take the bus (such as the Q48 immediately in front of the Development Site) or walk from nearby residential areas and would not exceed the 200 pedestrian *CEQR Technical Manual* thresholds for detailed analysis, and construction activities are not expected to result in significant adverse pedestrian or transit impacts during the non-gameday scenario. However, in order to provide a comprehensive comparison of non-gameday and gameday construction conditions, an assessment of the level of service along key walking paths during construction was conducted. This analysis was conducted during the AM and PM construction peak hours for the crosswalks and north and side sidewalks at the intersection of Roosevelt Avenue and 126th Street/Seaver Way.

~~When distributed across different transit options including the No.7 subway line and various MTA bus routes in the vicinity of the Proposed Project, the worker pedestrian and transit trips would be below the 200 pedestrian *CEQR Technical Manual* thresholds for detailed analysis. Furthermore, the peak construction pedestrian and transit increments would take place when background pedestrian levels are lower than they would be in the 8 AM to 9 AM and 5 PM to 6 PM commuter peak hours. Therefore, construction of the Proposed Project is not expected to result in any significant adverse pedestrian or transit impacts in the non-gameday scenario.~~

Detailed pedestrian levels of service for Existing, No-Action without Construction and non-gameday With-Action with Construction conditions are shown in **Table 20-9** and **Table 20-10**. Pedestrian volume figures for Existing, No-Action without Construction and non-gameday With-Action with Construction are provided in **Appendix F**. The No-Action without Construction pedestrian volumes were estimated using annual growth rates as per the *CEQR Technical Manual* as well as No-Action background development sites in the vicinity of the study area expected to be developed by the year 2029.

Table 20-9 Existing vs No-Action vs Non-Gameday With-Action Pedestrian Levels of Service - Sidewalks

	Existing				No-Action				With-Action			
Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS
AM Construction Peak Hour												
Roosevelt Avenue between Subway Station and 126th Street/Seaver Way (north side)	11.3	63	1,662.2	A	11.3	250	419.2	B	11.3	292	359.0	B
Roosevelt Avenue between Subway Station and 126th Street/Seaver Way (south side)	10.5	3	41,580.0	A	10.5	10	12,524.1	A	10.5	10	12,524.1	A
Roosevelt Avenue between 126th Street/Seaver Way and Flushing Creek (north side)	7.2	24	3,153.3	A	3.1	32	1,005.7	3.1	3.1	49	656.8	A
Roosevelt Avenue between 126th Street/Seaver Way and Flushing Creek (south side)	8.0	0	-	A	10.1	6	19,751.1	A	10.1	24	5,427.8	A
PM Construction Peak Hour												
Roosevelt Avenue between Subway Station and 126th Street/Seaver Way (north side)	11.3	64	2,493.3	A	11.3	584	273.0	B	11.3	632	252.3	B
Roosevelt Avenue between Subway Station and 126th Street/Seaver Way (south side)	10.5	14	5,940.0	A	10.5	34	2,417.4	A	10.5	34	2,417.4	A
Roosevelt Avenue between 126th Street/Seaver Way and Flushing Creek (north side)	7.2	45	2,027.1	A	3.1	89	437.7	B	3.1	109	358.8	B
Roosevelt Avenue between 126th Street/Seaver Way and Flushing Creek (south side)	8.0	0	-	A	10.1	41	3,136.9	A	10.1	60	2,119.8	A

Shading denotes significantly impacted pedestrian element

This Table is new to the FEIS.

Table 20-10 Existing vs No-Action vs Non-Gameday With-Action Pedestrian Levels of Service - Crosswalks

Intersection	Crosswalk	Existing			No-Action			With-Action		
		Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
AM Construction Peak Hour										
126th Street/Seaver Way and Roosevelt Avenue	*North*	16	2,219.9	A	95	745.3	A	137	524.9	A
	East	1	3,907.8	A	13	720.6	A	30	232.7	A
	South	1	18,008.9	A	6	6,233.9	A	6	6,192.0	A
	West	0	-	A	2	12,269.5	A	2	12,314.5	A
PM Construction Peak Hour										
126th Street/Seaver Way and Roosevelt Avenue	*North*	35	912.5	A	263	221.1	A	311	187.5	A
	East	6	820.4	A	62	106.2	A	81	71.1	A
	South	9	3,592.5	A	24	1,555.1	A	24	1,554.4	A
	West	1	4,244.9	A	6	1,272.0	A	6	1,277.4	A

Shading denotes significantly impacted pedestrian element

This table is new to the FEIS.

As shown in the tables above, no significant adverse pedestrian impacts would result from construction activities during the AM and PM construction peak hours in the non-gameday scenario.

Gameday With-Action Construction Scenario

On gamedays, construction workers would be accommodated offsite at parking facilities in downtown Flushing, as discussed above. Construction workers parking at these facilities would continue via transit or walk to access the Development Site. An assessment of the level of service along key walking paths to and from these facilities during construction was conducted. This analysis was conducted during the AM and PM construction peak hours for the crosswalks and north and south sidewalks at the intersection of Roosevelt Avenue and 126th Street/Seaver Way, similar to the non-gameday scenario.

Detailed pedestrian levels of service for Existing, No-Action without Construction and gameday With-Action with Construction conditions are shown in **Table 20-11** and **Table 20-12**. Pedestrian volume figures for Existing, No-Action without Construction and gameday With-Action with Construction are provided in **Appendix F**. ~~The No-Action without Construction pedestrian volumes were estimated using annual growth rates as per the *CEQR Technical Manual* as well as No-Action background development sites in the vicinity of the study area expected to be developed by the year 2029.~~

Table 20-11 Existing vs No-Action vs Gameday With-Action Pedestrian Levels of Service - Sidewalks

Sidewalk	Existing				No-Action				With-Action			
	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	LOS
AM Construction Peak Hour												
Roosevelt Avenue between Subway Station and 126th Street/Seaver Way (north side)	11.3	63	1,662.2	A	11.3	250	419.2	B	11.3	1084	96.1	B
Roosevelt Avenue between Subway Station and 126th Street/Seaver Way (south side)	10.5	3	41,580.0	A	10.5	10	12,524.1	A	10.5	10	12,524.1	A
Roosevelt Avenue between 126th Street/Seaver Way and Flushing Creek (north side)	7.2	24	3,153.3	A	3.1	32	1,005.7	3.1	3.1	49	656.8	A
Roosevelt Avenue between 126th Street/Seaver Way and Flushing Creek (south side)	8.0	0	-	A	10.1	6	19,751.1	A	10.1	816	156.6	B
PM Construction Peak Hour												
Roosevelt Avenue between Subway Station and 126th Street/Seaver Way (north side)	11.3	64	2,493.3	A	11.3	584	273.0	B	11.3	1532	103.6	B
Roosevelt Avenue between Subway Station and 126th Street/Seaver Way (south side)	10.5	14	5,940.0	A	10.5	34	2,417.4	A	10.5	34	2,417.4	A
Roosevelt Avenue between 126th Street/Seaver Way and Flushing Creek (north side)	7.2	45	2,027.1	A	3.1	89	437.7	B	3.1	109	358.8	B
Roosevelt Avenue between 126th Street/Seaver Way and Flushing Creek (south side)	8.0	0	-	A	10.1	41	3,136.9	A	10.1	960	132.9	B

Shading denotes significantly impacted pedestrian element

This table has been updated for the FEIS.

Table 20-12 Existing vs No-Action vs Gameday With-Action Pedestrian Levels of Service - Crosswalks

Intersection	Crosswalk	Existing			No-Action			With-Action		
		Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
AM Construction Peak Hour										
126th Street/Seaver Way and Roosevelt Avenue	*North*	16	2,219.9	A	95	745.3	A	533	132.2	A
	East	1	3,907.8	A	13	720.6	A	426	10.6	E
	South	1	18,008.9	A	6	6,233.9	A	402	187.9	A
	West	0	-	A	2	12,269.5	A	398	47.2	B
PM Construction Peak Hour										
126th Street/Seaver Way and Roosevelt Avenue	*North*	35	912.5	A	263	221.1	A	761	73.1	A
	East	6	820.4	A	62	106.2	A	531	7.2	F
	South	9	3,592.5	A	24	1,555.1	A	474	88.0	A
	West	1	4,244.9	A	6	1,272.0	A	456	10.2	E

Shading denotes significantly impacted pedestrian element

This table has been updated for the FEIS.

