Chapter 14: Transportation

A. INTRODUCTION

This chapter assesses whether any changed background conditions or the differences between the reasonable worst-case development scenario (RWCDS) and the program assessed in the 2008 Final Generic Environmental Impact Statement (FGEIS) and subsequent technical memoranda would result in any significant adverse impacts on transportation that were not addressed in the 2008 FGEIS and subsequent technical memoranda.

The project site includes the surface parking lots immediately west and south of CitiField and south of Roosevelt Avenue, and the Special Willets Point District (the District) located across 126th Street from CitiField and generally bounded by 126th Street to the west, Roosevelt Avenue to the south, the Van Wyck Expressway and an undeveloped parcel owned by the Metropolitan Transportation Authority (MTA) to the east, and Northern Boulevard to the north. Willets Point is also within close proximity to primary highways including the Whitestone Expressway to the north and east, the Grand Central Parkway to the west, and the Long Island Expressway (LIE) to the south. This network of highway mainlines and ramp interchanges carries significant traffic volumes and frequently experiences congestion during peak travel periods. Sections of the local street network adjacent to the District, such as Roosevelt Avenue and Northern Boulevard, experience moderate to heavy traffic volumes during peak travel periods, while other sections, such as 126th Street, have substantial amounts of unused capacity during typical weekday and weekend conditions.

The project site lies between the neighborhoods of Corona/North Corona to the west and Downtown Flushing—a key commercial center and intermodal transportation hub—across the Flushing River to the east. Both Northern Boulevard and Roosevelt Avenue provide connections between the project site, Downtown Flushing, and Corona. In addition, the close proximity of the project site to CitiField results in significant changes to traffic characteristics and operations on roadways in the area before and after Mets home games. With parking lot entrances located along Roosevelt Avenue, 126th Street, and Stadium Road, access and egress to CitiField during pre- and post-game periods significantly affects traffic conditions on both the highway and local street networks near Willets Point.

The proposed project, with its mix of uses, would replace the existing approximately 4,100-space surface parking lot adjacent to the west side of CitiField and lower-density uses currently within the District and, thus, would generate significantly more traffic on the adjacent local street and highway network. This would be developed over the course of three continuous phases: Phase 1A; Phase 1B; and Phase 2. In addition, the demapping and subsequent re-construction of streets within the District would create new access and egress points along Northern Boulevard and 126th Street and alter traffic circulation patterns on the adjacent street network. Improvements to connections between the Van Wyck Expressway and the District, which would be built between Phases 1A and 1B, would further modify travel patterns in the study area.

This chapter addresses the potential traffic, parking, transit, and pedestrian impacts of the proposed project for each phase of development. The approach routes to the study area traverse intersections along Northern Boulevard, Astoria Boulevard, Roosevelt Avenue, Sanford Avenue, Main Street, College Point Boulevard, 126th Street, and 34th Avenue, as well as exits from the Grand Central Parkway and the Van Wyck/Whitestone Expressway, both north and west of Willets West and the District. Transit facilities include the Met-Willets Point subway station and area bus routes and primary pedestrian corridors are situated along 126th Street and Roosevelt Avenue. In accordance with the approach outlined in Chapter 1, "Project Description," this chapter analyzes the impact of trips generated by all three phases of the proposed project.

B. PRINCIPAL CONCLUSIONS

TRAFFIC AND PARKING

As was found in the FGEIS, the proposed project is expected to be a significant traffic generator on both the highways surrounding the project site—including the Grand Central Parkway, the Van Wyck Expressway, and the Whitestone Expressway—and the local street network over the course of its three buildout phases. The With Action volume increments generated by the proposed project would be as follows:

Phase 1A of the project is expected to generate 883 vehicles per hour (vph) in the AM peak hour, 2,517 vph in the midday peak hour, 2,618 vph in the PM peak hour on a typical weekday without a Mets home game, and 3,132 vph in the Saturday midday peak hour on a non-game weekend. For peak hours with a Mets home game, the proposed project is expected to generate 2,324 vph in the weekday PM (evening) pre-game peak hour, 2,313 vph in the Saturday afternoon pre-game peak hour, and 2,063 vph in the Saturday evening post-game peak hour.

With the completion of Phase 1B, 2,649 vehicles per hour (vph) would be generated in the AM peak hour, 5,152 vph in the midday peak hour, 5,420 vph in the PM peak hour on a typical weekday without a Mets home game, and 5,855 vph in the Saturday midday peak hour on a non-game weekend. For peak hours with a Mets home game, the proposed project is expected to generate 4,194 vph in the weekday PM (evening) pre-game peak hour, 4,576 vph in the Saturday afternoon pre-game peak hour, and 4,037 vph in the Saturday evening post-game peak hour.

With full buildout at the completion of Phase 2, including the potential future development of Lot B, 4,533 vehicles per hour (vph) would be generated in the AM peak hour, 7,551 vph in the midday peak hour, 8,361 vph in the PM peak hour on a typical weekday without a Mets home game, and 8,740 vph in the Saturday midday peak hour on a non-game weekend. For peak hours with a Mets home game, the proposed project is expected to generate 6,339 vph in the weekday PM (evening) pre-game peak hour, 6,981 vph in the Saturday afternoon pre-game peak hour, and 6,445 vph in the Saturday evening post-game peak hour. This includes volume increment generated by the proposed project and the Lot B development.

Future baseline (future No Action) volumes, to which the traffic generated by the proposed project and Lot B would be added, and future levels of service are expected to be significantly worse than existing conditions due to background traffic growth plus traffic generated from additional background development projects. Traffic generated by the proposed project would be in addition to high baseline volumes and poor levels of service at many of the analysis intersections and along key sections of the highway network.

As a result, by Phase 1A, the proposed project is expected to have significant traffic impacts at 15 of the 29 intersections analyzed, both signalized and unsignalized, for the future With Action

condition in the weekday AM peak hour, 17 of 29 in the weekday midday peak hour, and 20 of 29 in the weekday PM and Saturday midday non-game peak hour. On game days, 21 of 29 intersections analyzed would have significant traffic impacts the PM pre-game weekday peak hour, 17 of 29 intersections analyzed would have significant traffic impacts during the Saturday pre-game peak hour and 19 of 29 intersections analyzed would have significant impacts during the Saturday post-game peak hour.

In Phase 1B, the proposed project is expected to have significant traffic impacts at 19 of the 30 intersections analyzed in the weekday AM peak hour, 20 of 30 in the weekday midday peak hour, 22 of 30 in the weekday PM peak hour, and 25 of 30 in the non-game-Saturday midday peak hour. On game days, 22 of 30 intersections analyzed would have significant traffic impacts the PM pre-game weekday peak hour, 20 of 30 intersections analyzed would have significant traffic impacts during the Saturday pre-game peak hour and 21 of 30 intersections analyzed would have significant impacts during the Saturday post-game peak hour.

By full buildout in Phase 2, including the potential future development of Lot B, the proposed project is expected to have significant traffic impacts at 22 of the 31 intersections analyzed in the weekday AM peak hour, and 26 of 31 in the weekday midday, weekday PM and Saturday midday non-game peak hours. During the PM pre-game weekday peak hour, 25 of 31 intersections analyzed would have significant traffic impacts, and during the Saturday pre-game and post-game peak hours, 23 of 31 intersections analyzed would have significant impacts. Potential measures to mitigate these projected significant adverse impacts are described in Chapter 21, "Mitigation."

Although the proposed project's analyses include new access ramps to and from the Van Wyck Expressway at the northeastern corner of the District that would be completed around 2024 in advance of Phase 1B of the proposed project, it is projected that in each proposed buildout phase (both before and after the construction of the ramps) some sections of the highway mainlines and critical ramp junctions would incur level of service degradations and be significantly impacted. By Phase 1A, three of the seven highway mainline locations analyzed (including the westbound Grand Central Parkway and the southbound Whitestone Expressway) and five of the 12 ramp locations would be significantly impacted during at least one of the seven peak analysis hours. The new access ramps are expected to reduce the use by project-generated traffic of certain local streets to access the project site; however, project generated traffic would also cause significant traffic increases and level of service degradations on the highway network in Phases 1B and 2 with the proposed ramps in place. By Phase 1B, five of the seven highway mainline locations analyzed (including both directions of the Grand Central Parkway and Whitestone and Van Wyck Expressways) and seven of the 12 ramp locations would be significantly impacted during at least one peak hour. By Phase 2, five of the six highway mainline locations analyzed (including the westbound Grand Central Parkway, and both directions of the Whitestone and Van Wyck Expressways) and eight of the 12 ramp locations would be significantly impacted during at least one peak hour.

By its full buildout in Phase 2, the proposed project would provide sufficient new off-street and on-street parking as part of the development to service its peak demand of 5,850 spaces. The redevelopment of the District would include the demapping and realignment of the local street network within the boundaries of the District, which is expected to increase the available on-street parking supply. The proposed project's expected parking needs would be provided within the immediate area by full buildout, and it is not expected that project-generated traffic would have to seek parking opportunities outside of the area. In all phases, Willets West's proposed 2,500 accessory parking spaces would be sufficient to meet parking demands generated by the

development at Willets West. Under Phase 1A, all project-generated parking demand within the District would be satisfied by accessory parking provided as part of the proposed project. Under Phase 1B, the 2,700 accessory parking spaces that would accompany development in the District would fully satisfy project demand in 2028 except from 2 to 4 PM on Saturday where there would be a shortfall of up to approximately 45 spaces. However, this demand is expected to be fully satisfied by available on-street spaces within the District and off-street spaces in facilities within walking distance of the District.

In addition to providing accessory parking for project demand, the proposed project would also replace the 4,100 Mets parking spaces in the main CitiField lots to the west of the stadium that would be displaced by the Willets West development. These replacement spaces would be distributed amongst an interim parking facility in the District (2,750 spaces, used as recreational space in the off-season), Lot D/South Lot (950 spaces), and the Willets West development (400 spaces) in Phase 1A, and between Lot D/South Lot (5,495 spaces) and the Willets West development (400 spaces) in Phases 1B and 2. Therefore, Mets parking needs would be accommodated.

TRANSIT AND PEDESTRIANS

Significant adverse transit impacts were identified for the street-level stairways and mezzanine stairway on the north side of Roosevelt Avenue at the Mets-Willets Point subway station, line-haul conditions on the No. 7 train, and the Q19, Q48, and Q66 bus routes. In addition, if NYCT reverts back to its pre-CitiField station operating plan for the Mets-Willets Point subway station, which would take place independent of the proposed project, additional interagency coordination is expected to take place to develop the appropriate game-day management strategies. However, additional impacts for the station's street-level connections and the unpaid zone passageway could occur during game days with this reconfiguration. Significant pedestrian impacts were identified for the east crosswalk at the intersection of Northern Boulevard and 126th Street; the north and west crosswalks at the intersection of Roosevelt Avenue and 126th Street; the north, south, and east crosswalks at the intersection of 34th Avenue and 126th Street; the south crosswalk at the intersection of New Willets Point Boulevard and 126th Street; and the north crosswalk at the newly signalized intersection of Roosevelt Avenue and the Lot B driveway. Potential measures to mitigate these projected significant adverse impacts are described in Chapter 21, "Mitigation."

C. SUMMARY OF FINDINGS—2008 FGEIS AND SUBSEQUENT TECHNICAL MEMORANDA

The 2008 FGEIS concluded that, of the 29 intersections analyzed, the proposed project and Lot B development were expected to have significant traffic impacts at 21 intersections in the weekday AM peak hour, 17 in the weekday midday peak hour, 23 in the weekday PM peak hour, and 21 in the Saturday midday peak hour on non-game days. During the PM pre-game weekday peak hour there would be significant traffic impacts at 24 intersections and during the Saturday pre-game and post-game peak hours there would be significant impacts at 23 intersections. The subsequent Technical Memoranda concluded that even with changed conditions, new assumptions and new guidance from the *2010 CEQR Technical Manual*, the overall findings of the 2008 FGEIS with regard to significant traffic impacts would remain substantially the same.

Under Phase 2 for the proposed project—representing full buildout conditions—the number of significantly impacted intersections would be approximately the same or somewhat higher as

compared to the 2008 FGEIS. The magnitude of delays experienced would be higher at many locations as compared to the 2008 FGEIS. Under Phase 2 for the proposed project, the number of significantly impacted highway sections and ramps, and the magnitude of delays, would generally be higher as compared to the 2008 FGEIS.

Under Phase 2 for the proposed project, the amount of parking to be provided plus available on-street parking would be sufficient to accommodate the needs of all phases of buildout. The same finding was concluded for the originally proposed project analyzed in the 2008 FGEIS.

For transit and pedestrians, significant adverse impacts were identified in the 2008 FGEIS and subsequent technical memoranda for the Mets-Willets Point subway station, area bus routes, and pedestrian elements adjacent to the District. Similar or greater impacts have been identified for Phase 2 of the proposed project. In addition, the previous analyses did not identify the significant adverse subway line-haul impact or the additional station impacts associated with potential station reconfiguration by NYCT that had been identified with the current proposed project.

D. SCOPE OF ANALYSIS (TRAFFIC AND PARKING)

The traffic and parking analyses cover a large study area encompassing 26 existing signalized intersections and five existing unsignalized intersections, plus one new signalized intersection that would be created in Phase 1B along the District's western boundary at 126th Street and Willets Point Boulevard, and another new signalized intersection that would be created in Phase 2 at Roosevelt Avenue and the CitiField/Lot B Internal Street. Key segments of the Grand Central Parkway, Van Wyck Expressway, and Whitestone Expressway, including interchange ramps, have also been studied (see **Figure 14-1**).

The analyses begin with an assessment of existing traffic and parking conditions in the study area, and proceeds to an analysis of conditions in the future without the proposed project (the future No Action condition) for each year of the proposed phased buildout—Phase 1A in 2018, Phase 1B in 2028, and Phase 2 in 2032. The existing and future conditions are analyzed under typical weekday and Saturday peak hour roadway conditions and under roadway conditions typically experienced immediately before and after Mets games on a weekday and Saturday. Four non-game-day peak hours are analyzed, including the 8:00-9:00 AM weekday morning, 1:00-2:00 PM weekday midday, 5:00-6:00 PM weekday evening, and 1:30-2:30 PM Saturday midday peak hours. Also, three game-day peak hours are analyzed, including the 5:30-6:30 PM pre-game weekday evening, 3:15-4:15 PM pre-game Saturday midday and 7:15-8:15 PM post-game Saturday PM peak hours (i.e., before and after 4 PM Met games). Post-game conditions are not analyzed for a weekday evening game, since project-generated traffic expected during that peak hour would not be significant. All of the analyses of local intersection conditions are based on *2000 Highway Capacity Manual (HCM)* procedures, in accordance with 2012 *City Environmental Quality Review (CEQR) Technical Manual* guidelines. A detailed traffic simulation analysis was also performed using the CORSIM model for the sections of the highway network being analyzed.

The next step in the analyses considers the amount of vehicular traffic expected to be generated by the proposed project in each the three future With Action analysis years and an assessment of future traffic and parking conditions with the proposed project in place (With Action condition). Like the No Action condition, the With Action condition analyzes roadway conditions with and without Mets games, on weekdays, and the weekend. The With Action year analyses identify the locations and extent of significant impacts potentially generated by the proposed project. Traffic improvements that would be needed to mitigate these impacts are identified and evaluated in

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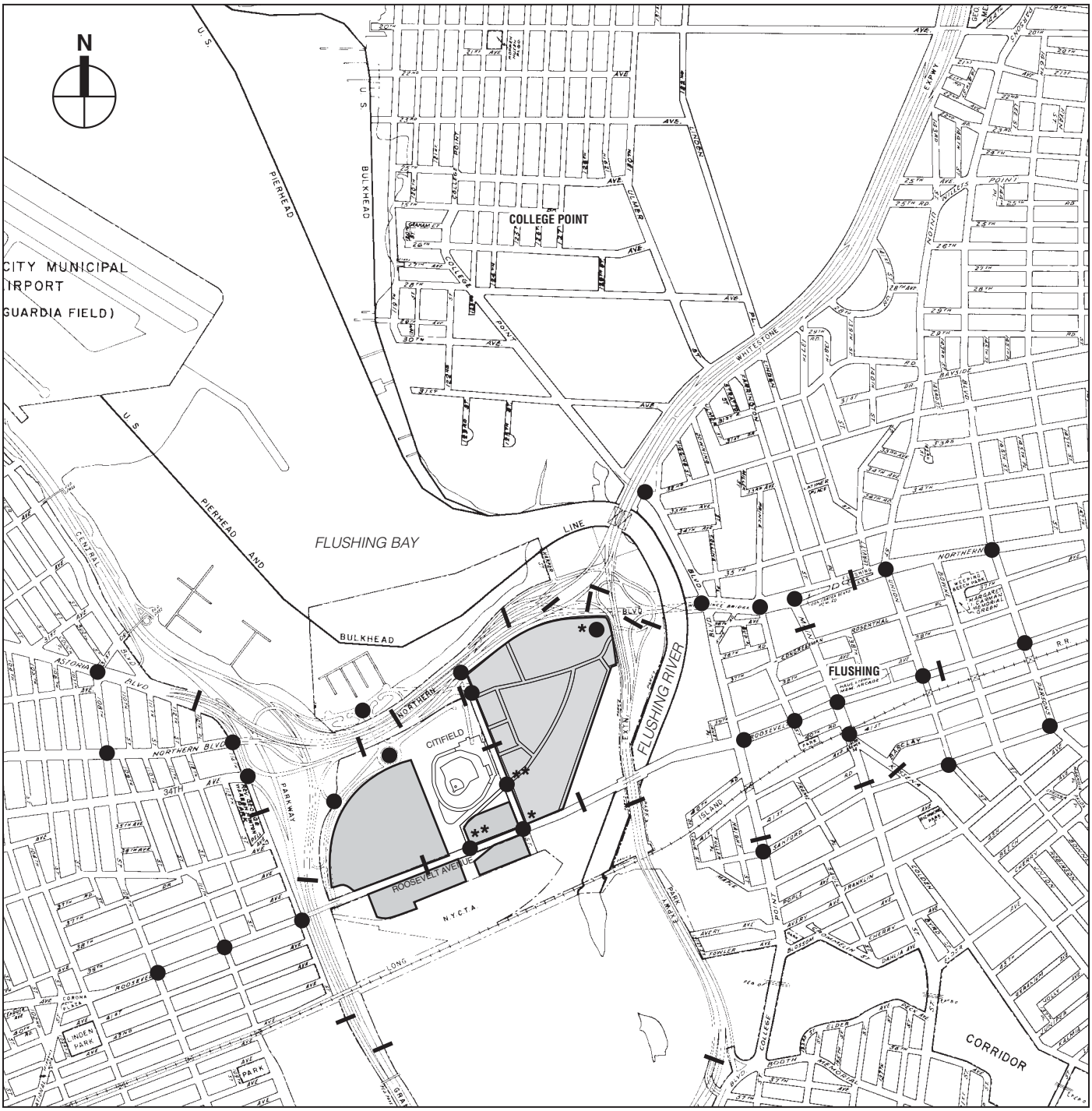


Project Site

● *Study Area Intersection Analyzed*

* *Existing/No Action Conditions Only*
NOTE: Intersection of Existing Willets Point Blvd. and 126th Street (Unsignalized) is Analyzed together with Intersection of Roosevelt Avenue and 126th Street in Existing and No Action Conditions

** *With-Action Condition Only*

— *Automatic Traffic Recorder Location*

Traffic Study Area
Figure 14-1

Chapter 21, "Mitigation." The parking analysis addresses the ability of the proposed project to accommodate the parking demands in the With Action years. In addition to the analysis findings presented in this chapter, detailed traffic impact analyses are presented at the end of this chapter and traffic volume maps are presented in **Appendix C**.

E. EXISTING CONDITIONS (TRAFFIC AND PARKING)

ROADWAY NETWORK AND TRAFFIC STUDY AREA

The overall study area generally consists of a grid network of local streets within Downtown Flushing interspersed between Northern Boulevard and Sanford Avenue, as well as a series of intersections along Roosevelt Avenue and Northern Boulevard between 108th and 126th Streets, and along 126th Street between Northern Boulevard and Roosevelt Avenue in Willets Point. There are also additional analysis locations farther away from the immediate study area. The presence of the Grand Central Parkway and the Van Wyck/Whitestone Expressways (both designated as I-678), and the network of ramps and interchanges have a major influence on traffic conditions in the area, since the highways attract a substantial volume of through and destination traffic. Key access points between the local street network and the limited access highways are located along Northern Boulevard, Astoria Boulevard, College Point Boulevard, West Park Loop/Stadium Road, World's Fair Marina, and 114th Street.

The Van Wyck Expressway is elevated, passing partially over the Flushing River, with three lanes in each direction, and provides a north-south connection from the LIE to where the Van Wyck Expressway becomes the Whitestone Expressway (north of Exit 13), with ramps to/from College Point Boulevard and Northern Boulevard. In particular, the ramps connecting the Van Wyck Expressway with Northern Boulevard provide access, though not completely direct access, to the local street network adjacent to the Special Willets Point District and Willets West portions of the project site.

The Van Wyck Expressway northbound Exit 13W is a single-lane ramp that carries traffic along the eastern and northern boundary of the site, where it joins with an off-ramp from the Whitestone Expressway (southbound Exit 13W) and terminates at a merge with westbound Northern Boulevard between 126th Place and 126th Street. Because there are no left-turn opportunities from westbound Northern Boulevard past that point, traffic from the northbound Van Wyck Expressway and southbound Whitestone Expressway does not currently have direct access to the project site.

The Grand Central Parkway is an at-grade highway with four lanes typically in each direction; the westbound direction gains an additional lane north of the World's Fair Marina on-ramp. The Grand Central Parkway has a major interchange with the LIE and provides access to Northern Boulevard, Astoria Boulevard, and West Park Loop/Stadium Road. In the eastbound direction, Exit 9E, a two-lane exit ramp, provides access to eastbound Northern Boulevard as well as a route toward the southbound Van Wyck Expressway and northbound Whitestone Expressway. The ramp toward eastbound Northern Boulevard also provides access to 126th Street, touching down at the signalized intersection of 126th Street and 34th Avenue/Stadium Road. The ramp/roadway extending south then east from Exit 9E is joined by a single-lane on-ramp to the eastbound Grand Central Parkway from Astoria Boulevard/114th Street and 34th Avenue.

In the westbound direction, the Grand Central Parkway mainline splits into a pair of two-lane sections immediately upstream of Exit 9P (to Flushing Meadows-Corona Park). The eastern pair provides access to eastbound Northern Boulevard, West Park Loop/Stadium Road, and a route to

the Van Wyck/Whitestone Expressway via Exit 9E. The western pair provides access to westbound Northern Boulevard at 114th Street via Exit 9W. North of these exits, the Grand Central Parkway lanes recombine into one mainline section toward LaGuardia Airport.

The local street network throughout the study area is primarily oriented in an east-west direction, with Northern Boulevard and Roosevelt Avenue extending from Corona on the west side to Downtown Flushing east of the Willets Point area. Most of the study area locations are where north-south streets intersect Northern Boulevard and Roosevelt Avenue. Due to the breadth of the study area, roadway characteristics along these roadways can vary, including their width, number of lanes, presence of parking, and adjacent land uses. In addition to Northern Boulevard and Roosevelt Avenue, the other primary east-west streets consist of Kissena Boulevard, Sanford Avenue, 34th Avenue, Astoria Boulevard, and West Park Loop/Stadium Road, as described below.

- Northern Boulevard is a primary east-west arterial across the study area, carrying significant traffic volumes to and from the Grand Central Parkway and Van Wyck Expressway, as well as through traffic toward western Queens and Manhattan. Its geometric and traffic characteristics vary throughout the study area. Through Downtown Flushing (between Prince Street and Parsons Boulevard) and Corona (between 108th Street and 114th Street), Northern Boulevard is a multilane roadway with curbside parking and is predominantly undivided except for a section between Prince Street and Union Street, where the roadway's east and west travel directions are separated by a wide landscaped median. Immediately west of Prince Street, the mainline section of Northern Boulevard transitions into a viaduct over the Flushing River, flanked by service roads to and from College Point Boulevard. The section of Northern Boulevard between 114th Street and Prince Street is generally a highway-type roadway with ramps to/from the Grand Central Parkway and Van Wyck Expressway; there is limited curbside parking and only one intermediate traffic signal, at the intersection with 126th Street.
- Roosevelt Avenue extends east-west through the entire study area from Corona to Flushing, carrying moderate traffic volumes. Between 108th and 114th Streets, Roosevelt Avenue has one moving lane in each direction with curbside parking, but east of 114th Street it changes to two moving lanes per direction and with no parking up to College Point Boulevard. For most of this segment, the roadway is straddled by the elevated No. 7 subway line until the train moves underground after passing the Flushing River. Through Downtown Flushing, Roosevelt Avenue has generally one moving lane per direction with a mix of parking, MTA bus stops and layover zones, and other curbside activities.
- Sanford Avenue study locations are situated within Downtown Flushing, where the roadway operates one-way westbound from Kissena Boulevard to College Point Boulevard and two-way from Kissena Boulevard to Parsons Boulevard. The one-way segment typically operates with two moving lanes, while the two-way section has one to two lanes in each direction.
- 34th Avenue is discontinuous between 114th Street and 126th Street, and its intersection with 114th Street serves as a primary access point to the eastbound Grand Central Parkway. West of 114th Street, the roadway is two-lane and bi-directional, and where it continues east of 126th Street through the District, its condition is in general disrepair, with very low traffic volumes.
- Astoria Boulevard, like Northern Boulevard, is a major east-west arterial that carries significant traffic volumes between the study area—particularly the highway network—and northwestern Queens and the RFK/Triboro Bridge. In the eastbound direction, the roadway

terminates at its ramps toward the Grand Central Parkway and the Van Wyck/Whitestone Expressway. Through North Corona on the west side of the study area, Astoria Boulevard is divided by a raised median, with multiple lanes in each direction and curbside parking.

- West Park Loop/Stadium Road is a limited access roadway along the west and north boundaries of the CitiField parking lots. Due to its direct ramps to and from the westbound Grand Central Parkway at Exit 9E, the roadway experiences the heaviest volumes before and after Mets games; otherwise, it does not have much traffic. West of the intersection at Boat Basin Road, West Park Loop/Stadium Shea Road has two lanes in each direction, divided by a landscaped median; the roadway is undivided to the east up to 126th Street.

The primary north-south cross-streets, which consist of College Point Boulevard, Main Street, Parsons Boulevard, and 108th Street, provide access to Northern Boulevard and Roosevelt Avenue from neighborhoods north and south of Downtown Flushing and Corona as well as the LIE. The remaining north-south streets, which carry less traffic and/or provide less regional access for though traffic, include Prince Street, Union Street, 111th Street, 114th Street, and 126th Street.

- College Point Boulevard is a bi-directional, multi-lane roadway between the LIE, south of the study area, to College Point, north of Downtown Flushing. The roadway serves as the link between the westbound LIE and the Van Wyck Expressway, since there are no direct interchange ramps between them. Due to highway access and adjacent land uses, College Point Boulevard carries both significant auto volumes and moderate to high truck traffic.
- Main Street extends through the core of Downtown Flushing, terminating at Northern Boulevard from the LIE and neighborhoods to the south, and serves as a primary MTA bus transit corridor. Although the roadway generally has two moving lanes in each direction and traffic volumes are moderate, the mix of bus traffic and the frequency of stops, parking and other curbside activities, and pedestrian crossings impact capacity.
- Kissena Boulevard is a northwest-southeast oriented street that approaches Downtown Flushing from areas to the south, terminates at Main Street within the downtown core near the Long Island Rail Road (LIRR) trestle, and serves as another primary MTA bus transit corridor to and from the south. Kissena Boulevard generally has one to two lanes in each direction with moderate volumes, but it also suffers from the same capacity hindrances as Main Street in the immediate Downtown Flushing area.
- Union Street connects to Northern Boulevard and Roosevelt and Sanford Avenues, and carries moderate traffic volumes through Downtown Flushing. Union Street also serves as a primary access and egress route for Municipal Lot No. 1. Its cross-section width varies with one or two moving lanes in each direction, and curbside parking is typical north of Roosevelt Avenue.
- Parsons Boulevard extends parallel to Main and Union Streets through Downtown Flushing and is primarily a residential street through the study area, with low to moderate volumes. It also connects to Northern Boulevard and Roosevelt and Sanford Avenues, and has one moving lane in each direction with curbside parking.
- 108th Street has one moving lane in each direction through the study area, with curbside parking. It extends through Roosevelt Avenue and Northern and Astoria Boulevards, providing access to residential blocks in the neighborhood of Corona, and carries low to moderate traffic volumes.

- Prince Street is a minor two-way, two-lane street within Downtown Flushing carrying low traffic volumes. It connects to Roosevelt Avenue and Northern Boulevard, as well as some cross-streets through the downtown area.
- 111th Street is one-way northbound through the neighborhood of Corona, providing access to Northern Boulevard from Roosevelt Avenue. Across a number of residential blocks, it has one moving lane with curbside parking in each direction and carries low to moderate traffic volumes.
- 114th Street is typically two-way, except for the blocks between 112th Street and 34th Avenue, where it is one-way southbound only. The roadway provides access to the ramp to the eastbound Grand Central Parkway at 34th Avenue; it carries high volumes of traffic southbound from Northern Boulevard to the on-ramp. Between 34th and Roosevelt Avenues, 114th Street is two-way, with one lane typical in each direction, and carries lower volumes.
- 126th Street forms the boundary between CitiField and the Special Willets Point District. This two-way roadway generally has two moving lanes in each direction and carries low volumes, although the high number of parking maneuvers due to land uses along the east side of the street affects capacity. During the hours before and after Mets games, traffic volumes and queuing along 126th Street are significantly higher. The southern end of 126th Street at Roosevelt Avenue also serves as the entrance/exit to the Casey Stengel bus depot and the Corona subway yard, where bus and employee access to these facilities are provided.

The traffic study area developed for this Supplemental Environmental Impact Statement (SEIS) includes the following 31 intersections, which are also shown in **Figure 14-1** (all intersections are signalized unless otherwise noted)

- 108th Street at Astoria Boulevard
- 108th Street at Northern Boulevard
- 114th Street at Northern Boulevard
- 126th Street at Northern Boulevard
- Prince Street at Northern Boulevard
- Main Street at Northern Boulevard
- Union Street at Northern Boulevard
- Parsons Boulevard at Northern Boulevard
- 114th Street at 34th Avenue
- 126th Street at 34th Avenue
- 108th Street at Roosevelt Avenue
- 111th Street at Roosevelt Avenue
- 114th Street at Roosevelt Avenue
- 126th Street at Roosevelt Avenue
- College Point Boulevard at Roosevelt Avenue
- Prince Street at Roosevelt Avenue
- Main Street at Roosevelt Avenue
- Union Street at Roosevelt Avenue

- Parsons Boulevard at Roosevelt Avenue
- Main Street at Kissena Boulevard
- College Point Boulevard at Sanford Avenue
- Union Street at Sanford Avenue
- Parsons Boulevard at Sanford Avenue
- College Point Boulevard at 32nd Avenue/Whitestone Expressway Service Road
- College Point Boulevard at Northern Boulevard Service Road
- Boat Basin Road at Stadium Road
- Willets Point Boulevard at 126th Street (unsignalized)
- Boat Basin Road at World's Fair Marina (unsignalized)
- Willets Point Boulevard at Northern Boulevard (unsignalized)
- Boat Basin Road at Stadium Road/CitiField Entrance 8 (unsignalized)
- Grand Central Parkway westbound exit ramp at West Park Loop/Stadium Road (unsignalized).

One additional intersection created by the design of the proposed project along 126th Street (New Willets Point Boulevard at 126th Street) is analyzed under the With Action condition for Phases 1B and 2, and one additional intersection created along Roosevelt Avenue (CitiField/Lot B Internal Street at Roosevelt Avenue) is analyzed under Phase 2 only. In addition to the study locations listed above, the intersections of 126th Street at 36th Avenue, 126th Street at 37th Avenue, and Northern Boulevard at 126th Place are expected to carry a significant amount of project-generated trips in all three buildout phases of the proposed project. These three unsignalized intersections were not analyzed for this Draft SEIS since the majority of project-generated trips from the District were assigned to the adjacent analyzed intersections. However, as further discussed in Chapter 21, "Mitigation," because impacts have been identified for these adjacent intersections, the three intersections listed above will be analyzed for the Final SEIS to determine if they would similarly experience significant adverse impacts.

Sections of the highway network are also analyzed, including:

- Grand Central Parkway mainline in both directions between the LIE and Roosevelt Avenue
- Van Wyck Expressway mainline in both directions between the LIE and Roosevelt Avenue
- Whitestone Expressway mainline in both directions between Northern Boulevard and Linden Place
- Ramp from World's Fair Marina/Boat Basin Road to the Grand Central Parkway
- Ramps from the northbound Van Wyck Expressway to eastbound and westbound Northern Boulevard
- Ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway
- Ramp from westbound Northern Boulevard to the southbound Van Wyck Expressway
- Ramp from eastbound Astoria Boulevard and eastbound Northern Boulevard to the northbound Whitestone Expressway
- Ramps from the southbound Whitestone Expressway to the eastbound and westbound Grand Central Parkway

- Ramp from westbound Northern Boulevard and southbound Whitestone Expressway to westbound Astoria Boulevard
- Ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway and eastbound Northern Boulevard
- Ramp from the eastbound Grand Central Parkway toward Stadium Road and the northbound Whitestone Expressway
- Ramp from the southbound Whitestone Expressway to westbound Northern Boulevard

Two additional ramps to and from the Van Wyck Expressway proposed at the northern end of Willets Point Boulevard are analyzed under With Action conditions (for Phases 1B and 2).

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

For continuous traffic data collection, 24-hour Automatic Traffic Recorders (ATRs) were installed along selected local streets, ramps, and expressway mainlines during the periods of May 5 to May 20, 2012. Concurrent manual turning movement counts (TMCs) were conducted for a typical weekday with no Mets home game, a Saturday with no Mets home game, weekday pre-game conditions, and weekend pre- and post-game conditions. The weekend Mets game began 4:05 PM (on May 5, 2012), and the weeknight game began at 7:10 PM (on May 16, 2012). The Mets game attendance on the weeknight and weekend afternoon that traffic volumes were collected was 22,659 and 30,253, respectively, which is lower than that of a typical game day. In order to adjust volumes to account for more typical game days, attendance data were collected for all games from the previous two seasons (2010 and 2011). The 85th percentile attendance for weekday games for the 2010 and 2011 seasons combined was 35,914 attendees; the 85th percentile attendance for weekend games for the 2010 and 2011 seasons combined was 37,577 attendees. The differences in attendees were developed into additional vehicle trips and assigned through the study network based on modal split, temporal distribution, and vehicle occupancy factors, and trip assignment assumptions from the *Shea Stadium Redevelopment FEIS* (2001). The resulting volumes together with the turning movement counts were used to develop existing game day traffic volumes. This methodology was approved by the New York City Department of Transportation (NYCDOT). The existing volumes were used, along with observations of actual traffic conditions, to determine the seven peak traffic analysis hours. **Tables 14-1** and **14-2** summarize the analysis time periods.

Table 14-1
Traffic Study Peak Hours—Without Mets Game

Day	Time	Peak Hour
Weekday	8:00-9:00 AM	Non-game AM
	1:00–2:00 PM	Non-game midday
	5:00–6:00 PM	Non-game PM
Saturday	1:30–2:30 PM	Non-game midday

Table 14-2
Traffic Study Peak Hours—With Mets Game

Day	Time	Peak Hour
Weekday	5:30-6:30 PM	Pre-game PM arrival peak
Saturday	3:15-4:15 PM	Pre-game afternoon arrival peak
	7:15-8:15 PM	Post-game PM departure peak

Without a Mets home game at CitiField:

- Weekday AM peak hour (8:00 AM – 9:00 AM)
- Weekday midday peak hour (1:00 PM – 2:00 PM)
- Weekday PM peak hour (5:00 PM – 6:00 PM)
- Saturday midday peak hour (1:30 PM – 2:30 PM).

With a Mets home game at CitiField:

- Weekday PM peak hour pre-game arrivals (5:30 PM – 6:30 PM)
- Weekend midday peak hour pre-game arrivals (3:15 PM – 4:15 PM)
- Weekend late afternoon peak hour post-game departures (7:15 PM – 8:15 PM).

The operation of all of the signalized and unsignalized intersection analysis locations were assessed using methodologies presented in the *2000 Highway Capacity Manual (HCM)* using the *Highway Capacity Software (HCS+ 5.5)*, which is the analysis methodology approved for use by NYCDOT. The *HCM* procedure evaluates the levels of service (LOS) for signalized and unsignalized intersections using average stop control delay, in seconds per vehicle, as described below.

SIGNALIZED INTERSECTIONS

The average control delay per vehicle is the basis for determining levels of service for individual lane groups (grouping of movements in one or more travel lanes), the overall approaches to each intersection, and the overall intersection itself. Levels of service are defined in **Table 14-3**.

Table 14-3
LOS Criteria for Signalized Intersections

LOS	Average Control Delay
A	≤ 10.0 seconds
B	>10.0 and ≤ 20.0 seconds
C	>20.0 and ≤ 35.0 seconds
D	>35.0 and ≤ 55.0 seconds
E	>55.0 and ≤ 80.0 seconds
F	>80.0 seconds
Source:	Transportation Research Board. *Highway Capacity Manual*, 2000.

LOS A describes operations with low delays, i.e., an average control delay of 10.0 seconds or less per vehicle. This occurs when signal progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all.

LOS B describes operations with delays in excess of 10.0 seconds up to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.

LOS C describes operations with delays in excess of 20.0 seconds up to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The number of vehicles stopping is noticeable at this level, although many still pass through the intersection without stopping.

LOS D describes operations with delays in excess of 35.0 seconds up to 55.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may

result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.

LOS E describes operations with delays in excess of 55.0 seconds up to 80.0 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios.

LOS F describes operations with delays in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with cycle failures. Poor progression and long cycle lengths may also contribute to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

Based on *CEQR Technical Manual* guidelines, LOS A, B, and C are considered acceptable, LOS D is considered marginally acceptable up to mid-LOS D (45 seconds of delay for signalized intersections) and unacceptable above mid-LOS D, and LOS E and F indicate congestion. These guidelines are applicable to individual traffic movements and overall intersection levels of service.

UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, the average control delay is defined as the total elapsed time from which a vehicle stops at the end of the queue until the vehicle departs from the stop line. The level of service criteria for unsignalized intersections are summarized in **Table 14-4**.

Table 14-4
LOS Criteria for Unsignalized Intersections

LOS	Average Control Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 15.0 seconds
C	> 15.0 and ≤ 25.0 seconds
D	> 25.0 and ≤ 35.0 seconds
E	> 35.0 and ≤ 50.0 seconds
F	> 50.0 seconds

Source: Transportation Research Board. *Highway Capacity Manual*, 2000.

For unsignalized intersections, LOS E is considered the limit of acceptable delay, while LOS F is considered unacceptable to most drivers. LOS F conditions exist when there are insufficient gaps of suitable size in a major vehicular traffic stream to allow side street traffic to cross safely.

Tables 14-5 and **14-6** provide an overview of the levels of service of the overall intersections and the individual lane groups (i.e., set[s] of lanes established at an intersection approach for discrete capacity and level of service analysis), respectively, that characterize the traffic study area during the peak hours. A summary description is also provided below:

- All 26 signalized intersections operate at overall LOS D or better during all seven peak hours. “Overall” LOS E or F would mean that serious congestion exists—either one specific traffic lane group has severe delays, or two or more of the specific traffic lane groups at the intersection are at LOS E or F with very significant delays (the overall intersection LOS is a weighted average of all of the individual traffic lane groups).