Significant pedestrian impacts would be expected at the 126th Street/Seaver Way and Roosevelt Avenue east crosswalk during both the AM and PM construction peak hours, and the 126th Street/Seaver Way and Roosevelt west crosswalk during the PM construction peak hour. These levels of service at these crosswalks would be temporary and only occur on gamedays that overlap with construction activities. However, the intersection will be monitored during construction with further coordination with OCMC. Potential measures to ensure pedestrian safety and supporting analysis, as well as potential data collection that may be required, will also be coordinated with OCMC. Mitigation measures implemented at these elements are discussed in further detail in **Chapter 21, Mitigation**.

Air Quality

Introduction

Construction impacts on air quality levels may occur because of particulate matter (fugitive dust) created by excavation, demolition, transfer of debris into trucks, emissions from on-site diesel equipment, and emissions from increased truck traffic to and from the construction site on local roadways. As discussed in the *CEQR Technical Manual,* the determination of whether it is sufficient to conduct a qualitative analysis of these emissions or whether a quantitative analysis is required should take into account factors such as duration of construction activities, location of the project site in relation to existing residential uses at the time of construction and other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate emission control measures.

The highest construction emissions are typically generated during demolition, excavation, and foundation phases, since it is during these phases 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 later phases 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. The later phases of construction generally involve use of smaller engines and electric tools dispersed vertically throughout the building, resulting in very low concentration increments in adjacent areas. Additionally, the later phases of construction do not involve soil disturbance activities and therefore result in significantly lower fugitive dust emissions. Construction activities associated with interior finishes are shielded from nearby sensitive receptors by the proposed structures themselves.

For the Proposed Project, the overall construction period would exceed two years, the threshold mentioned in *CEQR Technical Manual* that indicates potential for significant air quality impacts. Given that multiple buildings would be constructed, and the construction would partially occur near sensitive receptors, a detailed quantitative analysis of construction air quality impacts was undertaken.

Air Quality Analysis Methodologies

On-Site and Off-Site Construction Impacts

Based on a conceptual construction schedule developed for each stage of the Proposed Project, the peak cumulative short-term and annual emissions for each pollutant of concern were evaluated for the full construction process (demolition, foundation and excavation, utilities, structural frame/ superstructure, exterior and interior construction and site work) for each Area of Development. Periods with the highest emissions were selected for modeling as periods with the highest potential air quality effects. This analysis, called the intensity assessment, was used to identify the peak construction time and peak year for the dispersion modeling analysis.

A dispersion analysis—which considers the PM_{10}, $PM_{2.5}$, NO_x, and CO emissions from on-site sources (construction equipment, fugitive dust and trucks idling, loading and unloading and entering the site)—was performed to determine potential air quality effects during the peak emission construction period for each pollutant.

The effects of the trucks and employee cars approaching and departing the site on public roadways and trucks on internal roadways for each construction phase were also included in the emission calculations for the emission intensity analysis. For the dispersion analysis, roadway access for the selected period was included as a series of line sources, representing the approach and departure from the site. Additionally, impacts of construction traffic emissions at off-site intersections and intersections within the surrounding area were considered separately using *CEQR Technical Manual* screening methodologies (see the **Off-Site Construction Impacts** subsection).

The following sections provide additional details related to the construction air quality analysis methodology. For a review of the applicable regulations, standards and criteria, and benchmarks refer to **Chapter 15, Air Quality**.

Construction air quality analysis was performed following EPA and *CEQR Technical Manual* procedures and analytical tools, including EPA's *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Non-attainment and Maintenance Areas* (EPA PM Guidance).[4]

[4] https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1013C6A.pdf

Emissions were estimated using procedures described below. Estimated emission rates were then used as an input to the air quality dispersion model to determine potential impacts.

Emission Estimation Process

Construction analyses used an emission estimation method and a modeling approach that has been developed for evaluating air quality impacts of construction projects in New York City. Because the level and types of construction activities would vary from month to month, the approach includes a determination of the worst-case emission period based on an estimated monthly construction work schedule, the number of on-site construction equipment types and rated horsepower of each unit, quantities of materials to be excavated, and number of trucks arriving, working, and leaving the site.

The worst-case short-term emissions (e.g., maximum daily emissions) and the maximum annual emissions (based on a 12-month rolling average) were determined based on the construction schedule activities and equipment projected to be required for the construction period. The assessment considered several main phases of construction in each Area of Development construction: demolition, excavation/foundation, utilities, structural frame and precast superstructure, other exterior construction, MEPS and other interior construction, and site work.

The specific construction information used to calculate emissions generated from the construction process included, but is not limited to, the following:

- The number of units and fuel-type of construction equipment to be used;
- Rated horsepower and load factors for each piece of equipment[5];
- Utilization rates for equipment;
- Hours of operation on-site; and
- Average distance to approach the site, on-site travel, and idling time by trucks.

Emissions Reduction Measures Considered

As discussed above, construction activities could affect air quality because of engine emissions from on-site construction equipment and dust-generating activities. In general, much of the heavy equipment used in construction has diesel-powered engines, which produce relatively high levels of nitrogen oxides and particulate matter. Gasoline engines produce relatively high levels of carbon monoxide. Construction activities also generate fugitive dust emissions. As a result, the air pollutants analyzed for construction activities include nitrogen dioxide (NO_2), particulate matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}), particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), and carbon monoxide (CO).

Since ultra-low-sulfur diesel (ULSD) will be used for all diesel engines related to construction activities due to federal and state mandates, sulfur dioxides (SO_2) emitted from those construction activities would be negligible, and an analysis of SO_2 emissions is not warranted. More details and description of air pollutants and standards are in **Chapter 15, Air Quality**.

As stated above, construction activity in general, and large-scale construction in particular, has the potential to adversely affect air quality as a result of diesel emissions. The main component of diesel exhaust that has been identified as having an adverse effect on human health is fine particulates. To ensure that the construction of the Proposed Project results in the lowest feasible diesel particulate

[5] Based on information that Turner Construction Company provided.

matter (DPM) emissions, a series of emissions reduction strategies required by NYCDEP and state mandates would be implemented.

The evaluation performed in this section therefore assumes emission reduction measures that are mandated by law and are common practice in large-scale NYC construction projects, and follow the requirements included in NYC Law 77 and the NYC Air Pollution Control Code. These include the following:

- Fugitive Dust Control Plans. In compliance with the NYC Air Pollution Control Code provisions regarding control of fugitive dust, contractors would be required to ensure that all trucks carrying loose material use water as a dust suppression measure, that trucks hauling loose material be equipped with tight-fitting tailgates and their loads be securely covered prior to leaving the site, that streets adjacent to the site be cleaned as frequently as needed by the construction contractor, and that water sprays be used for transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air. These measures would be expected to reduce dust generation by more than 50 percent.
- Clean Fuel. Ultra-low sulfur diesel (ULSD) would be used exclusively for diesel engines related to construction activities for the Proposed Project. This has been a federal requirement since 2010 that enables the use of tailpipe reduction technologies that reduce diesel particulate matter and SO_2 emissions.
- Diesel Equipment Reduction. Hoists and small equipment, such as welders, stud machines etc. would use electric engines that operate on grid power instead of diesel power engines, to the extent practical. This is a common practice that has been achieving wider use as technology improves.
- Restrictions on Vehicle Idling. This would be required in compliance with local law to restrict unnecessary idling. On-site vehicle idle time would be restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.
- Given the construction timeframe for the Proposed Project (2026-2030), equipment meeting Tier 4 standards for diesel engines (model years 2011/12 and beyond) would be expected to be in wide use and comprise the majority of contractors' fleets. EPA's emission model MOVES includes equipment age distribution and provides emissions by year and by Tier in the fleet.
- Source Location and Shielding. To reduce concentration increments at sensitive receptors, large emissions sources and activities such as concrete trucks, generators, and large compressors will be located away from the sensitive receptors to the extent practical.

Overall, these emission control measures would be expected to significantly reduce DPM emissions. In addition, all necessary measures would be implemented to ensure that the NYC Air Pollution Control Code provisions regulating construction-related dust emissions are followed.

Engine Exhaust Emissions Estimation Process

Emission factors for NO_x, PM_{10}, $PM_{2.5}$, and CO from the combustion of fuel for on-site construction equipment were developed using the EPA MOVES3-NONROAD Emission Model.

The MOVES3-NONROAD model can generate unitary emission factors, in grams per horsepower/hour (g-hp/hr) by engine size (hp), equipment type, engine technology type, fuel type, and year of analysis. The model estimates emissions as the average emission factor by year for the

county fleet sorted by the above-mentioned parameters. The model calculates how many pieces of equipment for each engine technology group and model year are present in the county fleet and produces the yearly average emission factor. Emission factors for each equipment type were estimated by using the weighted average from the MOVES3 outputs for each year of construction, 2026 to 2030. Emissions for pile driving rig and backhoe were conservatively estimated using 2026 Tier 4 emissions for all construction years. This assumption is consistent with the Project's commitment to use the BAT requirements of LL 77.

Emission rates from a combustion of fuel for on-site dump trucks, pickup trucks, and other heavy trucks, such as tractor-trailers, were also developed using the MOVES3 emission model. NYC restrictions on idling times were applied for heavy trucks, with the exception of concrete trucks where one hour of idling was assumed. Short-term and annual emission rates were adjusted from the peak-hour emissions by applying usage factors for each equipment unit.

Fugitive Sources Emission Estimation Process

The entire Development Site is currently a paved parking lot. As such, construction vehicles will travel on paved roads except when going into the immediate construction areas. Road dust (PM_{10} and $PM_{2.5}$) emissions from trucks moving (approach and departure from the construction site) were calculated using equations from EPA's AP-42, Section 13.2.1 for paved roads. For dump trucks traveling into construction areas, unpaved road dust emissions were calculated using EPA's AP-42 Section 13.2.2 equations. It was assumed that dump trucks travel part of the way on a paved surface and part on an unpaved surface. Average vehicle weights (i.e., unloaded going in and loaded going out) were used in the analysis and reasonably conservative travel distances was estimated for on-site travel on paved and unpaved roads. Fugitive emissions from removal of the excavated material were estimated using EPA's AP-42 Section 13.2.4 equations. Dust control measures (described above) would provide at least a 50-percent reduction in PM_{10} and $PM_{2.5}$ emissions.

Construction Activity Emissions Intensity Assessment

To determine which construction phase constitutes the worst-case period for the pollutants of concern, construction-related emissions were calculated throughout the duration of construction on a monthly basis using peak daily emissions for short term and the rolling average for annual.

To determine the worst short-term emission and the worst annual emission, an emission intensity assessment (emission profiles) was conducted for the duration of construction. Such analysis was performed for each Area of Development. Based on the resulting multiyear profiles for a combination of all construction phases by month, the worst-case short-term and annual impact period was identified for each Area of Development and for each pollutant. **Table 20-13** presents the highest peak emissions for each Area. The highest emissions of all were estimated for the Area of Development A which is planned to have the biggest building and the largest construction. The highest peak was estimated in December of 2027 for the short-term pollutants PM and CO.

Table 20-13 Highest Peak Emissions for Areas of Development (lb/day)

Area of Development	$PM_{2.5}$		PM_{10}		CO	
	ER	Month	ER	Month	ER	Month
Area A	1.45	12/27	2.69	12/27	9.87	12/27
Area B	0.52	2/29	0.66	2/29	3.29	8/28
Area C	2.07	6/26	2.39	6/26	13.63	6/26
Area D	1.93	7/26	2.20	7/26	12.89	5/26

The highest rolling average emissions for NO_2 and $PM_{2.5}$ were used in the annual analyses. **Table 20-14** presents highest annual emissions by the Area of Development and the time when the highest annual average was estimated per each Area of Development. The highest rolling average annual emission period for the Area of Development A was identified from March 2027 to February 2028 for $PM_{2.5}$, and from March 2029 to February 2030 for NO_2.

Table 20-14 Highest Rolling Average Annual Emissions for Areas of Development (lb/day)

Area of Development	$PM_{2.5}$		NO_2	
	ER	Period	ER	Period
Area A	0.89	3/1/27-2/28/28	13.0	3/1/29-2/28/30
Area B	0.33	1/31/29-12/31/29	5.2	7/31/28-6/30/29
Area C	0.88	1/31/26-12/31/26	13.0	1/31/26-12/31/26
Area D	1.03	1/31/26-12/31/26	15.4	1/31/26-12/31/26

Impact Assessment

Off-Site Construction Impacts

Construction activities would result in a number of generated truck and worker trips at the project-affected intersections. The highest number of generated trips during construction is lower than the generated trips that were analyzed under the operation conditions (per **Table 20-7** in the **Transportation** section). Since CO and $PM_{2.5}$ analyses conducted for the four intersections under the With-Action operations condition demonstrated no significant adverse air quality impacts, it is assumed that there would not be any significant air quality impacts at any intersection during construction. Emissions from construction trucks and employee cars travelling in the immediate vicinity of the site were included into the dispersion model to account for the cumulative effects of their emissions and emissions from construction activities on-site.

On-Site Construction Impacts

The effects of construction emissions on the surrounding environment for the relevant air pollutants were quantified using EPA's AERMOD dispersion model. The highest emissions from construction were estimated for Area of Development A, which would experience the biggest and the longest construction effort. Areas of Development C and D would have garage construction in each area. Both garage construction efforts would have heavy construction finished before the Willets Point Project Phase 2 Development residential uses would be open and occupied. The superstructure work in the Area of Development D will overlap for four months, March-June 2027, with the opening of

the residential uses in the T and Northern Parcels of the Willets Point Project. Construction emissions in these months would be much less than in the peak period (in 2026) for construction effort in the Area of Development D (see **Table 20-3** and **Table 20-4**).

Area of Development B construction would happen later when the Willets Point Project Phase 1 and 2 buildings across Seaver Way will be fully occupied. As such, and in consultation with NYCDEP, construction for Areas of Development A and B were selected for dispersion modeling.

The highest peak emissions from both constructions were modeled for each applicable pollutant to estimate short-term impact and the highest rolling average annual emissions were used to estimate annual impact. Short-term impacts of construction were estimated for $PM_{2.5}$, PM_{10} and CO; annual – for $PM_{2.5}$ and NO_2.

Dispersion Modeling – Source Simulation

Potential impacts from on-site construction equipment and off-site truck emissions were evaluated using the EPA's AERMOD dispersion model version 22112. AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatment of the boundary layer theory, understanding of turbulence and dispersion; it also includes handling of terrain interaction. The AERMOD model calculates pollutant concentrations from one or more points, volumes or areas of different shape based on hourly meteorological data.

During construction, various types of construction equipment would be used throughout the site. Some of the equipment is mobile and would operate throughout the site, while some would remain stationary on-site at distinct locations during short-term periods (i.e., daily and hourly). These pieces could be moved to another location as construction progresses. Stationary emission sources include (but are not limited to) air compressors, generators, and concrete pumps. Equipment such as excavators and dump trucks would operate throughout the site.

The peak construction emissions on-site were simulated as a polygon area source for the purposes of dispersion analysis. The moving and idling trucks (e.g., delivery, dump, concrete) and paved road dust along the site, at site access and on Seaver Way were modeled as elongated polygon area sources. Both the on-site sources and simulated roadway sources were combined and modeled using one AERMOD model to account for cumulative effects.

Receptor Locations

AERMOD was used to predict maximum pollutant concentrations at nearby residential including on Willets Point Phase 2 buildings and hotel uses and on Citi Field and the soccer stadium. Discrete receptors were placed along nearby sidewalks along Roosevelt Avenue and Seaver Way. Neighborhood scale sidewalk receptors were used to estimate annual impacts. Additionally, although far away, receptors were placed on the closest residential buildings in Corona, on 114th Street.

Meteorological Data

All analyses were conducted using five consecutive years of meteorological data (2017 to 2021) provided by NYSDEC. Surface data were obtained from LaGuardia Airport and upper air data were obtained from Brookhaven station, New York.

Background Concentrations

Where needed to determine potential air quality impacts from the construction of the Proposed Project, background ambient air quality data for criteria pollutants (See **Chapter 15, Air Quality, Table 15-2**) were added to the predicted site concentrations. The background data represent the latest available three years of data and were obtained from the Queens College monitoring station that best represents the area surrounding the site. NO_2 annual background and PM_{10} 24-hour concentrations were obtained from **Table 15-3** from the same chapter and are equal to 14.6 ppb and 32 µg/m^3, respectively.