Table 14-5
Existing Overall Intersection Level of Service Summary

Signalized Intersections (26 Total)	Non-Game Day				Game Day		
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Pre-game Weekday PM	Pre-game Saturday Midday	Post-game Saturday PM
Overall Intersection LOS A/B/C	22	23	22	22	20	20	21
Overall Intersection LOS D	4	3	4	4	6	6	5
Overall Intersection LOS E	0	0	0	0	0	0	0
Overall Intersection LOS F	0	0	0	0	0	0	0

Note: During the non-game and weekday pre-game peak hours, all five unsignalized intersections operate at overall LOS A, B, C, or D; during the weekend pre-game peak hour, Boat Basin Road at Stadium Road/CitiField Entrance 8 operates at LOS E; during the weekend post-game peak period, Boat Basin Road at World's Fair Marina operates at overall LOS E and Boat Basin Road at Stadium Road/CitiField Entrance 8 operates at LOS F .

Table 14-6
Existing Traffic Lane Group Level of Service Summary

Signalized Lane Groups (Approx. 127 Total)	Non-Game Day				Game Day		
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Pre-game Weekday PM	Pre-game Saturday Midday	Post-game Saturday PM
Number of Lane Groups at LOS A/B/C	80	97	86	88	76	90	89
Number of Lane Groups at LOS D	34	24	30	30	37	21	25
Number of Lane Groups at LOS E	10	8	13	11	15	16	15
Number of Lane Groups at LOS F	3	0	0	0	1	2	1

Note: During the non-game peak hours, all unsignalized lane groups operate at LOS A, B, C or D; during the weekday pre-game peak hour, northbound left turns from Boat Basin Road onto World's Fair Marina operate at LOS E; during the weekend pre-game peak period, the eastbound left-through movement of Boat Basin Road at Stadium Road operates at LOS F; during the weekend post-game period, northbound left turns from Boat Basin Road onto World's Fair Marina operate at LOS F, eastbound Stadium Road at Boat Basin Road operates at LOS F, westbound CitiField Entrance 8 at Boat Basin Road operates at LOS E, and eastbound left turns from the GCP off-ramp onto Stadium Road operates at LOS E.

- During the non-game weekday AM peak hour, four signalized intersections operate at overall LOS D. Thirteen specific lane groups (e.g., a shared left turn-through-right turn, an exclusive left turn lane, etc.) out of approximately 127 total lane groups analyzed are at LOS E or F conditions.
- In the non-game weekday midday peak hour, three signalized intersections operate at overall LOS D. Eight lane groups operate at LOS E.
- In the non-game weekday PM peak hour four signalized intersections operate at overall LOS D. Thirteen lane groups have overall unacceptable LOS E.
- In the non-game Saturday midday peak hour, four signalized intersections operate at overall LOS D. Eleven lane groups operate at LOS E.
- In the pre-game weekday PM arrival peak hour, six signalized intersections operate at overall LOS D. Sixteen lane groups operate at LOS E or F.

- In the pre-game Saturday midday arrival peak hour, six signalized intersections operate at overall LOS D. Eighteen lane groups operate at LOS E or F.
- In the post-game Saturday weekend PM departure peak hour, five signalized intersections operate at overall LOS D. Sixteen lane groups operate at LOS E or F.
- Generally, the five unsignalized intersections operate at overall acceptable levels of service during the four non-game peak hours and the weekday PM pre-game condition. However, during the weekend pre-game arrival peak, one intersection, Boat Basin Road at Stadium Road/CitiField Entrance, operates at overall unacceptable LOS E, with one lane group at LOS F. During the weekend post-game departure peak, the intersection of Boat Basin Road at World's Fair Marina, operates at overall unacceptable LOS E (with one lane group at LOS F), and the intersection of Boat Basin Road at Stadium Road/CitiField Entrance operates at overall LOS F (with two lane groups at LOS E or F).

A more detailed presentation of traffic volumes and levels of service by corridor are provided below. (Detailed level of service analysis results, including results for every traffic lane group at each of the intersections analyzed, appear at the end of this chapter. Detailed traffic volume maps are presented in **Appendix C**).

NORTHERN BOULEVARD

Through Downtown Flushing, Northern Boulevard is traveled by approximately 800–1,550 vehicles per hour (vph) in the eastbound direction and 1,675–2,325 vph in the westbound direction during the weekday AM peak hour on non-game days. Since westbound is the prevailing travel direction in the weekday AM peak hour, westbound volumes generally build through Downtown Flushing toward the ramps to the Van Wyck Expressway and the Grand Central Parkway. Adjacent to the Special Willets Point District and Willets West portions of the project site, Northern Boulevard carries approximately 325–1,025 vph and 950–2,075 vph in the eastbound and westbound directions, respectively. At the intersection with 126th Street, 1,050 vph enter westbound Northern Boulevard from the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway, and 625 vph enter eastbound Northern Boulevard from the Grand Central Parkway/Astoria Boulevard ramp. Northern Boulevard eastbound and westbound volumes in the vicinity of 108th and 114th Streets are approximately 900 and 2,000 vph, respectively.

During the weekday midday peak hour on non-game days, there are approximately 950–1,600 vph in the eastbound direction and 1,050–1,825 vph in the westbound direction on Northern Boulevard through Downtown Flushing. Northern Boulevard carries approximately 425–1,150 vph and 425–1,300 vph in the eastbound and westbound directions, respectively, adjacent to the project site. At the intersection with 126th Street, approximately 700 vph enter westbound Northern Boulevard from the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway, and about 600 vph enter eastbound Northern Boulevard from the Grand Central Parkway/Astoria Boulevard ramp. Northern Boulevard eastbound and westbound volumes in the vicinity of 108th and 114th Streets are approximately 1,000 and 1,125 vph, respectively.

During the weekday PM peak hour on a non-game day, Northern Boulevard is traveled by approximately 1,400–2,050 vph in the eastbound direction and 1,150–1,675 vph in the westbound direction through Downtown Flushing. Adjacent to the project site, Northern Boulevard carries approximately 600–1,525 vph and 575–1,575 vph in the eastbound and westbound directions, respectively. At the intersection with 126th Street, approximately 830 vph

enter westbound Northern Boulevard from the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway, and approximately 800 vph enter eastbound Northern Boulevard from the Grand Central Parkway/Astoria Boulevard ramp. Northern Boulevard eastbound and westbound volumes in the vicinity of 108th and 114th Streets are approximately 1,750 and 1,525 vph, respectively.

During the Saturday midday peak hour on a non-game day, there are approximately 1075–1,800 vph in the eastbound direction and 1,325–1,945 vph in the westbound direction on Northern Boulevard through Downtown Flushing. Northern Boulevard carries approximately 475–1,250 vph and 450–1,425 vph in the eastbound and westbound directions, respectively, adjacent to the Special Willets Point District and CitiField. At the intersection with 126th Street, 750 vph enter westbound Northern Boulevard from the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway, and approximately 650 vph enter eastbound Northern Boulevard from the Grand Central Parkway/Astoria Boulevard ramp. Northern Boulevard eastbound and westbound volumes in the vicinity of 108th and 114th Streets are approximately 1,125 and 1,775 vph, respectively.

During the weekday PM pre-game arrival peak hour, eastbound volumes on Northern Boulevard are approximately 1,400–2,075 vph through Downtown Flushing, generally similar to those on non-game days. Westbound volumes are approximately 1,300–1,750 vph, slightly higher than on non-game days, which is expected due to increased traffic toward CitiField. Adjacent to the project site in the vicinity of 126th Street, Northern Boulevard eastbound volumes are approximately 575–1,675 vph; westbound volumes are approximately 725–2,525 vph. At the intersection with 126th Street, approximately 1,570 vph enter westbound Northern Boulevard from the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway, and about 950 vph enter eastbound Northern Boulevard from the Grand Central Parkway/Astoria Boulevard ramp. The New York City Police Department (NYPD) channelizes and operates the one-lane ramp and the adjacent lane (right lane) of Northern Boulevard as free-flow through the traffic signal at 126th Street so that it is able to process the heavy pre-game volume. Much of this traffic immediately exits Northern Boulevard onto the slip ramp to World's Fair Marina to access stadium parking lots. Northern Boulevard eastbound and westbound volumes in the vicinity of 108th and 114th Streets are approximately 1,750 and 1,625 vph, respectively.

During the weekend afternoon pre-game arrival peak hour, there are approximately 1,150–1,800 vph in the eastbound direction and 1,250–1,925 vph in the westbound direction on Northern Boulevard through Downtown Flushing. Northern Boulevard carries approximately 300–1,175 vph and 525–2,175 vph in the eastbound and westbound directions, respectively, adjacent to the project site. At the intersection with 126th Street, approximately 1,350 vph enter westbound Northern Boulevard from the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway, and approximately 1,030 vph enter eastbound Northern Boulevard from the Grand Central Parkway/Astoria Boulevard ramp. Again, NYPD operates the ramp similarly to the weekday PM pre-game condition, since a large portion of the entering traffic immediately exits to World's Fair Marina. Northern Boulevard eastbound and westbound volumes in the vicinity of 108th and 114th Streets are approximately 1,250 and 1,500 vph, respectively.

During the weekend PM post-game departure peak hour, there are approximately 1,250–1,875 vph in the eastbound direction and 1,150–1,700 vph westbound direction on Northern Boulevard through Downtown Flushing. Northern Boulevard carries approximately 350–1,275 vph and

450–1,650 vph in the eastbound and westbound directions, respectively, adjacent to the project site. The significant volume sources to westbound Northern Boulevard during this time period is 126th Street, carrying about 800 vph of departure traffic from CitiField parking lots, and the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway carrying about 600 vph. In the eastbound direction, the ramp from the Grand Central Parkway/Astoria Boulevard adds approximately 980 vph onto Northern Boulevard. Volumes along Northern Boulevard in the vicinity of 108th and 114th Streets are approximately 1,125 vph in the eastbound direction and 1,475 vph traveling westbound.

Traffic movements with high volumes and/or critical levels of service on Northern Boulevard during one or more analysis time period(s) include: the westbound through movement at 126th Street from the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway; eastbound and westbound mainline left turns at Prince Street; eastbound right turns at Main Street; and the westbound through/right turn movement at Parsons Boulevard. These movements sometimes experience significant delays, including unacceptable LOS D (delays above mid-D), E or F, due to heavy volumes and over-saturated conditions. The Northern Boulevard westbound left turn onto Prince Street, though a low volume, typically experiences LOS E or F conditions due to the small portion of effective green time it receives out of the long signal cycle. Importantly, the overall intersection levels of service for Northern Boulevard intersections, which are based on a weighted average of the delays for all of the traffic movements at each intersection, are greatly dependent on the delays of the high-volume eastbound and westbound through movements, even though the delays of Northern Boulevard turn movements and cross-street movements are generally worse.

For non-game day conditions, overall levels of service at intersections along Northern Boulevard between 108th Street and Prince Street are generally acceptable LOS B or C. The intersection of Northern Boulevard at 108th Street operates at overall marginally acceptable LOS D during the Saturday midday peak hour. Overall, Northern Boulevard at its intersections with Main Street, Prince Street, Union Street and Parsons Boulevard operate at marginally acceptable LOS D or better. Northern Boulevard at Parsons Boulevard operates at overall marginally unacceptable LOS D during the Saturday midday peak hour.

For game-day conditions, all Northern Boulevard intersections in the vicinity of the project site and to the west operate at overall LOS C or better. As mentioned above, NYPD traffic demand management at the intersection of Northern Boulevard and 126th Street allows free-flow operation of the westbound through movement from the ramp connection from the southbound Whitestone Expressway and northbound Van Wyck Expressway during pre-game periods. This generally helps process traffic from the ramp improving the overall traffic flow around the project site and CitiField.

All Northern Boulevard intersections in Downtown Flushing operate at overall LOS C or marginally acceptable LOS D (delays below mid-D) during the three game-day peak hours.

ROOSEVELT AVENUE

Through Downtown Flushing, Roosevelt Avenue is traveled by approximately 150–650 vph in the eastbound direction and 200–450 vph in the westbound direction during the non-game day peak hours. The highest eastbound volumes through the downtown area occur approaching Prince Street, while the highest westbound volumes are at the intersections with Union Street and Prince Street. Adjacent to the project site, in the vicinity of 126th Street to 114th Street, eastbound volumes on Roosevelt Avenue are approximately 425–750 vph, while the westbound

flow is approximately 450–800 vph for non-game day conditions. Between 108th and 114th Streets, volumes are approximately 300–475 vph eastbound and 375–600 vph westbound.

During the game-day peak hours, there are approximately 150-675 vph per direction on Roosevelt Avenue through Downtown Flushing. Adjacent to the project site, in the vicinity of 126th Street to 114th Street, eastbound volumes on Roosevelt Avenue are approximately 500–850 vph, while westbound volumes are approximately 725–1,150 vph for the pre-game conditions. Weekend post-game volumes along the same section of Roosevelt Avenue are approximately 450–750 vph eastbound and 450–950 vph westbound. Also during the weekend PM post-game departure peak hour, there are up to 975 vph on eastbound Roosevelt Avenue approaching College Point Boulevard, much of this as departing game traffic. Between 108th and 114th Streets, volumes are approximately 400–600 vph per direction during pre-game peak hours, and approximately 350–500 vph per direction during the post-game peak hour.

For non-game conditions, overall intersection levels of service along Roosevelt Avenue are at acceptable LOS C or better except at the intersections of Roosevelt Avenue at College Point Boulevard and Roosevelt Avenue and Main Street which operate at overall marginally acceptable LOS D during the weekday PM peak hour, and at the intersection of Roosevelt Avenue at Parsons Boulevard which operates at marginally acceptable LOS D during the weekday AM peak hour. All individual traffic movements along Roosevelt Avenue operate at acceptable or marginally acceptable levels of service (below mid-D) except at Main Street where westbound Roosevelt Avenue operates at unacceptable LOS D in the weekday AM peak hour and westbound and eastbound Roosevelt Avenue operate at LOS E in weekday PM peak hour. Traffic conditions through Main Street tend to be the most problematic along the corridor due to the heavy bus and pedestrian activity at the intersection, which is the nexus of Downtown Flushing's inter-modal transportation hub.

During game-day conditions, all intersections along Roosevelt Avenue within the vicinity of the project site operate at overall marginally acceptable LOS D or better during all peak hours. Also, all individual lane groups on Roosevelt Avenue operate at acceptable LOS C or better. The increase in volumes along Roosevelt Avenue during game-day peak hours due to traffic demand to CitiField is managed by NYPD to optimize traffic flow. At the intersection of Roosevelt Avenue and 126th Street, effective green times are adjusted, with preference to the eastbound left-turn movement (toward the CitiField parking lots north of Roosevelt Avenue) and to the southbound right-turn movement (towards the south parking lots). During the weekend post-game peak hour, NYPD continues to manage the Roosevelt Avenue/126th Street intersection, especially to process the eastbound through and southbound left turn movements carrying traffic out of these lots. Overall, the post-game demand management along Roosevelt Avenue adjacent to CitiField and the project site is effective.

Concurrently, the Roosevelt Avenue intersections through Downtown Flushing all operate at overall acceptable LOS C and marginally acceptable LOS D except for Roosevelt Avenue at College Point Boulevard which operates at overall unacceptable LOS D during the weekday pre-game peak hour. The Roosevelt Avenue eastbound shared through-right movement at this intersection operates at unacceptable LOS D or LOS E during pre-game and post-game peak hours. The only other traffic movement which operates at unacceptable levels of service during game day peak hours is eastbound Roosevelt Avenue approaching Main Street which operates at LOS E during the weekday pre-game peak hour.

KISSENA BOULEVARD

Kissena Boulevard, in the vicinity of Main Street, is traveled by approximately 200–350 vph per direction during all non-game and game day peak hours. Kissena Boulevard also carries significant bus traffic along seven bus routes to and from Main Street, with up to approximately 65 buses per hour per direction. The intersection of Kissena Boulevard and Main Street operates at overall acceptable LOS C during all non-game and game day peak hours. The Kissena Boulevard approach at Main Street operates at marginally acceptable LOS D (below mid-D) or better during all analysis periods, both for non-game and game conditions.

SANFORD AVENUE

Analysis locations along Sanford Avenue are located within Downtown Flushing, where traffic volumes are approximately 175–275 vph in the eastbound direction and 275–475 vph in the westbound direction during the non-game day peak hours. During the game-day peak hours, there are approximately 175–275 vph and 300–675 vph traveling eastbound and westbound, respectively, on Sanford Avenue through Downtown Flushing. During all of the analysis peak hours, the three intersections analyzed along Sanford Avenue operate at overall acceptable LOS B or C.

34TH AVENUE

As stated previously, 34th Avenue is discontinuous within the study area between 114th and 126th Streets. East of 126th Street, through the Special Willets Point District, 34th Avenue is traveled by only approximately 50–150 vph in each direction during all non-game and game day peak hours. West of 114th Street, 34th Avenue serves as an access route to the Grand Central Parkway eastbound on-ramp, where it carries approximately 350–525 vph eastbound and 50–125 vph westbound.

During pre-game conditions, NYPD manages the intersection of 34th Avenue at 126th Street and Stadium Road, including the at-grade ramp from Northern Boulevard and the elevated access ramp from the Grand Central Parkway/Astoria Boulevard. NYPD management includes: (1) deactivation of the traffic signal; (2) traffic cone/barrier channelization of the southbound Grand Central Parkway ramp to allow for two lanes. During the weekend post-game peak hour, NYPD traffic management includes the deactivation of the traffic signal.

Both 34th Avenue analysis locations operate at overall acceptable levels of service or marginally acceptable LOS D during all non-game peak hours. During game-day peak hours, the intersection of 34th Avenue and 114th Street operates at similar overall levels of service, while the intersection of the 126th Street/GCP Ramp at 34th Avenue operates at overall marginally unacceptable LOS D during all game-day peak hours. The only individual movement on 34th Avenue that operates at unacceptable levels of service is westbound 34th Avenue approaching 126th Street which operates at marginally unacceptable LOS D during all non-game peak hours and at LOS E during the Saturday pre-game peak hour.

Levels of service for both 34th Avenue analysis locations operate at overall acceptable levels of service and marginally acceptable LOS D during all non-game peak hours. During game-day peak hours, the intersection of 34th Avenue and 114th Street operates at similar overall levels of service, while the intersection of 126th Street/GCP Ramp at 34 Avenue operates at overall marginally unacceptable LOS D during all game-day peak hours. The only individual movement on 34th Avenue that operates at unacceptable levels of service is westbound 34th Avenue

approaching 126th Street which operates at marginally unacceptable LOS D during all non-game peak hours and at LOS E during the Saturday pre-game peak hour.

ASTORIA BOULEVARD

Similar to Northern Boulevard, the prevailing weekday AM traffic on Astoria Boulevard is in the westbound direction, and reversed in the weekday PM. Through the neighborhood of North Corona on the west side of the study area on a typical non-game day, eastbound Astoria Boulevard carries approximately 850 vph during the AM peak hour, which increases to approximately 2,225 vph during the PM peak hour. Conversely, the westbound direction carries approximately 1,925 vph during the AM peak hour, which decreases to approximately 850 vph during the PM peak hour. The weekday midday and Saturday midday traffic volumes are in the range of 925–1,000 vph eastbound and 650–750 westbound. Weeknight pre-game peak hour volumes on Astoria Boulevard are approximately 2,650 vph eastbound and 800 vph westbound. Weekend pre- and post-game peak hour volumes range from approximately 825–1,000 vph eastbound and 700–750 vph westbound. The analyzed intersection at 108th Street operates at overall LOS B or C during all analysis periods.