The 24-hour average $PM_{2.5}$ background concentration of 17.7 µg/m^3 was used to establish the *de minimis* value, consistent with the guidance provided in the *CEQR Technical Manual*. The annual average $PM_{2.5}$ impacts were assessed on an incremental basis and compared with the $PM_{2.5}$ *de minimis* criteria threshold, without considering the annual background.

Potential Impacts from Proposed Project Construction

Dispersion analysis was conducted for two areas of construction, Area of Development A and Area of Development B. The two areas had peak and annual emissions at different years and these two areas are located far enough from each other, so that cumulative impacts of these two constructions on the same receptors are unlikely.

Table 20-15 presents the highest predicted total concentration (including background for appropriate pollutants) due to construction activities of Development Area A, including the on-site sources (construction equipment, unpaved dust, and activities) and sources adjacent to the site (construction trucks and fugitive dust on paved road). **Table 20-16** presents similar results for Area of Development B.

As indicated in **Table 20-15** and **Table 20-16**, the highest predicted total concentrations of 1-hour CO, 8-hour CO, annual NO_2, and 24-hour PM_{10} would not result in any concentrations that exceed the NAAQS. The highest predicted 8-hour CO incremental concentration is well below the City's *de minimis* criteria. The highest predicted 24-hour and annual $PM_{2.5}$ incremental concentration (for a discrete receptor locations) would not exceed the City's *de minimis* criteria of 8.7 µg/m^3 and 0.3 µg/m^3 respectively.

Table 20-15 Highest Predicted Concentrations from Construction Activities at the Area of Development A

Pollutant	Averaging Period	Highest Modeled Concentration	Background Concentration	Total Concentration	NAAQS/De Minimis
CO	1-Hour	0.03 ppm	1.7 ppm	1.73 ppm	35 ppm
	8-Hour	0.01 ppm	1.2 ppm	1.21 ppm	9 ppm/3.9 ppm
NO_2	Annual	0.8 ppb	14.6 ppb	15.4 ppb	53 ppb
PM_{10}	24-Hour	5.6 µg/m^3	32 µg/m^3	37.6 µg/m^3	150 µg/m^3
$PM_{2.5}$	24-Hour	1.04 µg/m^3	---	1.04 µg/m^3	8.7 µg/m^3
	Annual	0.07 µg/m^3	---	0.07 µg/m^3	0.3 µg/m^3

Table 20-16 Highest Predicted Concentrations from Construction Activities at the Area of Development B

Pollutant	Averaging Period	Highest Modeled Concentration	Background Concentration	Total Concentration	NAAQS/De Minimis
CO	1-Hour	0.11 ppm	1.7 ppm	1.76 ppm	35 ppm
	8-Hour	0.02 ppm	1.2 ppm	1.21 ppm	9 ppm/3.9 ppm
NO_2	Annual	1.3 ppb	14.6 ppb	15.9 ppb	53 ppb
PM_{10}	24-Hour	19.1 µg/m^3	32 µg/m^3	40.8 µg/m^3	150 µg/m^3
$PM_{2.5}$	24-Hour	3.72 µg/m^3	---	3.72 µg/m^3	8.7 µg/m^3
	Annual	0.095 µg/m^3	---	0.095 µg/m^3	0.3 µg/m^3

The results of this quantitative analysis indicate that the Proposed Project would not result in any concentrations of NO_2, PM_{10}, and CO that exceed the NAAQS. In addition, the maximum predicted incremental concentrations of $PM_{2.5}$ would not exceed the City's *de minimis* criteria. Since no significant air quality impacts were estimated from the higher emissions in the Areas of Development A and B, no significant air quality impacts are anticipated from the area of Development D for the four months when the Northern and T Parcels of the Willets Point Project would be opened. No significant adverse air quality impacts are anticipated from the off-site mobile source emissions. Therefore, no significant adverse air quality impacts are expected from the construction-related sources.

Noise

Construction activities have the potential to affect the noise conditions of receptors near the proposed development. Construction noise can vary widely depending on the phase of construction (e.g., demolition, excavation, foundation, steel, and concrete erection, mechanical and interior fit out) and the specific equipment and methods being used. The most significant construction noise sources at a construction site are generally pile driving activities, back-up alarms, and equipment such as excavators, drill rigs, and cranes. The noisiest phase of construction is typically during demolition, excavation, and foundation work. The superstructure phase of construction can also have higher noise levels associated with concrete trucks and cranes. Similar to air emissions, interior fit out typically results in lower noise emissions, since it requires fewer pieces of heavy-duty diesel equipment.

As discussed in the *CEQR Technical Manual*, the need to conduct a construction-related noise assessment is considered based on factors such as the area, the intensity, and the duration of the construction activity.

Construction Analysis Fundamentals

Construction activities increase noise levels as a result of (1) the operation of construction equipment on site; and (2) 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 was evaluated.

Noise from the on-site operation of construction equipment at a specific receptor location near a construction site is generally calculated by computing the sum of the noise produced by all pieces of equipment operating at the construction site. For each piece of equipment, the noise level at a receptor location is a function of the following:

- The noise emission level of the equipment and quantity of 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, bus, 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.

Construction Noise Code

As described in Construction Regulations and General Practices, the Proposed Project would follow guidelines set forth by the NYCDEP Noise Code (Section 24-228). The DOB regulations require a perimeter barrier or "construction noise barrier" and when the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid perimeter noise barrier made from wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.

For the Proposed Project, a perimeter noise barrier 8 feet in height would be installed surrounding the area of construction in each phase.

Construction Noise Criteria

The construction noise impact criteria from the *CEQR Technical Manual* were also considered in the identification of adverse noise impacts.

Chapter 22, Section 100 of the *CEQR Technical Manual* breaks construction duration into "short-term" (less than two years) and "long-term" (two or more years). Where the duration of construction is expected to be short-term, any impacts resulting from such short-term construction generally do not require detailed assessment. However, there are instances where a potential impact may be of short duration, but nonetheless significant, because it raises specific issues of concern. Consequently, the construction noise analysis considers the potential for construction of a project to create high noise levels (the "intensity"), location of the construction activities relative to sensitive receptors, and whether construction noise would occur for an extended period of time (the "duration") in evaluating potential construction noise effects.

Chapter 19, Section 100 of the *CEQR Technical Manual* provides impact thresholds in terms of absolute and incremental noise levels that may serve as a screening-level thresholds for potential construction noise impacts. When incremental increases in the hourly noise exposure levels exceed more than 3 to 5 dBA, the intensity and duration of each phase of construction, as well as the area of impact, would also be considered when determining if the noise from construction activities are significant.

The NYCDEP Noise Code (Chapter 24 of the NYC Administrative Code) mandates that all construction is performed in accordance with noise mitigation plans, defines the hours when construction may occur, and sets noise standards for construction noise. For example, Section 24-223 limits the increase in aggregate construction levels for authorized after-hours work, while Section 24-228 places limits on equipment sound level emissions.

Construction Noise Assessment Methodology

A detailed modeling analysis was conducted to quantify potential construction noise effects at existing noise receptors (e.g., residences, hotel, etc.) within and around the Project Site. The construction noise methodology was as follows:

- **Measure existing noise levels**. As described in **Chapter 17, Noise**, a noise survey has been conducted to determine existing condition noise levels at receptors in the vicinity of the construction work areas. These measured noise levels were used as a baseline for comparison to the projected noise levels during construction. For purposes of a conservative analysis, the lowest existing noise levels measured during the expected construction work hours were used to represent existing-condition noise levels at noise receptor locations included in the analysis.
- **Select noise analysis periods based on the construction schedule**. Calculate the total noise emission levels from all equipment during each construction month. Identify the noise analysis periods with the highest noise-producing construction activities during the construction schedule. The selected time periods are described below in the "Analysis Periods" section.
- **Perform a screening-level analysis of the construction noise levels for each analysis period at each receptor location**. For this purpose, it was assumed that all on-site equipment would be located at the center of the construction site, using the distance propagation to calculate the noise levels at closest sensitive receptors. The potential for significant adverse impacts at these receptors was determined by evaluating the duration and magnitude of these increments.
- **As needed, perform detailed modeling of construction noise levels**. Calculate construction noise levels for each analysis period at receptor locations which are expected to experience the highest noise level increment and durations of peak noise levels. Taking into account the on-site equipment, the construction truck trips expected during the analysis periods, and the location of the construction equipment, noise prediction modeling was performed for each analysis period using CadnaA. The model includes each of the construction noise sources during each analysis period, calculation points representing multiple locations on various façades and floors of the associated receptors, as well as the noise control measures that would be used on the construction sites.
- **Determine total noise levels and noise level increments during construction**. For each analysis period and each noise receptor, the calculated level of construction noise was logarithmically added to the existing noise level to determine the cumulative total noise level.