WEST PARK LOOP/STADIUM ROAD

West Park Loop/Stadium Road carries low to moderate volumes during non-game conditions, with approximately 50–350 vph per direction during weekday and Saturday non-game peak hours. The roadway experiences a substantial increase in traffic during game conditions due to access from the Grand Central Parkway westbound ramps. Game traffic uses West Park Loop/Stadium Road to access CitiField parking lots. Weekday and weekend pre-game arrival volumes are approximately 150–650 vph per direction. A large portion of post-game traffic travels westbound along West Park Loop/Stadium Road—from the north exits of the CitiField lots at Boat Basin Road—toward the Grand Central Parkway on-ramp. Westbound volumes along this short segment are as high as 1,500 vph approaching the on-ramp toward the westbound Grand Central Parkway ramp (toward eastbound Northern Boulevard and the northbound Whitestone Expressway) during the weekend post-game departure peak hour, while eastbound volumes are much lower, approximately 100 vph.

The intersection of West Park Loop/Stadium Road at Boat Basin Road operates at overall acceptable LOS C during all the non-game peak hours. During post-game conditions, NYPD deploys an officer to control the intersection to give preference to the northbound approach (traffic exiting the CitiField parking lots). During this time, NYPD converts the two southbound receiving lanes into northbound exclusive left turn lanes, and uses cones to divert all southbound traffic to westbound Stadium Road (so all southbound traffic must turn right). This typically lasts for the first 60 minutes after a game after which the intersection reverts back to normal operations.

COLLEGE POINT BOULEVARD

Along the western boundary of Downtown Flushing between Sanford Avenue and Roosevelt Avenue, College Point Boulevard carries approximately 550–1,000 vph per direction during the non-game peak hours. Through Northern Boulevard, College Point Boulevard is traveled by approximately 550–750 vph in both the northbound and southbound directions, during the non-game peak hours. During weeknight and weekend pre-game conditions, College Point Boulevard between Sanford Avenue and Roosevelt Avenue is traveled by approximately 1,150–1,350 vph northbound and 900–1,100 vph southbound. Along the same section of College Point Boulevard during the weekend post-game peak hour, there are approximately 750–1,200 vph in the

northbound direction and 900–1,000 vph in the southbound direction. Through Northern Boulevard, College Point Boulevard is traveled by approximately 650–750 vph northbound and 400–700 vph southbound, during the game-day peak hours.

Overall levels of service along College Point Boulevard are generally at acceptable LOS B or C except for the intersection of College Point Boulevard and Roosevelt Avenue which operates at marginally acceptable LOS D during the weekday non-game PM, and weekend pre-game and post-game peak hours, and operates at marginally unacceptable LOS D during the weekday pre-game peak hour. Specifically during pre-game conditions, the College Point Boulevard northbound left turn at Roosevelt Avenue is congested and operates at unacceptable LOS F, due to increased traffic toward CitiField. The College Point Boulevard northbound left turn also operates at unacceptable LOS D during the weekday PM non-game peak hour.

MAIN STREET

Main Street carries approximately 500–650 vph northbound and 350–800 vph southbound, during the non-game and game day peak hours. Between Kissena Boulevard and Northern Boulevard, Main Street also supports up to nine bus lines, with volumes as high as approximately 90 buses per hour per direction near Roosevelt Avenue.

All intersections analyzed along Main Street operate at overall acceptable levels of service (marginally acceptable LOS D or better). In order to address traffic congestion at its intersection with Roosevelt Avenue caused by the volume of buses and potential conflicts between vehicles and pedestrians, in addition to generally high traffic volumes, Main Street approaches are restricted to through movements only. However, there are some critical movements along Main Street that operate at unacceptable levels of service. At the intersection with Main Street/41st Avenue, the northbound left turn movement onto 41st Street operates at unacceptable LOS D during the non-game Saturday midday peak hour, and the southbound left turn movement onto Kissena Boulevard operates at marginally unacceptable LOS D during the weekday PM non-game and Saturday pre-game peak hours. At the intersection of Main Street at Northern Boulevard, the northbound right turn movement onto Northern Boulevard operates at marginally unacceptable LOS D during the non-game weekday AM and Saturday midday peak hours and during the weekday pre-game peak hour. This movement also operates at unacceptable LOS E during the weekday PM non-game and Saturday pre-game peak hours.

UNION STREET

Northbound volumes on Union Street are lower between Sanford Avenue and 41st Avenue (approximately 75–225 vph) than between 41st Avenue and Northern Boulevard (approximately 300–500 vph). In the southbound direction, Union Street is traveled by approximately 400–875 vph between Northern Boulevard and the Municipal Parking Lot entrance just north of 39th Street. South of the parking lot, southbound volumes are 325-525 vph. At Sanford Avenue, a substantial amount of Union Street's southbound traffic turns either left or right onto Sanford Avenue, and southbound traffic volumes diminish to 175-275 vph south of Sanford Avenue. Union Street also carries bus traffic for a number of transit routes.

Overall levels of service at Union Street intersections operate at marginally acceptable LOS D or better during all non-game and game day peak hours. All individual movements along Union Street also operate at acceptable levels of service during all peak hours.

PARSONS BOULEVARD

Through eastern Downtown Flushing, Parsons Boulevard is traveled by approximately 250–400 vph northbound and 225–475 vph southbound, during all non-game and game day peak hours. Parsons Boulevard typically has acceptable overall levels of service at the intersections analyzed, except for Parsons Boulevard at Northern Boulevard which operates at overall marginally unacceptable LOS D during the Saturday midday non-game peak hour. The northbound left turn and southbound shared left-through-right movements operate at unacceptable LOS D or E during most peak hours. Other individual movements along Parsons Boulevard that operate at unacceptable levels of service during at least one peak hour include the northbound approach at Roosevelt Avenue (unacceptable LOS D during the weekday AM non-game peak hour) and the northbound approach at Sanford Avenue (unacceptable LOS D during the weekday AM and midday non-game peak hours).

108TH STREET

108th Street carries approximately 150–325 vph in the northbound direction and 50–450 vph in the southbound direction during the non-game and game day peak hours. Overall intersection levels of service at analyzed 108th Street intersections are acceptable LOS D or better; however, several 108th Street movements at these intersections operate at unacceptable levels of service. This includes the northbound *de facto* left turn movement at Astoria Boulevard (LOS mid-D during the weekday AM non-game peak hour) and the northbound and southbound approaches at Northern Boulevard and at Roosevelt Avenue (unacceptable LOS mid-D or E on both approaches at both intersections during all peak hours).

PRINCE STREET

Prince Street volumes are approximately 175–350 vph per direction during non-game and game day peak hours with the majority of southbound traffic at Northern Boulevard turning onto the westbound Northern Boulevard viaduct during most peak hours. Northbound Prince Street at Northern Boulevard consistently operates at unacceptable LOS E or F during all analysis peak hours, while the southbound approach operates at marginally acceptable LOS D at all times except during the weekday AM non-game peak hour where it operates at unacceptable LOS D. Prince Street at Roosevelt Avenue operates at acceptable levels of service during all peak hours.

111TH STREET

During all analysis peak hours, 111th Street northbound approaching Roosevelt Avenue is traveled by approximately 175–325 vph. Northbound 111th Street, which is the only approach to Roosevelt Avenue, since the street is one-way, operates at marginally unacceptable LOS D or LOS E during the non-game peak hours and at unacceptable LOS E during game day analysis peak hours.

114TH STREET

Northbound volumes on 114th Street are approximately 175–300 vph during the non-game analysis peak hours. There is heavy northbound right turn traffic at Roosevelt Avenue, and all northbound traffic approaching 34th Avenue turns onto the Grand Central Parkway on-ramp since the roadway becomes one-way southbound between that intersection and the intersection at Northern Boulevard. Northbound 114th Street volumes entering the Grand Central Parkway range between 225–300 vph for non-game conditions. In the southbound direction, volumes along 114th Street vary greatly due to the Grand Central Parkway on-ramp. During the non-

game peak hours, southbound traffic approaching 34th Avenue is approximately 450–675 vph, but downstream, approaching Roosevelt Avenue, volumes are 125–250 vph.

Pre-game volumes on 114th Street northbound are approximately 200–325 vph (similar to non-game), and southbound volumes approaching 34th Avenue range between 700–800 vph. Approaching Roosevelt Avenue, volumes are approximately 250–425 vph, which are higher than non-game conditions due to increased left turns toward CitiField.

Northbound and southbound 114th Street at Roosevelt Avenue operate at unacceptable LOS D or E during all analysis periods. The southbound 114th Street left turn movement at 34th Avenue operates at marginally unacceptable LOS D or unacceptable LOS E during all game day peak hours. At Northern Boulevard, southbound 114th operates at marginally unacceptable LOS D during all peak hours except for the weekday and Saturday midday non-game peak hours which operate at marginally acceptable LOS D.

PARKING

OFF-STREET PARKING

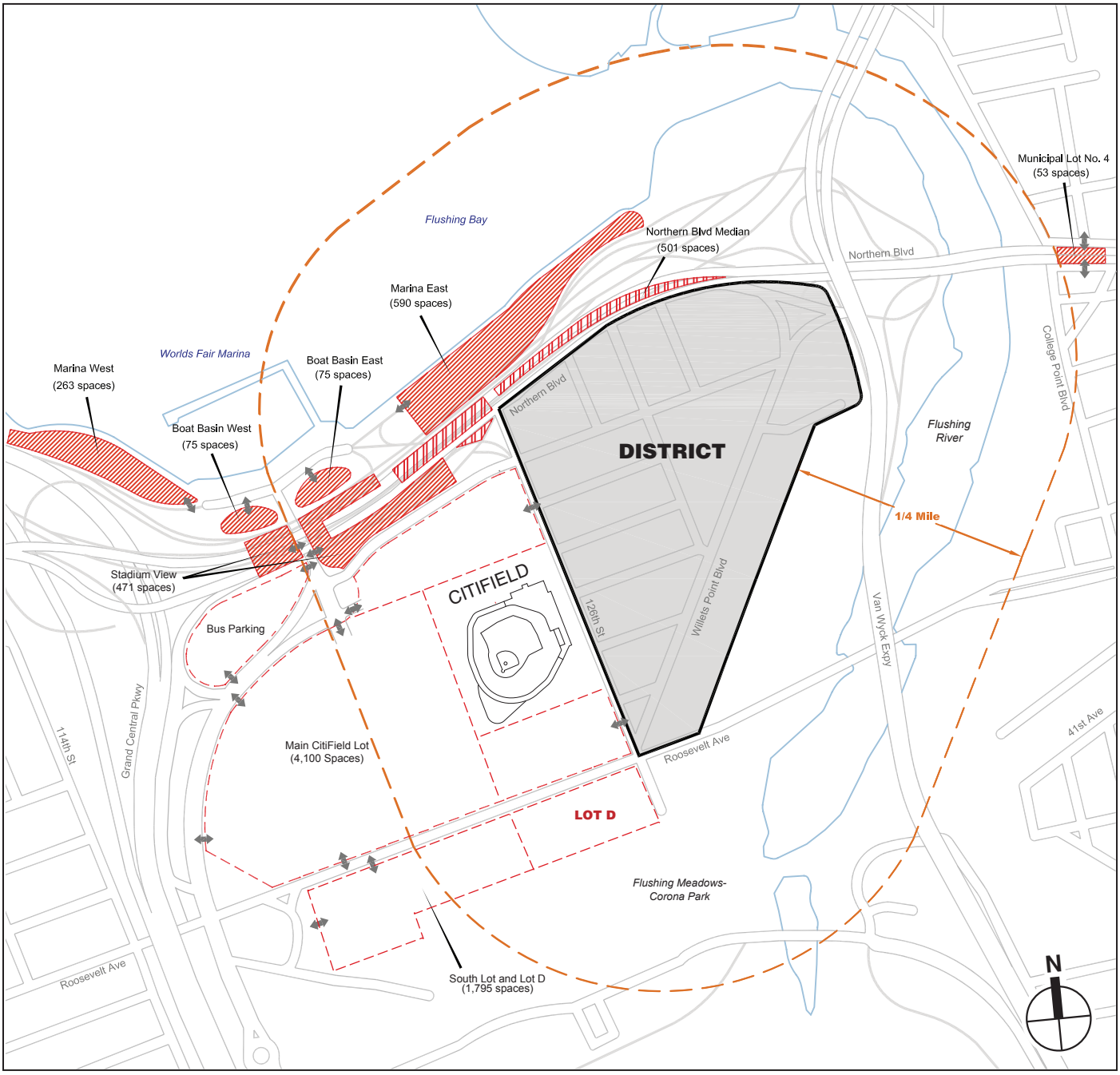
An inventory of public parking lots was conducted within the area generally bounded by College Point Boulevard to the east, West Park Loop/Stadium Road and the Grand Central Parkway to the west, Flushing Bay to the north, and Perimeter Road in Flushing Meadows-Corona Park to the south. This study area constitutes a region within approximately ¼ mile from the boundary of the project site and encompasses the various parking lots used by the Mets and game-day attendees.

As shown in **Tables 14-7** and **14-8**, an inventory was conducted along with hourly parking facility occupancy surveys during the periods of 7:00 AM–10:00 AM, 11:00 AM–2:00 PM, and 4:00 PM–7:00 PM on a typical weekday (Tuesday, May 22, 2012), and 11:00 AM-2:00 PM on Saturday without a Mets home game (Saturday, June 9, 2012). For periods with a Mets home game, parking surveys were conducted from 4:30 PM–7:30 PM (Tuesday, May 29, 2012) for the weekday PM pre-game arrival period and from 2:00 PM–5:00 PM and 6:00 PM-9:00 PM (Saturday, June 2, 2012) for the weekend pre- and post-game periods (see **Tables 14-9** and **14-10**). Similar to the traffic volumes, game day parking occupancies were conservatively adjusted upward to reflect an 85th percentile attendance at CitiField based on the 2010 and 2011 seasons since game attendance during the parking and traffic data collection was relatively low. On-street parking utilization was not adjusted since most Mets game attendees park in off-street facilities.

Overall, there is a mix of controlled and uncontrolled public parking lots as well as undesignated parking areas, including space on roadway shoulders and medians, which are typically used only during periods of high parking demand, such as during a Mets game (see **Figure 14-2**). The controlled lots include: the "main" CitiField lots (generally bounded by Roosevelt Avenue to the south, Shea Road to the north and west, and 126th Street to the east), which serve game and official stadium parking only on both game and non-game days; South Lot and Lot D[1], which serves as a pay park-and-ride lot for commuters on typical weekdays and weekends, and is a pay lot for CitiField during game periods; Marina East and Marina West, which are also pay lots for

[1] South Lot and Lot D currently operate as a single surface parking lot, with common entrance/exit locations.

3.13.13



Special Willets Point District

Parking Facility

Parking Median

CitiField Controlled Parking

1/4 Mile Perimeter

Directional Entrance/Exit

0 1000 Feet

SCALE

WILLETS POINT Development

Parking Facilities

Figure 14-2

Table 14-7
Hourly Parking Occupancy by Percentage of Spaces Occupied per Facility
Off-Street Parking Survey—Weekday Non-Game Day

Parking Facility	Capacity	7-8 AM	8-9 AM	9-10 AM	11AM -12PM	12-1 PM	1-2 PM	4-5 PM	5-6 PM	6-7 PM
South Lot and Lot D[2]	1,795	13%	20%	30%	32%	32%	31%	25%	21%	13%
Marina East	590	4%	4%	4%	6%	5%	5%	2%	1%	1%
Marina West	263	3%	6%	5%	9%	11%	14%	13%	13%	17%
Boat Basin East	75	4%	12%	13%	24%	25%	24%	15%	19%	37%
Boat Basin West	75	0%	0%	0%	0%	1%	0%	0%	0%	0%
Stadium View	471	3%	3%	3%	3%	4%	3%	1%	1%	1%
Northern Blvd. Median[1]	501	13%	14%	14%	15%	15%	16%	15%	10%	6%
Municipal Lot No. 4	53	23%	34%	53%	92%	119%	109%	98%	87%	60%
TOTAL	**3,823**	**10%**	**14%**	**20%**	**22%**	**23%**	**22%**	**18%**	**15%**	**11%**

Notes: [1] Capacity includes the median between eastbound and westbound Northern Boulevard, both east and west of 126th Street.
[2] South Lot and Lot D is currently striped as 1,556 parking spaces, but the surface lot has a higher capacity due to optimization of parking spaces by parking attendants.

Table 14-8
Hourly Parking Occupancy by Percentage of Spaces Occupied per Facility
Off-Street Parking Survey—Saturday Non-Game Day

Parking Facility	Capacity	11AM to 12PM	12-1 PM	1-2 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
South Lot and Lot D[2]	1,795	4%	4%	3%	3%	3%	3%	3%	2%
Marina East	590	2%	3%	3%	6%	5%	4%	3%	3%
Marina West	263	6%	7%	8%	8%	10%	11%	12%	20%
Boat Basin East	75	49%	51%	35%	24%	17%	12%	43%	101%
Boat Basin West	75	64%	43%	28%	17%	13%	9%	19%	44%
Stadium View	471	1%	1%	1%	1%	2%	1%	0%	0%
Northern Blvd. Median[1]	501	6%	6%	6%	4%	4%	3%	4%	4%
Municipal Lot No. 4	53	79%	83%	91%	83%	79%	74%	43%	32%
TOTAL	**3,823**	**7%**	**7%**	**6%**	**6%**	**6%**	**5%**	**5%**	**7%**

Notes: [1] Capacity includes the median between eastbound and westbound Northern Boulevard, both east and west of 126th Street.
[2] South Lot and Lot D is currently striped as 1,556 parking spaces, but the surface lot has a higher capacity due to optimization of parking spaces by parking attendants.

Table 14-9
Hourly Parking Occupancy by Percentage of Spaces Occupied per Facility
Off-Street Parking Survey—Weekday Game Day

Parking Facility	Capacity	Weeknight Pre-game		
		4:30-5:30 PM	5:30-6:30 PM	6:30-7:30 PM
South Lot and Lot D[2]	1,795	37%	37%	44%
Marina East	590	4%	2%	1%
Marina West	263	21%	29%	41%
Boat Basin East	75	17%	32%	57%
Boat Basin West	75	3%	13%	35%
Stadium View	471	9%	8%	10%
Northern Blvd. Median[1]	501	100%	100%	100%
Municipal Lot No. 4	53	92%	70%	45%
TOTAL	**3,823**	**38%**	**39%**	**48%**

Notes: [1] Capacity includes the median between eastbound and westbound Northern Boulevard, both east and west of 126th Street.
[2] South Lot and Lot D is currently striped as 1,556 parking spaces, but the surface lot has a higher capacity due to optimization of parking spaces by parking attendants.

Table 14-10
Hourly Parking Occupancy by Percentage of Spaces Occupied per Facility
Off-Street Parking Survey—Weekend Game Day

Parking Facility	Capacity	Weekend Pre-game			Weekend Post-game		
		2-3 PM	3-4 PM	4-5 PM	6-7 PM	7-8 PM	8-9 PM
South Lot and Lot D[2]	1,795	5%	23%	28%	21%	10%	1%
Marina East	590	7%	23%	47%	49%	27%	6%
Marina West	263	47%	54%	74%	81%	91%	87%
Boat Basin East	75	100%	100%	100%	87%	100%	97%
Boat Basin West	75	29%	43%	52%	65%	96%	91%
Stadium View	471	10%	20%	53%	51%	25%	1%
Northern Blvd. Median[1]	501	73%	83%	86%	89%	67%	18%
Municipal Lot No. 4	53	96%	100%	74%	26%	19%	13%
TOTAL	**3,823**	**23%**	**38%**	**51%**	**47%**	**33%**	**15%**

Notes: [1] Capacity includes the median between eastbound and westbound Northern Boulevard, both east and west of 126th Street.
[2] South Lot and Lot D is currently striped as 1,556 parking spaces, but the surface lot has a higher capacity due to optimization of parking spaces by parking attendants.

CitiField during game periods but are free and uncontrolled on typical weekdays and weekends; and Stadium View (Whitestone Lot) that flanks Boat Basin Road under the elevated expressway, which is also a pay lot for CitiField during game periods, but is free on non-game weekdays and weekends. Occupancy surveys of the main CitiField lots were not conducted since they serve only official CitiField and NYPD vehicles on typical weekdays and weekends, and official and attendee parking during game periods, so they would not regularly be publicly accessible.

The remaining group of lots and other off-street parking areas include: the Marina Boat Basin East and West lots; the Northern Boulevard dirt/pavement median both east and west of 126th Street, which have significantly higher usage during Mets game periods; and Municipal Lot No. 4, which is under the Northern Boulevard viaduct in Downtown Flushing. These parking lots are not part of CitiField's pay parking facilities and, excluding Municipal Lot No. 4, are only partially used during typical weekdays and weekends when there is no Mets home game. Municipal Lot No. 4 is consistently utilized on both game and non-game-days.

Non-Game-Day Parking

As shown in **Table 14-7**, there are eight surveyed parking facilities open to public use on non-game days, containing approximately 3,823 spaces. During non-game days, all off-street parking facilities are less than 40 percent occupied throughout the day except for Municipal Lot Number 4 which is located at the western end of Downtown Flushing, This facility reaches capacity by 11 AM and remains at or near capacity until the 5-6 PM hour. CitiField's South Lot/Lot D is by far the largest inventoried parking facility in the area. This primary commuter (pay) lot near the District has a capacity of 1,795[1], does not exceed 32 percent occupancy during the weekdays without a Mets game, and drops to about 13 percent occupancy outside of the 8 AM to 6 PM period. Examining the other more distant lots during days without a Mets home game, the two Boat Basin lots and Marina West service the club and marina visitors; however, the larger nearby lots, such as Marina East and Stadium View, which are generally utilized only during game days, are at or near zero percent occupancy. Overall, during weekday non-game peak hours, off-street parking occupancies within the parking study area range between 10 and 23 percent, resulting in a parking availability of 2,760 to 3,225 spaces.

As shown in **Table 14-8**, the occupancy level ranges between 5 and 7 percent between the hours of 11 AM and 6 PM on a typical Saturday without a Mets game. Therefore, there are approximately 3,335 to 3,400 unoccupied spaces available within the off-street lots.

Game Day Parking

On game days, CitiField's South Lot and Lot D are used for game attendance parking only. During the weekday PM hours preceding a 7:10 PM-start Mets home game, parking occupancy in the surveyed lots is approximately 42 to 51 percent. As shown in **Table 14-9**, from 4:30 to 7:30 PM, South Lot and Lot D experiences a transition from commuter park-and-ride occupants to Mets game attendees and has a consistent occupancy of 37 percent until 6:30 PM, and has a subsequent increase to 44 percent by the start of the game. Other lots, such as Stadium View and Marina West, which are controlled for game traffic on game days only, increase in occupancy approaching the start of the game, but do not reach more than about 57 percent capacity. The available free parking on the Northern Boulevard median, which is frequently used for parking by Mets attendees, reaches 100 percent of its approximately 500-space capacity. The Marina East and Stadium View lots were nearly unutilized during the surveyed weekday Mets game. Overall, within the parking study area, off-street parking utilization ranges between 38 and 48 percent during the 4:30 to 7:30 PM hours, resulting in a parking availability of approximately 1,860 to 2,225 spaces.

Table 14-10 shows off-street parking inventories preceding and following a weekend Mets game with a 4:10 PM start. Only four of the off-street parking facilities are near or above 75 percent of capacity in the hours leading up to the game, and one of them, Municipal Lot 4, likely has few if any game attendees parking there. Boat Basin East is the only parking facility that reaches capacity during the weekend game day parking period, and it only has a capacity of 75 spaces. Overall, off-street parking utilization during weekend game days peaks at around 50 percent, leaving approximately 1,800 available spaces during that period, and demand tapers down after game time. By 8 PM, parking utilization in the study area is only at approximately one-third of the total capacity, and by 9 PM utilization drops to about 15 percent.

[1] South Lot and Lot D is currently striped as 1,556 parking spaces, but the lot has a higher capacity due to optimization of parking spaces by parking attendants.

ON-STREET PARKING

On-street parking inventories were conducted for a study area that generally covers the area within a ¼-mile radius of the Special Willets Point District and Willets West portions of the project site. This includes the area bounded by Northern Boulevard to the north, Willets Point Boulevard/Roosevelt Avenue to the south, College Point Boulevard to the east and 126th Street to the west. The inventory along College Point Boulevard extended further north to 32nd Avenue, which is slightly beyond the ¼-mile radius but still within walking distance.

Since much of the existing roadway network within the District is in general disrepair, there are few blocks with defined sidewalks, curbs, and designated on-street parking space, and much of the block lengths are comprised of garage entrances and extensions of the abutting land uses and are not adequately built and maintained for any type of on-street parking. The small number of regulated spaces within or adjacent to this area are generally located along the south curb of eastbound Northern Boulevard (between 126th Street and Willets Point Boulevard) and along 126th Street. The remaining block space that can accommodate on-street parking is not regulated, such as along partial sections of 126th Place, 127th Street, 127th Place, and Willets Point Boulevard, near Northern Boulevard, and along one block of 34th Avenue.

Overall, within the area surveyed, there are approximately 235–270 legal spaces available on-street (depending on time of day and prevailing regulations), including the unregulated blocks discussed above. Within the surveyed area, there are no legal spaces along Roosevelt Avenue, West Park Loop/Stadium Road, and 126th Street, with a mix of No Standing Anytime and No Parking Anytime, though there is frequent illegal parking along both sides of 126th Street.

As shown in **Table 14-11**, the number of parked vehicles counted for the AM, midday, and PM periods on a typical weekday (Tuesday, May 22, 2012) is near or above the total on-street capacity. This is primarily due to illegally parked vehicles along 126th Street between Roosevelt Avenue and Northern Boulevard. Some of the other surveyed blocks are also parked over capacity, with a number of trucks and other delivery vehicles double parked near the warehouses and industrial land uses in the area. Within the District, many of the limited, unregulated blocks that have curb space for parking are typically filled to or beyond capacity by double-parked vehicles and vehicles blocking driveway/garage entrances.

On-street parking usage is generally lower during non-game weekend periods. Based on the data collected during a Saturday non-game survey, most streets have parking utilization that is below overall parking capacity during surveyed hours; however, substantial illegal parking still occurs along 126th Street.

On days with a Mets game, on-street parking usage is generally lower during pre-game and post-game periods. The overall number of parked vehicles remains below capacity for the hours surveyed during a typical weekday (Tuesday, May 29, 2012) and Saturday with a Mets game (June 2, 2012). Overall, game fans opt to park in pay and free lots rather than along the limited curb space on-street where available. With additional parking demand, typically for a weekend game, a small number of game fans park on-street along the south side of Northern Boulevard adjacent to the District and the blocks of 127th Street and 127th Place just south of Northern Boulevard.

Table 14-11
Existing Hourly On-Street Parking

		Without Mets Game						With Mets Game					
		Weekday			Weekend			Weekday			Weekend		
		Capacity	Legal Occupancy	Illegal Occupancy	Capacity	Legal Occupancy	Illegal Occupancy	Capacity	Legal Occupancy	Illegal Occupancy	Capacity	Legal Occupancy	Illegal Occupancy
7:00–8:00 AM	126th Street	0	0	7									
	Northern Boulevard	22	17	0									
	College Point Boulevard	108	97	0									
	Other	106	92	0									
8:00–9:00 AM	126th Street	0	0	13									
	Northern Boulevard	22	20	0									
	College Point Boulevard	108	108	0									
	Other	106	103	0									
9:00–10:00 AM	126th Street	0	0	18									
	Northern Boulevard	22	18	0									
	College Point Boulevard	140	116	0									
	Other	106	106	11									
11:00 AM–12:00 PM	126th Street	0	0	26	0	0	14						
	Northern Boulevard	22	19	0	22	18	0						
	College Point Boulevard	140	140	1	140	140	1						
	Other	106	106	2	106	94	0						
12:00–1:00 PM	126th Street	0	0	35	0	0	24						
	Northern Boulevard	22	17	0	22	18	0						
	College Point Boulevard	140	140	9	140	132	0						
	Other	106	106	5	106	98	0						
1:00–2:00 PM	126th Street	0	0	34	0	0	24						
	Northern Boulevard	22	22	0	22	20	0						
	College Point Boulevard	140	137	0	140	136	0						
	Other	106	106	16	106	93	0						
2:00–3:00 PM	126th Street				0	0	28				0	0	1
	Northern Boulevard				22	20	0				22	21	0
	College Point Boulevard				140	127	0				140	140	8
	Other				106	90	0				106	92	0
3:00–4:00 PM	126th Street				0	0	25				0	0	1
	Northern Boulevard				22	12	0				22	18	0
	College Point Boulevard				140	121	0				140	126	0
	Other				106	75	0				106	88	0

Table 14-11 (cont'd)
Existing Hourly On-Street Parking

		Without Mets Game						With Mets Game					
		Weekday			Weekend			Weekday			Weekend		
		Capacity	Legal Occupancy	Illegal Occupancy	Capacity	Legal Occupancy	Illegal Occupancy	Capacity	Legal Occupancy	Illegal Occupancy	Capacity	Legal Occupancy	Illegal Occupancy
4:00–5:00 PM	126th Street	0	0	36	0	0	27				0	0	2
	Northern Boulevard	0	0	15	22	16	0				22	22	2
	College Point Boulevard	140	137	0	140	109	0				140	117	0
	Other	106	91	0	106	76	0				106	79	0
4:30–5:30 PM	126th Street							0	0	7			
	Northern Boulevard							22	11	0			
	College Point Boulevard							140	140	4			
	Other							106	81	0			
5:00–6:00 PM	126th Street	0	0	24	0	0	25						
	Northern Boulevard	0	0	10	22	16	0						
	College Point Boulevard	140	119	0	140	87	0						
	Other	106	70	0	106	57	0						
5:30–6:30 PM	126th Street							0	0	2			
	Northern Boulevard							22	10	0			
	College Point Boulevard							140	122	0			
	Other							106	68	0			
6:00–7:00 PM	126th Street	0	0	18	0	0	15				0	0	13
	Northern Boulevard	0	0	5	22	14	0				22	18	0
	College Point Boulevard	140	90	0	140	77	0				140	83	0
	Other	106	47	0	106	52	0				106	59	0
6:30–7:30 PM	126th Street							0	0	5			
	Northern Boulevard							22	15	0			
	College Point Boulevard							140	66	0			
	Other							106	57	0			
7:00-8:00 PM	126th Street										0	0	3
	Northern Boulevard										22	11	0
	College Point Boulevard										140	79	0
	Other										106	43	0
8:00-9:00 PM	126th Street										0	0	10
	Northern Boulevard										22	9	0
	College Point Boulevard										140	74	0
	Other										106	44	0

Notes: For weekdays and Saturday, the number of designated legal parking spaces increases from approximately 230 to 268 at 9:00 AM due to a 7:00–9:00 AM parking restriction along a section of College Point Boulevard. For weekdays only, the number of designated legal parking spaces decreases from approximately 268 to 246 at 4:00 PM due to a 4:00–7:00 PM parking restriction along a section of Northern Boulevard (The number of spaces include those within approximately ¼ mile of the District.)

F. THE FUTURE WITHOUT THE PROPOSED PROJECT (TRAFFIC AND PARKING)

Future conditions without the proposed project (the No Action condition) are established in order to provide the baseline against which the impacts of the proposed project can be compared and to account for changes in traffic conditions between existing conditions and the future analysis years. Future year conditions were analyzed for each phase of the project: 2018 for Phase 1A; 2028 for Phase 1B; and 2032 for Phase 2. Future No Action traffic volumes for each phase were developed by applying a background traffic growth rate of 0.5 percent per year for the first five years and 0.25 percent per year for each additional year, as stated in the *CEQR Technical Manual*, and by adding trips expected to be generated by anticipated development projects that are expected to be operational by each respective buildout year.

NO ACTION BACKGROUND PROJECTS

Trip generation and specific traffic assignments for anticipated development projects were taken directly from their respective Environmental Impact Statements (EIS) or Environmental Assessment Statements (EAS) where such information was available. For projects where such information was not readily available, trip generation analyses were conducted to determine the volume of generated vehicle trips and these trips were assigned through study area intersections.

The 2018 No Action condition would include a large number of development projects within an area approximately up to and including one mile of the project site. (See **Table 14-12** for a complete list of No Action projects in the one-mile study area and corresponding **Figure 14-3**). One additional No Action project within the one-mile study area would be completed by 2019; however, this project would not generate significant new person or vehicle trips during peak analysis hours.

Table 14-12
No Action Projects in the Traffic Study Area

Map No.	Project Name/Address	Development Proposal/Program	Analysis Year	Transportation Notes
1	133-12 37 Ave	10 DU; 22,336 sf commercial; 1,971 sf community facility	2018	Cluster 9
2	132-08 Pople Ave	22 DU; 4,500 sf community facility; 12 parking spaces	2018	Cluster 4
3	35-19 College Point	35,580 sf manufacturing; 11 parking spaces	2018	Individually Assigned
4	41-09-15 Haight St	28 DU; 12,584 sf community facility	2018	Cluster 5
5	33-39 Prince St	6,396 sf manufacturing	2018	Cluster 10
6	132-18 41 Rd	10 DU (16,538); 4,095 sf community facility	2018	Cluster 5
7	136-13 Roosevelt Ave	2,800 sf commercial	2018	Cluster 7
8	41-38 College Point Boulevard	8 DU; 1,577 sf commercial; 1,646 sf community facility	2018	Cluster 5
9	131-10-14 40 Rd	5,795 sf commercial	2018	Cluster 5
10	102-06-10 Lewis Ave	14 DU; 8 parking spaces	2018	Background Growth
11	28-35 119 St	5,000 sf manufacturing (warehouse); 4 parking spaces	2018	Background Growth
12	105-10-12 Martense Ave	6 DU; 2 parking space	2018	Background Growth
13	108-30 49th Avenue	3 DU	2018	Background Growth
14	50-30-32 102 St	8 DU; 4 parking spaces	2018	Background Growth
15	57-37 Van Doren St	4 DU; 1 parking space	2018	Background Growth
16	104-24-28 Corona Ave	4 DU; 1,144 sf commercial sf	2018	Background Growth
17	50-08-10 102 St	6 DU	2018	Background Growth
18	99-21 Corona Ave	6 DU; 280 sf community facility	2018	Background Growth
19	27-24 College Point	5,082 sf commercial	2018	Background Growth
20	31-16 Linden Pl	24 DU; 6,085 sf commercial; 2,021 sf community facility	2018	Cluster 10
21	P.S. 287 - 110-08 Northern Blvd	49,471 sf public school	2016	Individually Assigned
22	32-29-33 112 Street	2 DU	2018	Cluster 3
23	32-56 101 Street	11,407 sf commercial	2016	Background Growth
24	37-56 108 Street	4 DU; 1,785 sf commercial	2018	Background Growth
25	32-05 Parsons Blvd	149,778 sf church	2018	Background Growth
26	133-47 39th Avenue	12,270 sf office; 11,420 sf retail; 9,755 sf medical office	2018	Individually Assigned
27	RKO Keith Theater - 135-27 Northern Boulevard	357 DU; 17,000 sf retail; 12,500 sf community facility; 385 parking spaces	2015	Cluster 10
28	37-06 112th Street	3 DU	2013	Background Growth
29	New Millennium - 134-03 35th Avenue	84 DU; 33,600 sf community facility; 3,600 sf retail; 222 parking spaces	2016	Cluster 10
30	Flushing Commons (Municipal Parking Lot 1) and Macedonia Plaza - 138th Street, 37th Avenue, 39th Avenue, and Union Street	Flushing Commons: 620 DU; 275,000 sf of retail; 110,000 sf of office; 98,000 sf of community facility space; 1,600 parking spaces; including 700 accessory spaces; and either 250 hotel rooms or an additional 124,000 sf of office Macedonia Plaza: 142 affordable residential units; 10,000 sf community facility space; 25,000 sf retail space	2018	Individually Assigned
31	Flushing Municipal Lot 3	120 DU; 23,000 sf commercial; 10,000 sf community facility; 200 parking spaces	2015	Cluster 6
32	43-57 Main Street	2,085 sf office; retail	2018	Background Growth
33	108-04, 14, 16 Astoria Blvd	84 DU; 34,965 sf community facility	2018	Individually Assigned
34	110-09 Northern Boulevard	31 DU; 15,500 sf of commercial use	2018	Cluster 2
35	112-12, 18, 24 Astoria Blvd	38 DU; 16,034 sf community facility	2018	Cluster 3
36	Block bounded by Astoria Blvd, Northern Blvd, and 112th Place	147 DU; 73,329 sf of commercial use	2018	Cluster 3
37	108-09 Northern Boulevard	18 DU; 8,970 sf commercial	2016	Cluster 2
38	106-15 Northern Boulevard	11 DU; 5,502 sf commercial	2016	Cluster 1
39	32-56 106th Street	14 DU; 7,144 commercial	2016	Cluster 1
40	Caldor Site - 136-20 Roosevelt Avenue	155,000 sf retail	2016	Cluster 7
41	132-27 to 132-61 41st Road	37 DU	2018	Cluster 5

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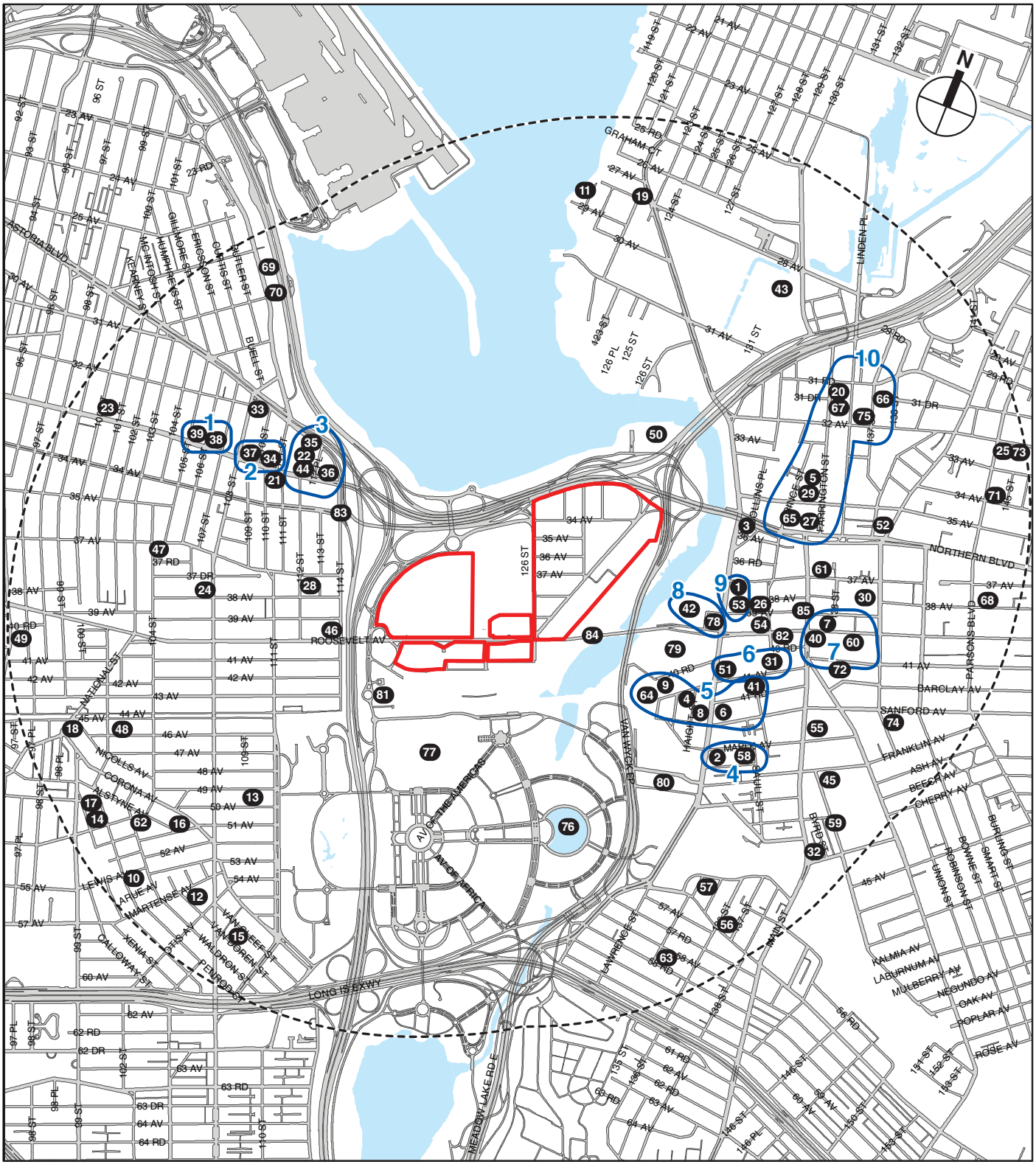