The existing noise level was then arithmetically subtracted from the cumulative noise level in each analysis period to determine the noise level increments.

- **Evaluate magnitude of construction noise level increments**. For each analysis period and each noise receptor, the predicted noise level increments due to construction were compared to screening thresholds from the *CEQR Technical Manual*.
- **Establish construction noise duration**. For each receptor, the noise level increments in each analysis period were evaluated to determine the duration that the receptor would experience elevated levels of construction noise.
- **Identify potential construction noise impacts**. At each existing receptor where peak construction-related noise levels were predicted, a determination was made as to whether the Proposed Project would have the potential to result in significant adverse construction noise impacts based on the predicted extent, duration, and magnitude of construction-related noise levels.

The detailed construction noise analysis includes both mobile and stationary construction noise sources. Stationary sources are based on typical equipment used during all phases of construction including foundation, superstructure, elevator installation, exterior construction, and interior fit-out. There would be overlapping construction activities during foundation and superstructure activities as well as during superstructure, elevators, exterior construction, and interior fit-out activities.

Construction mobile sources include worker vehicles and trucks. Construction noise has been evaluated for the construction mobile source peak period from 6:00 AM to 7:00 AM, 3:00 PM to 4:00 PM, and 11:00 PM to 12:00 AM as there would be two work shifts. ATR counts demonstrate that existing traffic volumes along Seaver Way during 2:00 PM to 3:00 PM are comparable to the period from 3:00 PM to 4:00 PM. To be conservative, the outbound/inbound trips for shift change were overlapped in the same hour (3:00 PM to 4:00 PM) for the construction mobile source noise assessment. ATR counts also demonstrate that existing traffic volumes along Seaver Way during 11:00 PM to 12:00 AM (2nd Shift departure) are higher than the projected construction related auto trips. The Noise PCEs during nighttime period are not expected to be doubled. Therefore, the construction is not anticipated to cause mobile source noise impact. No further analysis would be warranted.

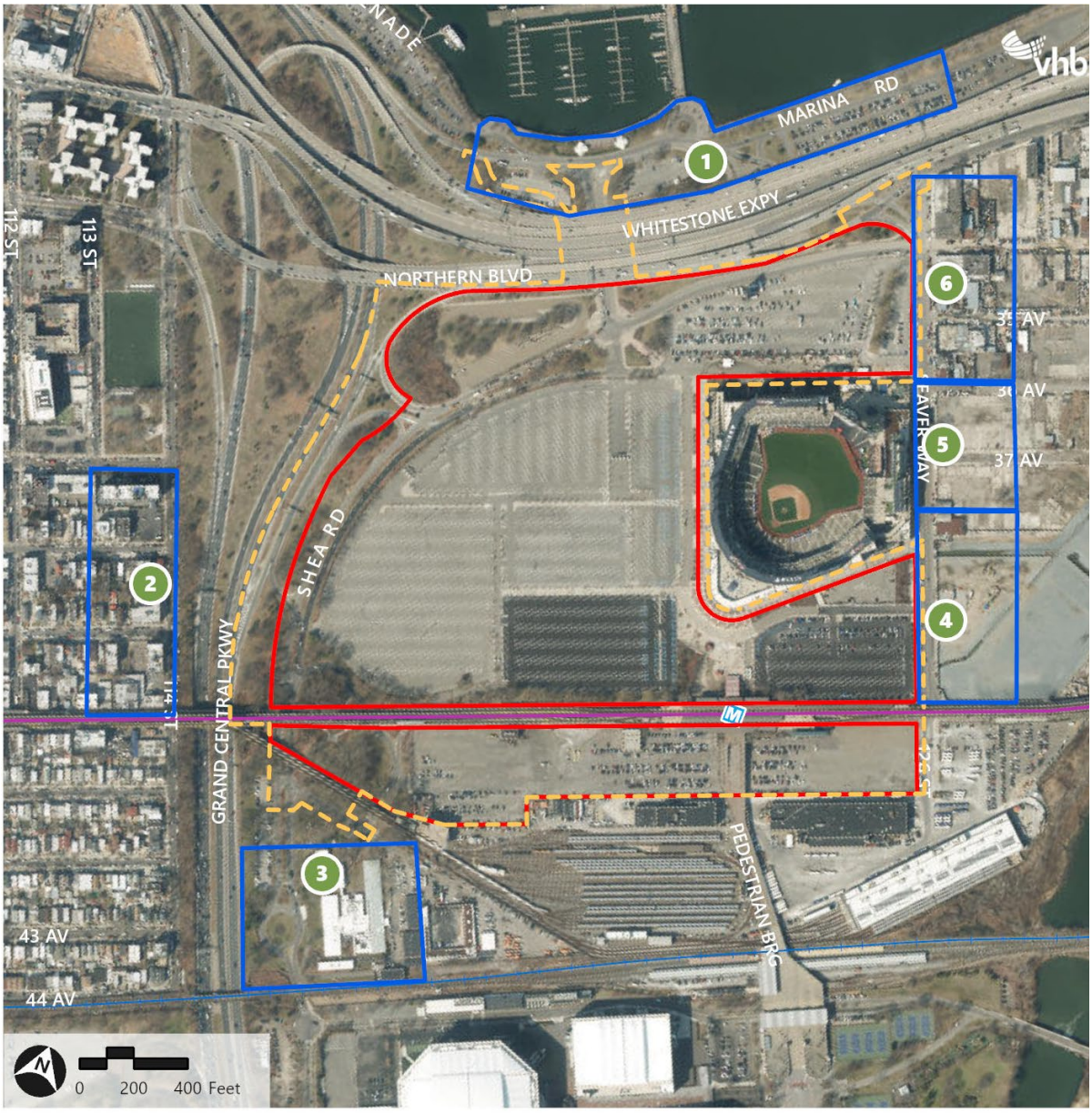
Construction noise from stationary sources has been evaluated for several different phases of construction.

Noise Receptors

The Development Site is bounded by Seaver Way to the east, the Metropolitan Transportation Authority (MTA) Corona Yard to the south, Grand Central Parkway to the west, and Northern Boulevard to the north. Since the Development Site would not be open to the public until its completion at the end of 2030, there would not be any on-site noise receptors. The noise receptors around the Development Site include the open spaces at Flushing Bay Promenade to the north across Northern Blvd and Whitestone Expressway, residences along 114th Street to the west across Grand Central Parkway, and residences and hotels proposed in Willets Point Project Phase 2 Development along Seaver Way to the east.

Table 20-17 details all receptor locations and land use descriptions. As shown in **Figure 20-2**, construction noise has been evaluated at six existing and future potential locations with receptors on each floor of the building on each site (if noise sensitive).

Figure 20-2 Noise Receptor Locations



Source: ESRI, DOITT GIS, MTA

Table 20-17 Construction Noise Receptor Locations and Land Use Descriptions

Receptor	Facility Name and/or Address	Land Use Description
R01	Flushing Bay Promenade	Open Space
R02	38-14 114th Street	Residential
R03	Olmsted Center	Office
R04	Willets Point Project Phase 2 Development South Parcel	Mixed Residential and Commercial
R05	Proposed New York City Football Club (NYCFC) stadium*	Recreational
R06	Willets Point Project Phase 2 Development North Parcel	Mixed Residential and Commercial

Note: * Not noise-sensitive

Construction Mobile Source Noise Assessment

During the entire construction period, construction related vehicles including trucks and vehicles driven by workers travel to and from the construction site. Most of these vehicles would be expected to use Seaver Way and Roosevelt Avenue to access the site.

The construction mobile source noise assessment evaluated five intersections/sections along Seaver Way and Roosevelt Avenue during the 6:00 - 7:00 AM period, the 3:00 - 4:00 PM period.