Transportation Analysis
No Action Projects
Figure 14-3

Table 14-12 (cont'd)
No Action Projects in the Traffic Study Area

Map No.	Project Name/Address	Development Proposal/Program	Analysis Year	Transportation Notes
42	River Park Place - 39-08 Janet Place	475 DU; 10,200 sf retail; 1,500 sf community facility; 251,000 sf office; 175 hotel rooms	2018	Cluster 8
43	College Point Police Academy - 129-05 31st Avenue	2.4 million sf program; including 450,000-square-foot physical training area; 250 beds for visiting law enforcement agencies; 250 classrooms, firing range and fields for emergency-vehicle and other training exercises; 2,000 parking spaces	2018	No trips during peak hours
44	112-15 Northern Boulevard	163-room hotel	2013	Cluster 3
45	P.S. 244 - 137-20 Franklin Avenue	425-seat primary school; enrollment of 373 in 2012	2016	Individually Assigned
46	39-14 114th Street	23 DU; 18,638 commercial; 4,794 community facility; 38 parking spaces	2018	Background Growth
47	37-19 104th Street	2 DU; 1,100 sf community facility	2018	Background Growth
48	102-12-14 45th Avenue	8 DU; 2 parking space	2018	Background Growth
49	40-53 Junction Boulevard	7 DU; 1,458 sf community facility	2018	Background Growth
50	32-11 Harper Street	137 sf commercial	2018	Background Growth
51	132-15 41st Avenue	25 DU; 5,933 sf community facility; 8 parking spaces	2018	Cluster 6
52	35-01-05 Leavitt Street	12 DU; 6 parking spaces	2018	Individually Assigned
53	37-19 College Point Boulevard	1 residential unit; 56,595 sf commercial; 1,000 sf community facility; 31 parking spaces	2018	Cluster 9
54	One Fulton Square	88 DU; 142,180 sf office; 168 hotel rooms; 16,722 community facility; 283 parking spaces	2018	Individually Assigned
55	42-33 Main Street	79 DU	2018	Individually Assigned
56	56-40 137th Street	3 DU; 4,401 sf community facility	2018	Background Growth
57	56-18 135th Street	2 DU	2018	Background Growth
58	132-29 Pople Avenue	9 DU; 560 sf community facility	2018	Cluster 4
59	43-02 Colden Street	7 DU; 2,298 sf office; 3 parking spaces	2018	Background Growth
60	136-68 Roosevelt Avenue	29,124 sf commercial; 14,279 sf community facility; 34 parking spaces	2018	Cluster 7
61	136-33 37th Avenue	116,894 sf office; 97 parking spaces	2018	Individually Assigned
62	50-15 103rd Street	1 residential unit	2018	Background Growth
63	134-06 58th Avenue	Addition of 1 residential unit	2018	Background Growth
64	131-08 40 Road	4,548 commercial sf	2018	Cluster 5
65	135-17 Northern Boulevard	28 DU; 8,465 commercial sf; 2,867 community facility sf; 45 parking spaces	2018	Cluster 10
66	31-13 137 St	6 DU	2018	Cluster 10
67	31-39 Farrington St	5,937 sf commercial (Con Ed)	2018	Cluster 10
68	143-21 38th Avenue	25 DU	2018	Background Growth
69	106-47 Ditmars Boulevard	2 DU; 1 parking space	2018	Background Growth
70	106-57 Ditmars Boulevard	2 DU; 1 parking space	2018	Background Growth
71	33-25 Parsons Boulevard	13,417 sf community facility; 38 parking spaces	2018	Background Growth
72	154-32 Barclay Avenue	18 DU; 5,950 sf community facility	2018	Background Growth
73	144-18 32nd Avenue	Rectory with 1 residential unit (5,400 sf)	2018	Background Growth
74	42-15 Union Street	16,848 sf community	2018	Background Growth
75	31-53 Linden Place	16 DU; 3,746 sf community facility; 8 parking spaces	2018	Cluster 10
76	Flushing Meadows Corona Park	Major League Soccer stadium, 25,000 seats	2016	Not included in Trip Assignments; See Section O below.
77	USTA Billie Jean King National Tennis Center Strategic Vision	Additional 6,500 seats; 80,000 sf of retail/office; 493 parking spaces	2019	USTA Site, no new vehicle trips generated
78	39-16 College Point Boulevard	7-room hotel; 15 parking spaces	2013	Cluster 8
79	Sky View Parc - Phase II	Approximately 600 DU	2018	Individually Assigned
80	Flushing Meadows East Rezoning	376 DU	2014	Individually Assigned
81	Flushing Meadows Corona Park	Annex to Olmsted Center	2013	Background Growth
82	135-15 40th Road	4,000 sf community facility; 4,100 sf retail/restaurant; 4,100 sf office	2018	Background Growth
83	34th Avenue & 114th Street	DOT's bicycle and pedestrian connection to CitiField project	2013	Roadway Improvements
84	Roosevelt Avenue Bridge Reconstruction	Roadway unchanged; bike/pedestrian space improvements	2018	Roadway Improvements
85	Main Street Reconstruction	Sidewalk/roadway improvements between 38th and 41st Aves.	2015	Roadway Improvements

Notes: DU = Dwelling units; sf = Square feet
#76 – As detailed in Section O, MLS trip-making is expected to be comparable to the Mets and occur on different days; therefore it is not analyzed as a separate No Action project.
#83 & #85 – Analysis revisions, if necessary, will be undertaken in coordination with DOT between Draft and Final SEIS.

After reviewing the development programs for each of the No Action projects, it was determined that background growth will address the increase in traffic and pedestrian levels for 33 of the small projects in the study area. These small projects are dispersed throughout the study area and are not clustered together on a single block. As a result, these sites would not add a noticeable amount of traffic to any single block and have been screened out; they are considered as part of the general background growth rate. Additionally, one No Action project would not generate significant new person or vehicle trips during peak analysis hours. Person and vehicle trips generated by the remaining 46 projects were then determined. Ten clusters were created, grouping nearby projects that would have similar assignment routes based on their location. The clusters and corresponding No Action project numbers are presented in **Table 14-13**.

Table 14-13
No Action Project Clusters

Cluster ID No.	No Action Projects (Refer to Figure 14-3)
1	38, 39
2	34, 37
3	22, 35, 36, 44
4	2, 58
5	4, 6, 8, 9, 41, 64
6	31, 51
7	7, 40, 60
8	42, 78
9	1, 53
10	5, 20, 27, 29, 65, 66, 67

Traffic assignments for the following projects were taken directly from their respective EIS/EAS, or latest available information from on-going studies: Sky View Parc; RKO Keith Plaza; Flushing Commons; and P.S. 287. For the College Point Boulevard Police Academy, most trips are expected to be generated during hours outside of this SEIS' analysis peak hours for the proposed project. A summary of all No Action project-generated vehicle trips is presented in **Table 14-14** for non-game-day peak hours and in **Table 14-15** for game-day peak hours.

As shown in **Table 14-14**, the expected magnitude of background development generated volumes added to the study area network for the non-game peak hours would be substantial, ranging from approximately 2,325 to 3,150 vehicle trips, with the lowest increment expected during the weekday AM peak hour and highest during the PM peak hour. As shown in **Table 14-15**, the expected magnitude of background development generated volumes added to the study area network for the game peak hours would also be substantial, ranging from approximately 1,950 to 2,375 vehicle trips.

Table 14-14
Vehicle Trips from Background Development Projects—Non-Game Day

Project Name / Project Cluster	AM Peak		Midday Peak		PM Peak		Sat. Midday	
	In	Out	In	Out	In	Out	In	Out
35-19 College Point	30	7	7	7	5	30	5	5
P.S. 287 (110-08 Northern Blvd)	42	27	0	0	0	2	0	0
133-47 39th Avenue	16	5	21	21	10	22	14	14
Flushing Commons	366	255	521	474	338	442	386	360
108-04, 14, 16 Astoria Blvd	9	8	7	8	11	9	17	14
35-01-05 Leavitt Street	0	2	1	1	1	1	0	0
One Fulton Square	182	71	154	113	222	99	89	72
42-33 Main Street	3	11	3	3	10	5	8	6
136-33 37th Avenue	111	6	36	39	9	127	21	14
Sky View Parc - Phase II	42	88	30	29	77	43	65	50
Flushing Meadows East Rezoning	15	61	0	0	57	29	0	0
Cluster 1	2	4	14	14	9	9	12	9
Cluster 2	6	10	29	29	16	19	25	19
Cluster 3	61	82	179	143	134	112	128	107
Cluster 4	4	4	1	2	4	3	4	4
Cluster 5	8	13	17	17	18	18	21	19
Cluster 6	13	24	33	33	33	25	35	28
Cluster 7	79	53	229	198	185	204	250	238
Cluster 8	307	143	215	181	169	379	160	123
Cluster 9	15	16	87	87	47	47	60	48
Cluster 10	49	81	71	71	91	77	96	75
TOTAL TRIPS ASSIGNED TO NO ACTION	**1,360**	**971**	**1,655**	**1,470**	**1,446**	**1,702**	**1,396**	**1,205**

Table 14-15
Vehicle Trips from Background Development Projects—Game Day

Project Name / Project Cluster	Weekday Pre-game		Weekend Pre-game		Weekend Post-game	
	In	Out	In	Out	In	Out
35-19 College Point	1	1	5	5	4	4
P.S. 287 (110-08 Northern Blvd)	0	0	0	0	0	0
133-47 39th Avenue	10	11	14	16	15	15
Flushing Commons	338	442	424	390	382	414
108-04, 14, 16 Astoria Blvd	9	6	14	14	15	16
35-01-05 Leavitt Street	1	1	1	1	1	1
One Fulton Square	59	47	60	49	74	62
42-33 Main Street	8	3	6	6	6	6
136-33 37th Avenue	2	7	6	27	18	12
Sky View Parc - Phase II	63	23	50	50	50	50
Flushing Meadows East Rezoning	43	17	0	0	0	0
Cluster 1	7	5	11	9	9	11
Cluster 2	25	17	22	19	19	22
Cluster 3	26	18	112	99	101	88
Cluster 4	3	1	4	4	4	4
Cluster 5	16	10	19	18	18	19
Cluster 6	26	18	30	27	28	31
Cluster 7	165	165	195	171	136	150
Cluster 8	108	71	102	141	113	132
Cluster 9	35	35	57	47	47	57
Cluster 10	73	43	80	77	77	82
TOTAL TRIPS ASSIGNED TO NO ACTION	**1,018**	**941**	**1,212**	**1,170**	**1,117**	**1,176**

PHASE 1A (2018) NO ACTION TRAFFIC CONDITIONS

Traffic volume increases on the study area's roadway network due to the cumulative effect of background projects are quantified and discussed below. The peak hour volumes reported below include the **Table 14-14** and **Table 14-15** traffic volumes assigned to the study area's networks,

but do not include the general annual growth rate (0.5 percent per year for the first five years and 0.025 percent per year each additional year per CEQR guidelines) that has been separately applied to existing traffic volumes, which would add just under three percent more traffic to all streets. However, the annual increase is included in the 2018 No Action volume totals. Because of background growth and No Action developments, substantial increases in traffic volumes can be expected under the 2018 No Action condition, independent from those that the proposed project would add.

The more substantial traffic increases between existing and No Action conditions would occur along the primary streets in the study area network, including Northern Boulevard, Roosevelt Avenue, Astoria Boulevard, and College Point Boulevard. Below is a detailed description of the projected traffic increases expected throughout the study area as a result of the No Action development projects.

Northern Boulevard volumes through Downtown Flushing between Parsons Boulevard and Union Street can be expected to increase by about 75 to 175 vph during the seven peak analysis hours. Westbound Northern Boulevard volumes between Main Street and Union Street would increase by about 60 to 115 vph, while eastbound Northern Boulevard volumes along the same section would increase by about 285 to 455 vph during the seven peak hours. At Prince Street and farther west, adjacent to the Special Willets Point District and Willets West, Northern Boulevard volumes can be expected to increase by approximately 75 to 670 vph per direction during all of the peak hours. Northern Boulevard volumes in the vicinity of 108th and 114th Street can be expected to increase by about 100 to 235 vph per direction during the seven peak analysis hours.

Traffic volumes on Roosevelt Avenue through Downtown Flushing between Parsons Boulevard and College Point Boulevard can be expected to increase by about 10 to 215 vph per direction during all of the peak analysis hours. Adjacent to the project site, Roosevelt Avenue volumes can be expected to increase by approximately 65 to 315 vph per direction during the seven peak analysis hours. Roosevelt Avenue volumes in the vicinity of 108th, 111th, and 114th Street can be expected to increase by about 55 to 145 vph per direction during all of the peak analysis hours.

Sanford Avenue volumes through Downtown Flushing between Parsons Boulevard and College Point Boulevard can be expected to increase by about 10 to 55 vph per direction during the seven peak analysis hours.

On the west side of the study area, in the vicinity of 114th Street, and also within the Special Willets Point District, volumes on 34th Avenue can be expected to increase by up to 10 vph during the weekday non-game AM and PM peak analysis hours.

Astoria Boulevard volumes in the vicinity of 108th and 114th Streets can be expected to increase by about 30 to 95 vph per direction during the peak analysis hours.

Volumes along West Park Loop/Stadium Road can be expected to increase by up to about 50 vph during the peak analysis hours.

College Point Boulevard volumes between Sanford Avenue and 32nd Avenue can be expected to increase by about 60 to 320 vph per direction during all the seven peak analysis hours except during the weekday non-game PM peak hour when volumes are expected to increase by about 90 to 505 vph per direction.

Main Street volumes from Kissena Boulevard to Roosevelt Avenue can be expected to increase by up to 40 vph during the seven peak analysis hours. Between Roosevelt Avenue and Northern

Boulevard, northbound Main Street volumes would increase by up to 450 vph and southbound volumes would increase by up to 185 vph during the peak analysis hours.

Union Street volumes between Sanford Avenue and Northern Boulevard can be expected to increase by approximately 35 to 75 vph in the northbound direction and by approximately 10 to 235 vph in the southbound direction during the peak analysis hours.

Parsons Boulevard volumes between Northern Boulevard and Sanford Avenue can be expected to increase by up to 20 vph per direction during the peak analysis hours.

Traffic volumes along 108th Street in the vicinity of Astoria Boulevard and Northern Boulevard and at Roosevelt Avenue can be expected to increase by about 10 to 50 vph per direction during the seven peak analysis hours.

Prince Street volumes at Northern Boulevard and Roosevelt Avenue can be expected to increase by up to 30 vph per direction during the peak analysis hours.

Traffic volumes along 111th and 114th Street in the vicinity of Roosevelt Avenue can be expected to increase by up to 5 vph per direction during the seven peak analysis hours. 114th Street volumes at 34th Avenue can be expected to increase by approximately 10 to 45 vph per direction during the peak analysis hours.

126th Street volumes between Northern Boulevard and Roosevelt Avenue can be expected increase by approximately 35 to 95 vph per direction during the peak analysis hours.

Traffic volumes along westbound World's Fair Marina at Stadium Road can be expected to increase by up to 10 vph during the peak analysis hours.

Based on these projected traffic volume changes, 2018 No Action traffic levels of service were determined for the 31 No Action analysis locations within the study area. **Tables 14-16** and **14-17** show comparisons of overall intersection and individual movement levels of service, respectively, for existing and 2018 No Action conditions for non-game-day peak hours, and **Tables 14-18** and **14-19** show the comparisons for the game-day peak hours. It is clear, in comparing overall intersection levels of service and individual traffic movement levels of service, that considerably more locations would operate at LOS E or F under the 2018 No Action condition than in existing conditions due to the substantial additional volumes generated by the expected background developments superimposed on top of a background growth rate of 2.8 percent.

Table 14-16
Overall Intersection Level of Service Summary Comparison
Existing vs. Phase 1A (2018) No Action Conditions—Non-Game Day

Signalized Intersections	Existing Conditions				Phase 1A (2018) No Action Conditions			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
	26 Signalized Intersections				26 Signalized Intersections [1]			
Overall Intersection LOS A/B/C	22	23	22	22	13	15	13	15
Overall Intersection LOS D	4	3	4	4	5	6	7	3
Overall Intersection LOS E	0	0	0	0	8	2	4	6
Overall Intersection LOS F	0	0	0	0	0	3	2	2

Note: [1] Under Phase 1A (2018) No Action conditions, all five unsignalized intersections would operate at overall LOS A, B or C.

Table 14-17
Traffic Lane Group Level of Service Summary Comparison
Existing vs. Phase 1A (2018) No Action Conditions—Non-Game Day

Signalized Movements	Existing Conditions				Phase 1A (2018) No Action Conditions			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
	26 Signalized Intersections				26 Signalized Intersections [1]			
No. of Lane Groups at LOS A/B/C	80	97	86	88	62	76	63	74
No. of Lane Groups at LOS D	34	24	30	30	35	28	32	23
No. of Lane Groups at LOS E	10	8	13	11	15	9	12	13
No. of Lane Groups at LOS F	3	0	0	0	17	17	22	20

Note : [1] Under Phase 1A (2018) No Action conditions, all but one unsignalized lane group (northbound left turn movement of Boat Basin Road at World's Fair Marina during the weekday AM non-game peak hour) would operate at overall LOS A, B or C.

Table 14-18
Overall Intersection Level of Service Summary Comparison
Existing vs. Phase 1A (2018) No Action Conditions—Game Day

Signalized Intersections	Existing Conditions			Phase 1A (2018) No Action Conditions		
	Weekday Pre-game	Saturday Pre-game	Saturday Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
	26 Signalized Intersections			26 Signalized Intersections [1]		
Overall Intersection LOS A/B/C	20	20	21	11	13	10
Overall Intersection LOS D	6	6	5	7	4	5
Overall Intersection LOS E	0	0	0	6	5	8
Overall Intersection LOS F	0	0	0	2	4	3

Notes:

[1] Under Phase 1A (2018) No Action conditions during game day peak hours, none of the five unsignalized intersections would operate at overall LOS E or F (all five would operate at overall LOS D or better) during the weekday pre-game peak hour; one intersection would operate at overall LOS E during the Saturday pre-game peak hour; and two intersections would operate at overall LOS E and one intersection would operate at LOS F during the Saturday post-game peak hour.

Table 14-19
Traffic Lane Group Level of Service Summary Comparison
Existing vs. Phase 1A (2018) No Action Conditions—Game Day

Signalized Lane Groups	Existing Conditions			Phase 1A (2018) No Action Conditions		
	Weekday Pre-game	Saturday Pre-game	Saturday Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
	26 Signalized Intersections			26 Signalized Intersections [1]		
No. of Lane Groups at LOS A/B/C	76	90	89	61	72	72
No. of Lane Groups at LOS D	37	21	25	37	25	20
No. of Lane Groups at LOS E	15	16	15	11	8	9
No. of Lane Groups at LOS F	1	2	1	21	25	29

Notes:
[1] Under Phase 1A (2018) No Action conditions during game day peak hours, eight of about 12 unsignalized lane groups operate at LOS A, B, C or D during all peak hours. Four movements would operate at LOS E or F during at least one peak hour including: northbound left turns from Boat Basin Road onto World's Fair Marina (LOS E during weekday pregame and Saturday pregame peak hours and LOS F during the Saturday post game peak hour); the eastbound left-through movement on Stadium Road at Boat Basin Road (LOS F during Saturday pre- and post-game peak hours); westbound CitiField Entrance 9 at Boat Basin Road (LOS F during the Saturday post-game peak hour); and eastbound left turns from the GCP off-ramp onto Stadium Road (LOS E during the Saturday post-game peak hour).