The potential for construction mobile sources to increase ambient sound conditions has been determined based on proportional modeling of noise PCEs. If construction mobile sources would result in a doubling or more of PCEs, it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double during construction, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

- Each automobile or light truck: 1 noise PCE
- Each medium truck: 13 noise PCEs
- Each bus: 18 noise PCEs
- Each heavy truck: 47 noise PCEs

Increases in noise due to construction mobile sources are calculated using the following equation:

$$Sound\ Level\ Increase\ (Leq) = 10 * \log\left(\frac{Existing\ and\ Construction\ PCEs}{Existing\ PCEs}\right)$$

As described in the **Construction Traffic** section, the peak construction vehicle trips during the peak construction quarter (first quarter of 2029) would include 906 automobiles and 48 truck trips in the 6:00 - 7:00 AM period, and 972 automobiles and 26 truck trips in the 3:00 - 4:00 PM period for a non-game day; 938 automobiles and 64 truck trips in the 6:00 - 7:00 AM period, and 948 automobiles and 14 truck trips in the 3:00 - 4:00 PM period for a game day. These vehicle trips would be distributed throughout the study area.

As shown in **Table 20-18,** noise from construction mobile sources on a non-game day would typically increase an average of 1.1 dBA compared to the future no-action condition, with a maximum of 2.0 dBA. As the construction mobile source noise levels would not increase by 3 dBA or more, there would be no significant adverse noise impact.

Table 20-18 Construction Mobile Source Analysis on a Non-game Day

	Intersection/Section	Period	No-Action PCEs	Construction PCEs	Construction Mobile Source Sound Increase (dBA)
1	Marina Road	AM	2,432	3,418	1.5
		PM	1,644	2,147	1.2
2	114th Street	AM	569	570	0.0
		PM	972	1,276	1.2
3	Roosevelt Avenue between Seaver Wy and College Point	AM	1,818	1,951	0.3
		PM	2,089	2,387	0.6
4	Parking Lot G Entrance and Exit along Seaver Way	AM	1,026	1,203	0.7
		PM	1,226	1,899	1.9
5	35th Avenue and Seaver Way	AM	1,787	2,835	2.0
		PM	1,679	2,518	1.8

Source: VHB, 2024

As shown in **Table 20-19,** noise from construction mobile sources on a game day would typically increase an average of 0.6 dBA compared to the future no-action condition with a maximum of 0.9 dBA. As the construction mobile source noise levels would not increase by 3 dBA or more, there would be no significant adverse noise impact.

Table 20-19 Construction Mobile Source Analysis on a Game Day

	Intersection	Period	No-Action PCEs	Construction PCEs	Construction Mobile Source Sound Increase (dBA)
1	Marina Road	AM	2,432	2,983	0.9
		PM	1,644	1,960	0.8
2	114th Street	AM	569	623	0.4
		PM	972	975	0.0
3	Roosevelt Avenue between Seaver Wy and College Point	AM	1,818	1,984	0.4
		PM	2,089	2,520	0.8
4	Parking Lot G Entrance and Exit along Seaver Way	AM	1,026	1,094	0.3
		PM	1,226	1,465	0.8
5	35th Avenue and Seaver Way	AM	1,787	2,134	0.8
		PM	1,679	1,964	0.7

Source: VHB, 2024

Construction Stationary Source Noise Modelling

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

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

Construction equipment source noise levels were based on the Lmax levels presented in Table 22-1 of the *CEQR Technical Manual*. For construction equipment not included in this table, other reference sources, manufacturer specifications, or field measured noise levels were used.

Reflections and shielding by barriers that would be erected on the construction site and shield adjacent buildings were accounted for in the model. In addition, construction-related vehicles were assigned to the adjacent roadways. The model produced A-weighted L_{eq} noise levels at each receptor location for each analysis period, as well as the contribution from each noise source. The

L10 metric is calculated by adding a 3-dBA adjustment factor to the calculated Leq according to FHWA's Roadway Construction Noise Model (RCNM) guidance.

Based on the construction schedule presented in **Figure 20-2**, the Superstructure and Envelope phase of Northfield Garage (Area D) would be completed by Q2 2027, Interior MEP and Finishes phase would be completed by Q3 2027; the construction of South Field Garage (Area C) would be completed by Q1 2027. Since the north residential building in the Willets Point Project Phase 2 Development along Seaver Way to the east will be completed in February 2027, it is expected that the construction of the Northfield Garage would only have a noise impact on the residences in the Willets Point Project Phase 2 Development for five months.

Construction noise from stationary sources has been evaluated for the following construction peak periods, sound emissions for non-peak month are anticipated to be lower than the peak month analyzed below. Based on the result of screening analysis:

- **April 2027**. Construction has been evaluated for April 2027 since this month has the highest construction sound emission for both Shift 1 and Shift 2 from Area D.
- September 2027 and December 2027. Construction has been evaluated for September 2027 since this month has the highest construction sound emission for Shift 1, and December 2027 since this month has the highest construction sound emissions for Shift 2 from Area A.
- **January 2029 and June 2029**. Construction has been evaluated for January 2029 since this month has the highest construction sound emission for Shift 2 and June 2029 since this month has the highest construction sound emissions for Shift 1 from Area B.

Construction Equipment Noise Emissions

Table 20-20 presents the type of equipment, the maximum sound level at 50 feet, the utilization factors (percentage of time the equipment is operating at full power), and the number of each piece of equipment that would be used during each of the four time periods of construction based on the *CEQR Technical Manual*. This table does not include trucks at the Development Site such as box trucks, pickup trucks, tractor trailers, packer trucks, container trucks, and dump trucks since under the New York City Administrative Code Sec. 24-163 they are not allowed to idle more than three minutes. These tables show that there would be up to four concrete mixer trucks during various phases of construction. However, this is the total number of vehicles operating and not the total number of concrete mixer trucks that would be at the site at any given time. The number of concrete mixer trucks that have been included in the analysis is based on those shown on the construction logistics plans.

Table 20-20 Construction Equipment by Peak Month

Equipment	Maximum Sound Level at 50 feet (dBA, L_{max})	Utilization Factor (%)	Number of Construction Equipment Pieces by Peak Month					
			Apr 2027 (Area D Shift 1)	Apr 2027 (Area D Shift 2)	Sep 2027 (Area A Shift 1)	Dec 2027 (Area A Shift 2)	Jan 2029 (Area B Shift 2)	Jun 2029 (Area B Shift 1)
Excavator	85	40	0	0	3	1	1	3
Loader	80	40	0	1	4	2	4	6
Pile Driving Rig	95	20	0	0	11	0	0	3
Crane	85	16	5	1	12	6	1	7
Compressor	80	40	0	0	2	1	1	2
Generator	82	50	0	0	0	2	0	0
Paver	85	50	1	0	0	0	1	0
Roller	85	20	1	1	0	0	1	0
Sweeper	80	10	1	1	0	0	1	0
Grader	85	40	1	1	0	0	0	0
Concrete Mix Truck	85	40	1	0	4	2	1	1

Source: Turner, 2024.

Construction Noise Assessment

As discussed above, the major construction of Area of Development D would be completed five months after the completion of potential noise-sensitive receptors in the Willets Point Project Phase 2 Development North Parcel (R06), and so would produce noise impacts to the Willets Point Project Phase 2 Development North Building (R06) for only five months. Additionally, the construction management team has committed that no noise intensive equipment would be operating during a game time, including games at both Citi Field and NYCFC stadium. R05 is not expected to experience construction noise impact during game time. This section will evaluate the potential for the construction of Areas of Development A, B, and D to result in construction noise impacts on Receptors 01, 02, 03, 04, and 06.

Existing Ambient Sound Levels

Existing ambient sound levels at all receptor locations have been determined based on measurements conducted in the study area. Measurements include those conducted during the morning peak period (7:00 AM to 9:00 AM), the midday peak period (12:00 PM to 2:00 PM), and the afternoon peak period (4:00 PM to 6:00 PM) throughout the Development Site (Receptor 01, 02, 03, 04, and 06), and one additional late-night period (10:00 PM to 11:00 PM) at two residential receptors (Receptor 02 and Receptor 04) as shown in **Table 20-21**.

Table 20-21 Existing Sound Level Measurements

Receptor	Monitoring Location	Time Period	L_{eq}	L_{10}	L_{50}	L_{90}
R01[A]	Flushing Bay Promenade	Morning	**68.7**	70.0	67.8	66.1
		Midday	68.8	70.4	67.6	65.9
		Afternoon	**67.5**	69.1	66.7	65.1
R02[B]	38-14 114th Street	Morning	73.0	75.3	72.1	69.0
		Midday	**72.9**	74.7	71.6	68.8
		Afternoon	**73.4**	76.0	71.1	69.1
		Late Night	74.0	74.6	72.1	70.6
R03[C]	Olmsted Center	Morning	66.4	68.9	64.4	61.2
		Midday	**65.5**	67.6	63.8	62.2
		Afternoon	68.7	73.3	64.5	60.8
		Late Night	**65.9**	69.0	63.7	62.1
R04[D]	126th Street/Seaver Way approximately 190 feet north of Roosevelt Avenue	Morning	72.6	75.7	67.8	62.6
		Midday	**69.8**	71.3	64.8	60.8
		Afternoon	72.9	77.6	66.3	60.6
		Late Night	**70.4**	70.2	62.5	58.7
R06[E]	126th Street/Seaver Way between 36th and Roosevelt Avenues, across from Citi Field stadium	Morning	**70.2**	73.4	67.5	62.3
		Midday	70.7	73.9	67.6	62.4
		Afternoon	**68.0**	71.7	66.2	58.8

Source:
A. Receptor 01 is the Site 6 from Willets Point Project Phase 2 Development. (Field measurement performed by AKRF between Apr 19, 2023 and Aug 27, 2023). Willets Point Phase 2 Development Project Final Second Supplemental Environmental Impact Statement (FSSEIS), February 23, 2024
B. Noise measurements conducted by VHB on Apr 10, 2024.
C. Noise measurements at Location 6 conducted by VHB on Jun 7 to Jun 8, 2023, same distance setback from the major source (elevated train tracks along Roosevelt Avenue.
D. Receptor 04 is the Site 1 from Willets Point Project Phase 2 Development. (Field measurement performed by AKRF between Apr 19, 2023 and Aug 27, 2023). Willets Point Phase 2 Development Project FSSEIS, February 23, 2024
E. Receptor 06 is the Site 2 from Willets Point Project Phase 2 Development. (Field measurement performed by AKRF between Apr 19, 2023 and Aug 27, 2023). Willets Point Phase 2 Development Project FSSEIS, February 23, 2024
Notes:
Bold numbers are selected to be used as the baseline for construction noise assessment.

The ambient sound level at each receptor was determined based on the measured sound level, similarity of acoustic context, and an adjustment based on the difference in modeled sound levels at the corresponding measurement location and each specific receptor location. The lower noise level between the morning peak period and the midday peak period is considered as the baseline for Construction Shift 1, and the lower noise level between the afternoon peak period and the late-night peak period is considered as the baseline for Construction Shift 2.

Predicted Construction Noise Levels

The construction noise analysis assumes use of the equipment described in **Table 20-20.** The 8-foot perimeter walls have been included at all sites throughout the phased development as indicated on the logistics plans.

The residential buildings proposed in Willets Point Phase 2 Development Project would provide 35 dBA window/wall attenuation as presented in the Willets Point Phase 2 Development Project FSSEIS, February 23, 2024.

The *CEQR Technical Manual* defines 45 dBA (L_{10}) as an acceptable interior noise level limit for residential and hotel spaces, as discussed in **Chapter 19, Noise**. As mentioned earlier, these acceptable interior L_{10} noise level limits are used to determine if additional mitigation measures are needed at receptors identified with significant adverse construction noise impact. The L_{10} metric is calculated by adding a 3-dBA adjustment factor to the calculated L_{eq} according to FHWA's Roadway Construction Noise Model (RCNM) guidance.

Noise levels resulting from construction of the Proposed Project were predicted to exceed the *CEQR Technical Manual* construction noise screening thresholds for some portion of the construction period at several of the analyzed receptors. The potential for significant adverse impacts at these receptors was determined by evaluating the duration and magnitude of these increments. With the exception of Receptor 04, the predicted construction noise level increments at analyzed receptors are not considered significant. While such increases in noise may be noticeable at times, predicted noise level increments would be moderate and would occur over a limited duration. Noise levels generated by construction at these receptors would generally be in the "acceptable" to "marginally unacceptable" categories according to the *CEQR Technical Manual* noise exposure criteria throughout construction. Consequently, construction noise associated with the Proposed Project would not rise to the level of a significant adverse impact at these receptors.

- **R01**: This represents the open space along Flushing Bay Promenade.

  At Receptor R01, construction is predicted to produce noise levels up to the low-70s dBA during the most noise-intensive stages of construction, with noise level increases up to 3.2 dBA, which is only slightly more than the impact threshold of 3 dBA presented in *CEQR Technical Manual Chapter 19 Section 410*. Accordingly, since construction would comply with New York City Noise Control regulations, significant adverse impacts are not expected to occur at R01.

- **R02**: This receptor presents existing residential buildings along 114th Street to the east of the development sites.

  At Receptor R02, construction is predicted to produce noise levels up to the low-70s dBA during the most noise-intensive stages of construction, with noise level increases up to 1.9 dBA, which is only less than the impact threshold of 3 dBA presented in *CEQR Technical Manual Chapter 19 Section 410*. Accordingly, since construction would comply with New York City Noise Control regulations, significant adverse impacts are not expected to occur at R02.

- **R03**: This represents the office use at Olmsted Center occupied by NYC Department of Parks and Reservation's capital design and construction division.

  At Receptor R03, construction is predicted to produce noise levels up to the low-70s dBA during the most noise-intensive stages of construction, with noise level increases more than 5.0 dBA for 16 months in total and increases more than 8.0 dBA for only 3 months in total.

  The one-story modular office building with glass curtain windows in Olmsted Center. The maximum interior noise levels during construction would be in the mid- to high-40s dBA for the peak months of construction, and low-40s dBA during most of the construction period, which is no more than approximately 3 dBA greater than the recommended noise level threshold for office use according to the *CEQR Technical Manual* noise exposure criteria. Noise levels in the

mid-40s dBA are comparable to typical noise levels in an office building setting. Accordingly, since construction would comply with New York City Noise Control regulations, significant adverse impacts are not expected to occur at R03.

› **R06**: The north and "T" residential building is in the Willets Point Project Phase 2 Development. As mentioned above, construction for these buildings is scheduled to be completed in February 2027, and construction for the North Garage is scheduled to be completed in July 2027. The western facade of these building was assessed for potential noise impacts for five months peak in month 16 (April 2027) for both Shift 1 and Shift 2.

At Receptor R06, construction is predicted to produce noise levels up to the low-70s dBA during the most noise-intensive stages of construction, with noise level increases up to 2.1 dBA.

This residential building in the Willets Point Project Phase 2 Development will provide 35 dBA window/wall attenuation and alternate means of ventilation, thereby improving the window/wall attenuation provided by the building façade and allowing for the maintenance of a closed-window condition as presented in the Willets Point Phase 2 Development Project FSSEIS, February 23, 2024. Therefore, maximum interior noise levels during construction would be in the mid- to high-30s dBA for the peak months of construction, and low-30s dBA during most of the construction period, which is within the recommended noise level threshold for residential use according to the *CEQR Technical Manual* noise exposure criteria. Accordingly, since construction would comply with New York City Noise Control regulations, significant adverse impacts are not expected to occur at R06.

A detailed modeling has been conducted for R04 from the construction of Area A since the screening analysis shows the highest noise level increment over the existing level for approximately nine months. The following summarizes the results of the construction noise assessment, as shown in **Table 20-22** at the nearest receptors to the Proposed Project.

Table 20-22 Construction Noise Assessment Results Summary

Receptor	Facility Name and/or Address	Land Use	Shift	Total L_{10} (dBA)	Change in L_{eq} (dBA)
R04	Seaver Way approximately 190 feet north of Roosevelt Avenue Roosevelt Avenues	Residential	Shift 1	81.2	8.7
			Shift 2	76.7	4.2

Source: VHB, 2024

› **R04:** This 15-story residential building is in the Willets Point Project Phase 2 Development. Construction for this building is scheduled to be completed in month 12 (June 2027). The western facade of this building was assessed for potential noise impacts beginning in month 36 (June 2029) for Shift 1 and month 29 (Jan 2029) for Shift 2.

At Receptor R04, construction is predicted to produce noise levels up to the low-80s dBA during the most noise-intensive stages of construction, with noise level increases more than 5.0 dBA up to 8.7 dBA for 9 months.