The summary overview of the Phase 1A (2018) No Action condition without a Mets game indicates that:

- In the weekday AM peak hour, of the 26 signalized intersections analyzed, the number of locations that are projected to operate at overall LOS E or F would increase from none under existing conditions to eight under the Phase 1A No Action condition. The number of traffic lane groups projected to operate at LOS E or F would increase from 13 to 32.
- In the weekday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from zero to five, while the number of traffic lane groups at LOS E or F would increase from eight to 26.
- In the weekday PM peak hour, the number of locations that are projected to operate at overall LOS E or F would increase from none under existing conditions to six under Phase 1A No Action conditions. The number of lane groups projected to operate at LOS E or F would increase from 13 to 34.
- In the Saturday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from zero to eight, while the number of lane groups at LOS E or F would increase from 11 to 33.
- Most of the projected LOS E or F intersections would be located in Downtown Flushing.

The summary overview of the Phase 1A No Action condition with a Mets game indicates that:

- In the weekday PM pre-game peak hour, of the 26 signalized intersections analyzed, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to eight under the Phase 1A No Action condition. The number of traffic lane groups projected to operate at LOS E or F would increase from 16 to 32.
- In the Saturday afternoon pre-game peak hour, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to nine under the Phase 1A No Action condition. The number of lane groups projected to operate at LOS E or F would increase from 18 to 33. The unsignalized intersection of Boat Basin Road at Stadium Road/CitiField Entrance 8 would operate at LOS E.

- In the Saturday PM post-game peak hour, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to 11 under the Phase 1A No Action conditions. The number of lane groups projected to operate at LOS E or F would increase from 16 to 38. The unsignalized intersections of Boat Basin Road at World's Fair Marina and Grand Central Parkway Ramp at West Park Loop/Stadium Road would operate at LOS E, and the unsignalized intersection of Boat Basin Road at Stadium Road/CitiField Entrance 8 would operate at LOS F.

PHASE 1A (2018) NO ACTION PARKING CONDITIONS

Based on a background traffic growth rate of 2.8 percent to 2018, demand for off-street parking facilities and on-street parking in the area during the Phase 1A No Action condition can generally be expected to increase by the same rate. The maximum occupancy level for parking facilities on non-game days would increase by about one percent or less of total capacity in 2018 from the existing occupancy level range of 9 to 21 percent on a typical weekday without a Mets game. One facility, Municipal Lot 4, would reach capacity during the 4-5 PM hour under the Phase 1A No Action condition as compared to 98 percent occupancy under existing conditions. On a typical Saturday without a Mets game, the maximum occupancy level for parking facilities would increase by about one percent or less of total capacity in 2018 from the existing occupancy level range of 4 to 7 percent.

On a typical weeknight with a Mets game, the maximum occupancy which occurs between 6:30-7:30 PM would peak at about 46 percent in 2018 (excluding the main CitiField lots), compared to approximately 45 percent under existing conditions. On a typical weekend game day, the maximum occupancy (peaking at 4-5 PM) would increase by two percent, from 47 to 49 percent in 2018. This off-street demand projection for a weekend game day is a conservative assumption since it includes increases in Mets fan parking, which are not really subject to annual background increases.

Because the existing on-street parking occupancy is at or exceeds the legal capacity during most of the AM, midday, and PM periods (non-game and pre-game), and Saturday midday periods, the on-street parking utilization is assumed to continue to peak near or above 100 percent after increasing the existing on-street parking demand by the 2.8 percent background growth rate. On weekends with a Mets game, total on-street parking occupancy would reach capacity during the 2-3 PM hour of the pre-game period during the Phase 1A 2018 No Action condition as compared to 98 percent under existing conditions. During the rest of the pre-game period (3-5 PM) on-street occupancies would increase slightly from a range of 83 to 87 percent overall under existing conditions to 85 to 89 percent in 2018. During the post-game period on-street parking occupancies would increase by about one percent from the existing usage range of 51 to 65 percent.

PHASE 1B (2028) NO ACTION TRAFFIC CONDITIONS

No additional No Action projects were identified beyond those projected for 2018 (detailed above); therefore, the peak hour volumes for the Phase 1B (2028) No Action condition consist of the same No Action project increments as Phase 1A plus the annual background growth for 16 years (2012 to 2028) which amounts to almost 5.5 percent. The increase in traffic volumes between Phase 1A (2018) and Phase 1B (2028) is relatively minor since background growth between the two phases is only about 2.5 percent overall and, as mentioned, both No Action years include the same No Action project vehicle trip increments.

Traffic volumes maps for Phase 1B are and detailed levels of service results are provided at the end of this chapter. Level of service summaries are provided in **Tables 14-20** to **14-23** and described in detail below.

Table 14-20
Overall Intersection Level of Service Summary Comparison
Existing vs. Phase 1B (2018) No Action Conditions—Non-Game Day

Signalized Intersections	Existing Conditions				Phase 1B (2028) No Action Conditions			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
	26 Signalized Intersections				26 Signalized Intersections [1]			
Overall Intersection LOS A/B/C	22	23	22	22	11	15	12	14
Overall Intersection LOS D	4	3	4	4	7	5	5	3
Overall Intersection LOS E	0	0	0	0	8	2	7	6
Overall Intersection LOS F	0	0	0	0	0	4	2	3

Notes: [1] Under Phase 1B (2028) No Action conditions, all five unsignalized intersections would operate at overall LOS A, B or C.

Table 14-21
Traffic Lane Group Level of Service Summary Comparison
Existing vs. Phase 1B (2028) No Action Conditions—Non-Game Day

Signalized Movements	Existing Conditions				Phase 1B (2028) No Action Conditions			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
	26 Signalized Intersections				26 Signalized Intersections [1]			
No. of Lane Groups at LOS A/B/C	80	97	86	88	58	72	59	71
No. of Lane Groups at LOS D	34	24	30	30	38	31	35	22
No. of Lane Groups at LOS E	10	8	13	11	12	9	11	17
No. of Lane Groups at LOS F	3	0	0	0	21	18	24	20

Note: [1] Under Phase 1B (2028) No Action conditions, all but one unsignalized lane group (northbound left turn movement of Boat Basin Road at World's Fair Marina during the weekday AM non-game peak hour) would operate at overall LOS A, B or C.

Table 14-22
Overall Intersection Level of Service Summary Comparison
Existing vs. Phase 1B (2028) No Action Conditions—Game Day

Signalized Intersections	Existing Conditions			Phase 1B (2028) No Action Conditions		
	Weekday Pre-game	Saturday Pre-game	Saturday Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
	26 Signalized Intersections			26 Signalized Intersections [1]		
Overall Intersection LOS A/B/C	20	20	21	11	13	10
Overall Intersection LOS D	6	6	5	7	2	3
Overall Intersection LOS E	0	0	0	5	7	6
Overall Intersection LOS F	0	0	0	3	4	7

Note:
[1] Under Phase 1B (2028) No Action conditions during game day peak hours, none of the five unsignalized intersections would operate at overall LOS E or F (all five would operate at overall LOS D or better) during the weekday pre-game peak hour; one intersection would operate at overall LOS F during the Saturday pre-game peak hour; and one intersection would operate at overall LOS E and two intersections would operate at LOS F during the Saturday post-game peak hour.

Table 14-23
Traffic Lane Group Level of Service Summary Comparison
Existing vs. Phase 1B (2028) No Action Conditions—Game Day

Signalized Lane Groups	Existing Conditions			Phase 1B (2028) No Action Conditions		
	Weekday Pre-game	Saturday Pre-game	Saturday Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
	26 Signalized Intersections			26 Signalized Intersections [1]		
No. of Lane Groups at LOS A/B/C	76	90	89	59	68	69
No. of Lane Groups at LOS D	37	21	25	34	27	24
No. of Lane Groups at LOS E	15	16	15	16	7	9
No. of Lane Groups at LOS F	1	2	1	21	28	29

Note:
[1] Under Phase 1B (2028) No Action conditions during game day peak hours, seven of about 12 unsignalized lane groups operate at LOS A, B, C or D during all peak hours. Five movements would operate at LOS E or F during at least one peak hour including: northbound left turns from Boat Basin Road onto World's Fair Marina (LOS E during the Saturday pregame peak hour and LOS F during the weekday pregame and Saturday post game peak hours); the eastbound left-through movement of Stadium Road at Boat Basin Road (LOS F during Saturday pre- and post-game peak hours); the eastbound through-right movement of Stadium Road at Boat Basin Road (LOS E during the Saturday pre-game peak hour); westbound CitiField Entrance 9 at Boat Basin Road (LOS F during the Saturday post-game peak hour); and eastbound left turns from the GCP off-ramp onto Stadium Road (LOS F during the Saturday post-game peak hour).

The summary overview of the Phase 1B (2028) No Action condition without a Mets game indicates that:

- In the weekday AM peak hour, of the 26 signalized intersections analyzed, the number of locations that are projected to operate at overall LOS E or F would increase from none under existing conditions to eight under the Phase 1B No Action condition. The number of traffic lane groups projected to operate at LOS E or F would increase from 13 to 33.
- In the weekday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from zero to six, while the number of traffic lane groups at LOS E or F would increase from eight to 27.
- In the weekday PM peak hour, the number of locations that are projected to operate at overall LOS E or F would increase from none under existing conditions to nine under Phase 1B No Action conditions. The number of lane groups projected to operate at LOS E or F would increase from 13 to 35.
- In the Saturday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from zero to nine, while the number of lane groups at LOS E or F would increase from 11 to 37.
- Most of the projected LOS E or F intersections would be located in Downtown Flushing.

The summary overview of the Phase 1B No Action condition with a Mets game indicates that:

- In the weekday PM pre-game peak hour, of the 26 signalized intersections analyzed, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to eight under the Phase 1B No Action condition. The number of traffic lane groups projected to operate at LOS E or F would increase from 16 to 37.
- In the Saturday afternoon pre-game peak hour, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to 11 under the Phase 1B No Action condition. The number of lane groups projected to operate at LOS E or F would increase from 18 to 35. The unsignalized intersection of Boat Basin Road at Stadium Road/CitiField Entrance 8 would operate at LOS F.

- In the Saturday PM post-game peak hour, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to 13 under the Phase 1A No Action conditions. The number of lane groups projected to operate at LOS E or F would increase from 16 to 38. The unsignalized intersection of Grand Central Parkway Ramp at West Park Loop/Stadium Road would operate at LOS E, and the unsignalized intersections of Boat Basin Road at World's Fair Marina and Boat Basin Road at Stadium Road/CitiField Entrance 8 would operate at LOS F.

PHASE 1B (2028) NO ACTION PARKING CONDITIONS

Based on a background traffic growth rate of almost 5.5 percent to 2028, demand for off-street parking facilities and on-street parking in the area during the Phase 1B No Action condition can generally be expected to increase by the same rate. The maximum occupancy level for parking facilities on non-game days would increase by about one percent or less of total capacity in 2028 from the existing occupancy level range of 9 to 21 percent on a typical weekday without a Mets game. One facility, Municipal Lot 4, would reach full capacity during the 4-5 PM hour under the Phase 1B No Action condition as compared to 98 percent occupancy under existing conditions. On a typical Saturday without a Mets game, the maximum occupancy level for parking facilities would also increase by about one percent or less of total capacity in 2028 from the existing occupancy level range of 4 to 7 percent.

On a typical weeknight with a Mets game, the maximum occupancy which occurs between 6:30-7:30 PM would peak at about 48 percent in 2028 (excluding the main CitiField lots), compared to approximately 45 percent under existing conditions. On a typical weekend game day, the maximum occupancy (peaking at 4-5 PM) would increase by approximately three percent (from 47 percent to 50 percent) in 2028 as compared to existing conditions. This off-street demand projection for a weekend game day is a conservative assumption since it includes increases in Mets fan parking, which are not really subject to annual background increases.

Because the existing on-street parking occupancy is near or exceeds the legal capacity during most of the AM, midday, and PM periods (non-game and pre-game), and Saturday midday periods, the on-street parking utilization is assumed to continue to peak near or above 100 percent after increasing the existing on-street parking demand by the background growth rate. On weekends with a Mets game, total on-street parking occupancy would reach capacity during the 2-3 PM hour of the pre-game period during the Phase 1B (2028) No Action condition as compared to 98 percent under existing conditions. During the rest of the pre-game period (3-5 PM), on-street occupancies would increase slightly from a range of 83 to 87 percent overall under existing conditions to 87 to 92 percent in 2028. During the post-game period, on-street parking occupancies would increase by three percent, from a range of 51 to 65 percent under existing conditions to a range of 54 to 68 percent in the Phase 1B (2028) No Action condition.

PHASE 2 (2032) NO ACTION TRAFFIC CONDITIONS

As mentioned previously, no additional No Action projects were identified beyond those projected for 2018 (detailed above in the Phase 1A No Action discussion); therefore, the peak hour volumes for the Phase 2 (2032) No Action condition consist of the same No Action project increments as Phase 1A plus the annual background growth for 20 years (2012 to 2032) which amounts to almost 6.5 percent. As with Phase 1B, the increase in traffic volumes under Phase 2 is relatively minor as compared to Phase 1A since background growth between Phase 1A (2018) and Phase 2 (2032) is only about 3.5 percent overall. Traffic volume maps for the Phase 2 No Action condition and

detailed levels of service results are provided in traffic appendices at the end of this chapter. Level of service summaries are provided in **Tables 14-24** to **14-27** and discussed below.

Table 14-24
Overall Intersection Level of Service Summary Comparison
Existing vs. Phase 2 (2032) No Action Conditions—Non-Game Day

Signalized Intersections	Existing Conditions				Phase 2 (2032) No Action Conditions			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
	26 Signalized Intersections				26 Signalized Intersections [1]			
Overall Intersection LOS A/B/C	22	23	22	22	11	15	12	14
Overall Intersection LOS D	4	3	4	4	7	4	5	2
Overall Intersection LOS E	0	0	0	0	7	3	7	7
Overall Intersection LOS F	0	0	0	0	1	4	2	3

Note: [1] Under Phase 2 (2032) No Action conditions, all five unsignalized intersections would operate at overall LOS A, B or C.

Table 14-25
Traffic Lane Group Level of Service Summary Comparison
Existing vs. Phase 2 (2032) No Action Conditions—Non-Game Day

Signalized Movements	Existing Conditions				Phase 2 (2032) No Action Conditions			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
	26 Signalized Intersections				26 Signalized Intersections [1]			
No. of Lane Groups at LOS A/B/C	80	97	86	88	56	72	57	69
No. of Lane Groups at LOS D	34	24	30	30	38	30	38	24
No. of Lane Groups at LOS E	10	8	13	11	13	10	9	16
No. of Lane Groups at LOS F	3	0	0	0	22	18	25	21

Note:[1] Under Phase 2 (2032) No Action conditions, all but one unsignalized lane group (northbound left turn movement of Boat Basin Road at World's Fair Marina during the weekday AM non-game peak hour) would operate at overall LOS A, B or C.

Table 14-26
Overall Intersection Level of Service Summary Comparison
Existing vs. Phase 2 (2032) No Action Conditions—Game Day

Signalized Intersections	Existing Conditions			Phase 2 (2032) No Action Conditions		
	Weekday Pre-game	Saturday Pre-game	Saturday Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
	26 Signalized Intersections			26 Signalized Intersections [1]		
Overall Intersection LOS A/B/C	20	20	21	8	12	10
Overall Intersection LOS D	6	6	5	10	2	2
Overall Intersection LOS E	0	0	0	5	7	7
Overall Intersection LOS F	0	0	0	3	5	7

Note:
[1] Under Phase 2 (2032) No Action conditions during game day peak hours, none of the five unsignalized intersections would operate at overall LOS E or F (all five would operate at overall LOS D or better) during the weekday pre-game peak hour; one intersection would operate at overall LOS F during the Saturday pre-game peak hour; and one intersection would operate at overall LOS E and two intersections would operate at LOS F during the Saturday post-game peak hour.

Table 14-27
Traffic Lane Group Level of Service Summary Comparison
Existing vs. Phase 2 (2032) No Action Conditions—Game Day

Signalized Lane Groups	Existing Conditions			Phase 2 (2032) No Action Conditions		
	Weekday Pre-game	Saturday Pre-game	Saturday Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
	26 Signalized Intersections			26 Signalized Intersections [1]		
No. of Lane Groups at LOS A/B/C	76	90	89	57	64	69
No. of Lane Groups at LOS D	37	21	25	34	28	23
No. of Lane Groups at LOS E	15	16	15	16	7	6
No. of Lane Groups at LOS F	1	2	1	23	31	32

Note:
[1] Under Phase 2 (2032) No Action conditions during game day peak hours, seven of about 12 unsignalized lane groups operate at LOS A, B, C or D during all peak hours. Five movements would operate at LOS E or F during at least one peak hour including: northbound left turns from Boat Basin Road onto World's Fair Marina (LOS E during the Saturday pregame peak hour and LOS F during the weekday pregame and Saturday post-game peak hours; the eastbound left-through movement of Stadium Road at Boat Basin Road (LOS F during Saturday pre- and post-game peak hours); the eastbound through-right movement of Stadium Road at Boat Basin Road (LOS E during the Saturday pre-game peak hour); westbound CitiField Entrance 9 at Boat Basin Road (LOS F during the Saturday post-game peak hour); and eastbound left turns from the GCP off-ramp onto Stadium Road (LOS E during the weekday and Saturday pre-game peak hours, and LOS F during the Saturday post-game peak hour).

The summary overview of the Phase 2 (2032) No Action condition without a Mets game indicates that:

- In the weekday AM peak hour, of the 26 signalized intersections analyzed, the number of locations that are projected to operate at overall LOS E or F would increase from none under existing conditions to eight under the Phase 2 No Action condition. The number of traffic lane groups projected to operate at LOS E or F would increase from 13 to 35.
- In the weekday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from zero to seven, while the number of traffic lane groups at LOS E or F would increase from eight to 28.
- In the weekday PM peak hour, the number of locations that are projected to operate at overall LOS E or F would increase from none under existing conditions to nine under Phase

2 No Action conditions. The number of lane groups projected to operate at LOS E or F would increase from 13 to 34.

- In the Saturday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from zero to ten, while the number of lane groups at LOS E or F would increase from 11 to 37.
- Most of the projected LOS E or F intersections would be located in Downtown Flushing.

The summary overview of the Phase 2 No Action condition with a Mets game indicates that:

- In the weekday PM pre-game peak hour, of the 26 signalized intersections analyzed, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to eight under the Phase 2 No Action condition. The number of traffic lane groups projected to operate at LOS E or F would increase from 16 to 39.
- In the Saturday midday pre-game peak hour, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to 12 under the Phase 2 No Action condition. The number of lane groups projected to operate at LOS E or F would increase from 18 to 38. The unsignalized intersection of Boat Basin Road at Stadium Road/CitiField Entrance 8 would operate at LOS F.
- In the Saturday PM post-game peak hour, the number of locations that are projected to operate at LOS E or F would increase from zero under existing conditions to 14 under the Phase 2 No Action conditions. The number of lane groups projected to operate at LOS E or F would increase from 16 to 38. The unsignalized intersection of Grand Central Parkway Ramp at West Park Loop/Stadium Road would operate at LOS E, and the unsignalized intersections of Boat Basin Road at World's Fair Marina and Boat Basin Road at Stadium Road/CitiField Entrance 8 would operate at LOS F.