This residential building in the Willets Point Project Phase 2 Development will provide 35 dBA window/wall attenuation and alternate means of ventilation, thereby improving the window/wall attenuation provided by the building façade and allowing for the maintenance of a closed-window condition as presented in the Willets Point Phase 2 Development Project FSSEIS,

February 23, 2024. Therefore, maximum interior noise levels during construction would be in the mid- to high-40s dBA for the peak months of construction, and low-40s dBA during most of the construction period, which is no more than approximately 3 dBA greater than the recommended noise level threshold for residential use according to the *CEQR Technical Manual* noise exposure criteria. Noise levels in the mid-40s dBA are comparable to typical noise levels in a residential building setting. Accordingly, since construction would comply with New York City Noise Control regulations, significant adverse impacts are not expected to occur at R04 or elsewhere.

Conclusion

Construction of the Proposed Project is predicted to result in elevated noise levels at several of the analyzed receptors. The screening shows that with the exception of one noise receptor, the maximum predicted construction noise level increments at analyzed receptors would not be considered significant adverse impacts under the *CEQR Technical Manual*. While such increases in noise may be noticeable at times, predicted noise level increments would be moderate and would occur over a limited duration.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including a perimeter noise barrier 8 feet in height to be installed surrounding the area of construction in each phase.

At one receptor located to the east of the Development Site, as part of the Willets Point Project Phase 2 Development (Receptor R04), which is expected to have the highest noise level increment over existing condition, detailed construction noise modeling was performed. Construction is predicted to result in noise level increases up to approximately 8.7 dBA at residential receptors in the Willets Point Phase 2 development during limited periods of time. Such noise level increases would result in maximum interior noise levels in the high-40s dBA for the peak months of construction, which is no more than approximately 3 dBA greater than the recommended noise level threshold for residential use according to the *CEQR Technical Manual* noise exposure criteria. For most of the construction period, interior noise levels due to construction would be in the low-40s dBA in Willets Point Phase 2 development. Noise levels in the mid-40s dBA are comparable to typical noise levels in a residential building setting.

Construction in each work area would occur over limited periods and would therefore be considered temporary and transient. Furthermore, construction would comply with New York City Noise Control Code regulations, and the future building to the east of the Development Site as part of the Willets Point Project Phase 2 Development would have insulated glass windows with OITC rating of 35 and alternate means of ventilation, thereby improving the window/wall attenuation provided by the building façade and allowing for the maintenance of a closed-window condition.

Per New York City Noise Control Code regulations, the Proposed Project would be required to prepare a Construction Noise Mitigation Plan, which may identify more control measures that would further reduce construction noise levels. Also, the construction management team has committed that no noise intensive equipment would be operating during the game time (for Citi Field and for the future soccer stadium) or after 10 PM.

Therefore, the predicted levels of construction noise were determined not to rise to the level of a significant adverse impact at any noise receptors.

Vibration

Construction activities have the potential to generate ground-borne vibration that can potentially cause structural or architectural damage or annoy people in nearby vibration-sensitive spaces, such as residences. The most substantial sources of construction vibration are equipment associated with the excavation and foundation phase, such as pile drivers, drill rigs, bulldozers, and jack hammers.

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

Land Use and Neighborhood Character

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

Socioeconomic Conditions

Construction could, in some instances, temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the Development Site; however, long-term lane and/or sidewalk closures are not expected during construction. Further, since the Development Site is separated from neighborhood commercial areas, there is no potential for construction activity to restrict access to existing or planned retail businesses. Utility service would also be maintained to all businesses, although there may be very short-term interruptions. Overall, construction of the Proposed Project is not expected to result in any significant adverse impacts on surrounding businesses.

Community Facilities

There are no community facilities adjacent to, or in the vicinity of, the Development Site, and there is no potential for construction activities to affect the access or operations of any community facilities. Construction of the proposed buildings would not affect emergency response times of the New York City Police Department (NYPD) and New York City Fire Department (FDNY) given the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, no construction impacts would be expected to community facilities as a result of the Proposed Project.

Open Space

As described in **Chapter 5, Open Space**, though mapped as parkland, the Development Site contains surface parking lots leased to the Mets and is not available to the general public except for limited events and commuter parking. Construction of the Proposed Project would not affect public access or utilization of any nearby open spaces.

Open Space resources in the vicinity of the Development Site include Malcolm X Promenade and a portion of Flushing Meadows Corona Park. There would be no potential for construction impacts to Malcolm X Promenade because of its physical separation from the Development Site. Within Flushing Meadows Corona Park, the portions of the park nearest the Development Site include pedestrian pathways and passive seating areas south of Roosevelt Avenue along Shea Road and Olmsted Drive. Most of the active and passive recreational space in the park is separated by a significant distance from the Development Site. Measures would be implemented to control air emissions, dust, noise, and vibration on the construction site to avoid any effects upon users of the nearby portions of Flushing Meadows Corona Park. Therefore, no significant adverse construction impacts to open space are expected.

Historic and Cultural Resources

The Proposed Project could have an impact on the Mets-Willets Point Subway Station and IRT Interlocking Tower (eligible for listing in the State and National Registers of Historic Places [S/NR]) from construction vibrations from the Proposed Project buildings, some of which would be located within 90 feet of the resource. In addition, construction vibrations from the Proposed Project could have a direct impact on the Passerelle Bridge (S/NR eligible), which also is within 90 feet of the Proposed Project. In order to avoid or minimize impacts such as vibrations, the New York State Historic Preservation Office has indicated that a Construction Protection Plan would need to be developed and implemented for the Mets-Willets Point Subway Station IRT Interlocking Tower and the Passerelle Bridge. With the implementation of a Construction Protection Plan, no significant adverse impact as a result of construction vibration is expected on historic and cultural resources.

Natural Resources

As the Project Area does not contain wetlands or surface waters and is largely developed with paved parking lots and other impervious surfaces, natural resources within the Project Area are limited primarily to landscaping, including turf grass areas, vegetated parking lot islands, vegetated roadside borders and street tree pits. Flushing Bay by Marina Road, the Malcolm X Promenade, and the World's Fair Marina bulkhead occur between the Project Area and Flushing Bay, which is the nearest surface water. Potential adverse impacts to surface waters and other natural resources during construction would be avoided through the physical separation of the Project Area from Flushing Bay, as well as through best management practices incorporated into the construction plan.

Stormwater collected onsite would be controlled and discharged to the New York City Department of Environmental Protection (NYCDEP) sewer system, in accordance with NYCDEP requirements. Potential indirect impacts to Flushing Bay would be avoided through implementation of stormwater controls in accordance with all conditions of an approved Stormwater Pollution Prevention Plan (SWPPP), as required by NYCDEP and NYSDEC. The purpose of a SWPPP is to ensure that stormwater discharges generated by construction activities, and those from the completed project, do not degrade water quality within area wetlands and surface waters. Therefore, a SWPPP covers temporary activities created by construction, as well as permanent, post-construction practices to be implemented.

The SWPP design for the Proposed Project would avoid or minimize the potential for sediment generated during construction to be carried by stormwater to existing stormwater infrastructure,

thereby preventing water quality impacts to Flushing Bay. Erosion and sediment controls to be implemented under the SWPP include inlet protection to be installed within catch basins, compost filter socks, silt fencing and/or straw bales to be installed along the construction site perimeter, and stabilized construction exits with tracking pads that would be installed to remove sediments from tires where construction vehicles exit the site. Additional erosion and sediment controls, such as sedimentation basins, swales, mulching, stockpile stabilization, and others, would be utilized as necessary to prevent adverse impacts to Flushing Bay and other natural resources within and surrounding the Project Area. Additionally, dust control measures such as watering trucks and regular street sweeping would be implemented to further protect surface waters and local air quality. All erosion and sediment controls would be installed and maintained according to the *New York State Standards and Specifications for Erosion and Sediment Control* (2016).

To prevent potential adverse impacts to trees during construction work, tree protection measures would be installed and maintained around all existing trees to be preserved. As part of the construction closeout, permanent stormwater treatment measures would be installed and maintained in perpetuity as part of the SWPPP. Therefore, no significant adverse construction impacts to natural resources are expected.

Hazardous Materials

As discussed in greater detail in **Chapter 10, Hazardous Materials**, the potential for significant adverse impacts related to hazardous materials resulting from the Proposed Project would be precluded through the development and implementation of a RAP and CHASP during redevelopment. These measures would be developed through the assignment of an (E)-Designation on the Development Site that will ensure that the investigation, mitigation, and remediation of any hazardous materials is completed in a safe, and comprehensive manner.