PHASE 2 (2032) NO ACTION PARKING CONDITIONS

Based on a background traffic growth rate of almost 6.5 percent to 2032, demand for off-street parking facilities and on-street parking in the area during the Phase 2 No Action condition can generally be expected to increase by the same rate. The maximum occupancy level for parking facilities on non-game days would increase by two percent or less of total capacity in 2032 from the existing occupancy level range of 9 to 21 percent on a typical weekday without a Mets game. One facility, Municipal Lot 4, would reach full capacity during the 4-5 PM hour under the Phase 2 No Action condition as compared to 98 percent occupancy under existing conditions. On a typical Saturday without a Mets game, the maximum occupancy level for parking facilities would increase by about one percent or less of total capacity in 2032 from the existing occupancy level range of 4 to 7 percent.

On a typical weeknight with a Mets game, the maximum occupancy which occurs between 6:30-7:30 PM would peak at about 48 percent in 2032 (excluding the main CitiField lots), compared to approximately 45 percent under existing conditions. On a typical weekend game day, the maximum occupancy (peaking at 4-5 PM) would increase by approximately four percent (from 47 percent to 51 percent) in 2032 as compared to existing conditions. This off-street demand projection for a weekend game day is a conservative assumption since it includes increases in Mets fan parking, which are not really subject to annual background increases.

Because the existing on-street parking occupancy is at or exceeds the legal capacity during most of the AM, midday, and PM periods (non-game and pre-game), and Saturday midday periods, the on-street parking utilization is assumed to continue to peak near or above 100 percent after

increasing the existing on-street parking demand by the background growth rate. On weekends with a Mets game, total on-street parking occupancy would exceed capacity during the 2-3 PM hour of the pre-game period during the Phase 2 (2032) No Action condition as compared to 98 percent under existing conditions. During the rest of the pre-game period (3-5 PM) on-street occupancies would increase by approximately five percent from a range of 83 to 87 percent overall under existing conditions to 88 to 93 percent in 2032. During the post-game period, on-street parking occupancies would increase by approximately three percent, from a range of 51 to 65 percent under existing conditions to a range of 54 to 69 percent in the Phase 2 (2032) No Action condition.

G. PROBABLE IMPACTS OF THE PROPOSED PROJECT (TRAFFIC AND PARKING)

The proposed project would redevelop the Willets Point/CitiField area with a mix of uses over a 18-year period. As mentioned, this development would occur in three continuous phases. Therefore, three separate build years were analyzed corresponding to each phase: Phase 1A (2018); Phase 1B (2028); and Phase 2 (2032). Proposed development under each phase is as follows:

- By 2018 (Phase 1A), the development of an approximately 23-acre portion of the Special Willets Point District (the "District") with a 200-room hotel, approximately 30,000 square feet of retail space, an approximately 2,825-space surface parking area/off-season public recreation space, and the development of the parking field west of CitiField with "Willets West"—a retail and entertainment center of approximately 1.4 million square feet (1 million square feet of leaseable area) and a 2,900-space parking garage (including 2,500 spaces for the Willets West retail/entertainment center and 400 spaces as replacement parking to be used for the Mets); and the development of a structured parking facility on the westernmost CitiField surface parking lot south of Roosevelt Avenue (South Lot);
- By 2028 (Phase 1B), the replacement of the interim surface parking area/off-season recreation space (the parking spaces would be relocated to two new structured parking facilities on the CitiField surface parking lots south of Roosevelt Avenue [South Lot/Lot D]) and the creation of approximately 4.23 million square feet of residential, retail, office, hotel, public school, community facility, enclosed parking, and public open space uses within the District; and
- By 2032 (Phase 2), the full build-out of the Special Willets Point District substantially as anticipated in the 2008 FGEIS, and the development of retail, and office uses on portions of the CitiField leasehold north of Roosevelt Avenue (Lot B).

Table 14-28 identifies the development program analyzed for the full buildout of the proposed project, including development in the District and Willets West, as well as the potential future development of Lot B. The proposed program development for each of the interim phases is summarized in detail later in the chapter (**Tables 14-42** and **14-52**).

Table 14-28
Full Buildout Development Program for Analysis

Use	Size
Willets West [1]	
Destination Retail	915,000 SF
Movie Theater	4,000 Seats (80,000 SF) [2]
Special Willets Point District	
Residential	5,850 DU
Destination Retail	657,000 SF
Local Retail	593,000 SF
Office	500,000 SF
Convention Center	400,000 SF
Hotel	700 Rooms
Community Facility	150,000 SF
Public School (K-8)	1,463 Seats
Lot B Development	
Destination Retail	184,500 SF
Office	280,000 SF
Total	
Residential	**5,850 DU**
Destination Retail	**1,756,500 SF**
Movie Theater	**4,000 Seats**
Local Retail	**593,000 SF**
Office	**780,000 SF**
Convention Center	**400,000 SF**
Hotel	**700 Rooms**
Community Facility	**150,000 SF**
Public School (K-8)	**1,463 Seats**

Notes:
(1) Willets West would contain approximately 1.4 million sf of development, including 400,000 sf of non-leasable common area. This ancillary space is not considered for trip generation purposes.
(2) *Willets Point Development Plan FGEIS* (2008) assumption of 20 sf per seat.
SF = square feet
DU = dwelling unit

TRIP GENERATION AND MODAL SPLIT

Travel demand estimates were prepared for each of the nine land use types. Trip generation estimates were developed in consultation with the New York City Department of Transportation (NYCDOT) and rely on other representative developments with similar land uses, area types, etc., for appropriate trip generation rates. To the extent possible, the travel demand assumptions previously used in the 2008 FGEIS were applied. The specific travel demand factors for the SEIS are shown in **Table 14-29** and **Table 14-30** and are described in detail below.

Table 14-29
Weekday Trip Generation Factors

Rates	Residential				Office				Destination Retail				Local Retail				Convention/Expo Facility				Movie Theater			
Person Trips																								
Daily Trip Rate	8.075 / DU (1)				18.0 / 1,000 SF (1)				78.2 / 1,000 SF (1)				205.0 / 1,000 SF (1)				46.2 / 1,000 SF (3)				3.26 / Seat (1)			
Linkage Trip Credit													(3) 25%											
Modal Split	(2)				(3, 4)				(3)				(3)				(3)				(3)			
	AM	MD	PM	EVE	AM	MD	PM	EVE	AM	MD	PM	EVE	AM	MD	PM	EVE	AM	MD	PM	EVE	AM	MD	PM	EVE
Auto	26.0%	26.0%	26.0%	26.0%	51.0%	25.5%	51.0%	51.0%	59.0%	59.0%	59.0%	59.0%	15.0%	15.0%	15.0%	15.0%	68.0%	68.0%	68.0%	68.0%	56.0%	56.0%	56.0%	56.0%
Taxi	1.0%	1.0%	1.0%	1.0%	1.0%	0.5%	1.0%	1.0%	3.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	8.0%	8.0%	8.0%	8.0%	7.0%	7.0%	7.0%	7.0%
Subway	52.0%	52.0%	52.0%	52.0%	16.0%	8.0%	16.0%	16.0%	15.0%	15.0%	15.0%	15.0%	5.0%	5.0%	5.0%	5.0%	12.0%	12.0%	12.0%	12.0%	18.0%	18.0%	18.0%	18.0%
Bus	10.0%	10.0%	10.0%	10.0%	14.0%	7.0%	14.0%	14.0%	18.0%	18.0%	18.0%	18.0%	10.0%	10.0%	10.0%	10.0%	2.0%	2.0%	2.0%	2.0%	8.0%	8.0%	8.0%	8.0%
Walk Only	11.0%	11.0%	11.0%	11.0%	18.0%	59.0%	18.0%	18.0%	5.0%	5.0%	5.0%	5.0%	70.0%	70.0%	70.0%	70.0%	10.0%	10.0%	10.0%	10.0%	11.0%	11.0%	11.0%	11.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy	(2) AM	(2) MD	(2) PM	(2) EVE	(4) AM	(4) MD	(4) PM	(4) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE
Auto	1.39	1.39	1.39	1.39	1.14	1.14	1.14	1.14	2.05	2.05	2.05	2.05	2.00	2.00	2.00	2.00	2.30	2.30	2.30	2.30	2.52	2.52	2.52	2.52
Taxi	1.39	1.39	1.39	1.39	1.14	1.14	1.14	1.14	2.05	2.05	2.05	2.05	2.00	2.00	2.00	2.00	1.80	1.80	1.80	1.80	2.30	2.30	2.30	2.30
Temporal Distribution	(1) AM	(1) MD	(1) PM	(3) EVE	(1) AM	(1) MD	(1) PM	(3) EVE	(1) AM	(1) MD	(1) PM	(3) EVE	(1) AM	(1) MD	(1) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(1) AM	(1) MD	(1) PM	(3) EVE
	10.0%	5.0%	11.0%	8.3%	12.0%	15.0%	14.0%	0.9%	3.0%	9.0%	9.0%	7.8%	3.0%	19.0%	10.0%	7.6%	5.5%	7.1%	12.7%	11.7%	1.0%	3.0%	8.0%	13.0%
Percent In/Out	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(1)	(1)	(1)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
In	20.0%	51.0%	65.0%	70.0%	96.2%	48.0%	5.0%	20.0%	61.0%	55.0%	47.0%	50.0%	50.0%	50.0%	50.0%	50.0%	100.0%	73.0%	3.0%	1.0%	95.0%	62.0%	54.0%	53.0%
Out	80.0%	49.0%	35.0%	30.0%	3.8%	52.0%	95.0%	80.0%	39.0%	45.0%	53.0%	50.0%	50.0%	50.0%	50.0%	50.0%	0.0%	27.0%	97.0%	99.0%	5.0%	38.0%	46.0%	47.0%
Delivery Trips																								
Daily Trip Rate	0.06 / DU (1)				0.32 / 1,000 SF (1)				0.35 / 1,000 SF (1)				0.35 / 1,000 SF (1)				0.70 / 1,000 SF (3)				0.02 / Seat (3)			
Temporal Distribution	(1) AM	(1) MD	(1) PM	(3) EVE	(1) AM	(1) MD	(1) PM	(3) EVE	(1) AM	(1) MD	(1) PM	(3) EVE	(1) AM	(1) MD	(1) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE
	12.0%	9.0%	2.0%	2.0%	10.0%	11.0%	2.0%	2.0%	8.0%	11.0%	2.0%	1.0%	8.0%	11.0%	2.0%	1.0%	7.9%	14.7%	1.1%	1.1%	12.0%	11.0%	1.0%	1.0%
Percent In/Out	(1)	(1)	(1)	(3)	(1)	(1)	(1)	(3)	(1)	(1)	(1)	(3)	(1)	(1)	(1)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%

Rates	Hotel				Community Facility				PS/IS - Students				PS/IS - Faculty				Recreational Uses			
Person Trips																				
Daily Trip Rate	9.4 / Room (1)				34.0 / 1,000 SF (3)				2.0 / Seat (3)				2.0 / Staff (3)				190.3 / Acre (5)			
Linkage Trip Credit																	(6) 25%			
Modal Split	(3)				(2,3)				(3)				(3)				(7)			
	AM	MD	PM	EVE	AM	MD	PM	EVE	AM	MD	PM	EVE	AM	MD	PM	EVE	AM	MD	PM	EVE
Auto	70.0%	70.0%	70.0%	70.0%	13.0%	13.0%	13.0%	13.0%	15.0%	15.0%	15.0%	15.0%	50.0%	50.0%	50.0%	50.0%	59.0%	59.0%	59.0%	59.0%
Taxi	15.0%	15.0%	15.0%	15.0%	0.5%	0.5%	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%
Subway	5.0%	5.0%	5.0%	5.0%	26.0%	26.0%	26.0%	26.0%	15.0%	15.0%	15.0%	15.0%	50.0%	50.0%	50.0%	50.0%	15.0%	15.0%	15.0%	15.0%
Bus	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	10.0%	10.0%	10.0%	10.0%	0.0%	0.0%	0.0%	0.0%	18.0%	18.0%	18.0%	18.0%
Walk Only	5.0%	5.0%	5.0%	5.0%	55.5%	55.5%	55.5%	55.5%	60.0%	60.0%	60.0%	60.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(7) AM	(7) MD	(7) PM	(7) EVE
Auto	1.60	1.60	1.60	1.60	1.50	1.50	1.50	1.50	1.30	1.30	1.30	1.30	1.20	1.20	1.20	1.20	2.05	2.05	2.05	2.05
Taxi	1.40	1.40	1.40	1.40	1.50	1.50	1.50	1.50	1.30	1.30	1.30	1.30	1.20	1.20	1.20	1.20	2.05	2.05	2.05	2.05
Temporal Distribution	(1) AM	(1) MD	(1) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(5) AM	(5) MD	(5) PM	(8) EVE
	8.0%	14.0%	13.0%	6.6%	7.2%	7.1%	8.3%	6.4%	45.0%	0.0%	7.5%	0.0%	45.0%	0.0%	5.0%	0.0%	3.2%	12.8%	12.8%	0.0%
Percent In/Out	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(9)	(9)	(9)	(8)
In	41.0%	68.0%	59.0%	60.0%	94.0%	45.0%	42.0%	50.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	50.0%	57.0%	49.0%	50.0%
Out	59.0%	32.0%	41.0%	40.0%	6.0%	55.0%	58.0%	50.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	50.0%	43.0%	51.0%	50.0%
Delivery Trips																				
Daily Trip Rate	0.24 / Room (3)				0.38 / 1,000 SF (3)				0.04 / Seat (3)				N/A N/A				3.48 / Acre (9)			
Temporal Distribution	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(3) AM	(3) MD	(3) PM	(3) EVE	(9) AM	(9) MD	(9) PM	(8) EVE
	12.0%	9.0%	0.0%	0.0%	6.0%	11.0%	1.0%	0.0%	9.7%	7.8%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0%	9.0%	2.0%	0.0%
Percent In/Out	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(9)	(9)	(9)	(8)
In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%

Sources:

(1) New York City Mayor's Office of Environmental Coordination, *City Environmental Quality Review Technical Manual* (2012)
(2) U.S. Census Bureau 2006-2010 American Community Survey 5-Year Estimates. Journey to Work Data.
(3) *Willets Point Development Plan FGEIS* (2008)
(4) U.S. Department of Commerce, Bureau of the Census, *Census 2000.* Reverse Journey to Work Data.
(5) Institute of Transportation Engineers, *Trip Generation Manual, 8th Edition* (2008), Land Use 435 (Multipurpose Recreational Facility). Temporal distribution based on the ratio of peak hour of generator trip rates versus the total daily trip rates. Weekday midday temporal distribution assumed the same as weekday PM.
(6) Linkage accounts for synergy with recreational uses in adjacent Flushing Corona Meadows Park
(7) Assumed the same as the destination retail land use
(8) The recreational uses component would only be in use during non-game days and the off-season, it would not generate any trips during game day related peak hours.
(9) *Coney Island Rezoning FEIS* (2009) - Amusement Park Use. Delivery trip rate converted from per 1,000 square feet to per acre.

Table 14-30
Saturday Trip Generation Factors

Rates	Residential			Office			Destination Retail			Local Retail			Convention/Expo Facility		
Person Trips															
Daily Trip Rate	9.6 / DU (1)			3.9 / 1,000 SF (1)			92.5 / 1,000 SF (1)			240 / 1,000 SF (1)			46.2 / 1,000 SF (3)		
Linkage Trip Credit										(3) 25%					
Modal Split	(2,3)			(4)			(3)			(3)			(3)		
	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game
Auto	34.0%	34.0%	34.0%	51.0%	51.0%	51.0%	59.0%	59.0%	59.0%	15.0%	15.0%	15.0%	70.0%	70.0%	70.0%
Taxi	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	6.0%	6.0%	6.0%
Subway	32.0%	32.0%	32.0%	16.0%	16.0%	16.0%	13.0%	13.0%	13.0%	5.0%	5.0%	5.0%	12.0%	12.0%	12.0%
Bus	3.0%	3.0%	3.0%	14.0%	14.0%	14.0%	18.0%	18.0%	18.0%	10.0%	10.0%	10.0%	2.0%	2.0%	2.0%
Walk Only	30.0%	30.0%	30.0%	18.0%	18.0%	18.0%	5.0%	5.0%	5.0%	70.0%	70.0%	70.0%	10.0%	10.0%	10.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy	(2)	(2)	(2)	(4)	(4)	(4)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game
Auto	1.39	1.39	1.39	1.14	1.14	1.14	2.49	2.49	2.49	2.00	2.00	2.00	2.60	2.60	2.60
Taxi	1.39	1.39	1.39	1.14	1.14	1.14	2.49	2.49	2.49	2.00	2.00	2.00	1.70	1.70	1.70
Temporal Distribution	(1)	(3)	(3)	(1)	(3)	(3)	(1)	(3)	(3)	(1)	(3)	(3)	(3)	(3)	(3)
	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game
	8.0%	7.0%	7.2%	17.0%	15.0%	15.0%	11.0%	8.0%	6.0%	10.0%	9.5%	9.5%	14.4%	12.0%	13.8%
Percent In/Out	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
In	57.0%	50.0%	50.0%	60.0%	15.0%	60.0%	51.0%	53.6%	47.5%	55.0%	55.0%	45.0%	50.0%	64.0%	41.0%
Out	43.0%	50.0%	50.0%	40.0%	85.0%	40.0%	49.0%	46.4%	52.5%	45.0%	45.0%	55.0%	50.0%	36.0%	59.0%
Delivery Trips															
Daily Trip Rate	0.02 / DU (1)			0.01 / 1,000 SF (1)			0.04 / 1,000 SF (1)			0.04 / 1,000 SF (1)			0.04 / 1,000 SF (3)		
Temporal Distribution	(1)	(3)	(3)	(1)	(3)	(3)	(1)	(3)	(3)	(1)	(3)	(3)	(3)	(3)	(3)
	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game
	9.0%	9.0%	2.0%	11.0%	11.0%	3.0%	11.0%	11.0%	2.0%	11.0%	11.0%	2.0%	14.7%	14.7%	1.1%
Percent In/Out	(1)	(3)	(3)	(1)	(3)	(3)	(1)	(3)	(3)	(1)	(3)	(3)	(3)	(3)	(3)
In	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Out	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Rates	Movie Theater			Hotel			Community Facility			Recreational Uses		
Person Trips												
Daily Trip Rate	6.25 / Seat (1)			9.4 / Room (1)			34.0 / 1,000 SF (3)			205.5 / Acre (5)		
Linkage Trip Credit										(6) 25%		
Modal Split	(3)			(3)			(2,3)			(7)		
	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game
Auto	56.0%	56.0%	56.0%	70.0%	70.0%	70.0%	13.0%	13.0%	13.0%	59.0%	59.0%	59.0%
Taxi	7.0%	7.0%	7.0%	15.0%	15.0%	15.0%	0.5%	0.5%	0.5%	5.0%	5.0%	5.0%
Subway	18.0%	18.0%	18.0%	5.0%	5.0%	5.0%	26.0%	26.0%	26.0%	13.0%	13.0%	13.0%
Bus	8.0%	8.0%	8.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	18.0%	18.0%	18.0%
Walk Only	11.0%	11.0%	11.0%	5.0%	5.0%	5.0%	55.5%	55.5%	55.5%	5.0%	5.0%	5.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(7)	(7)	(7)
	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game
Auto	2.52	2.52	2.52	1.60	1.60	1.60	1.50	1.50	1.50	2.49	2.49	2.49
Taxi	2.30	2.30	2.30	1.40	1.40	1.40	1.50	1.50	1.50	2.49	2.49	2.49
Temporal Distribution	(1)	(3)	(3)	(1)	(3)	(3)	(3)	(3)	(3)	(5)	(8)	(8)
	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game
	5.0%	5.0%	8.0%	9.0%	7.5%	7.5%	14.1%	14.1%	14.1%	12.6%	0.0%	0.0%
Percent In/Out	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(9)	(8)	(8)
Percent In	62.0%	62.0%	38.0%	56.0%	56.0%	56.0%	49.0%	49.0%	48.0%	58.0%	50.0%	50.0%
Percent Out	38.0%	38.0%	62.0%	44.0%	44.0%	44.0%	51.0%	51.0%	52.0%	42.0%	50.0%	50.0%
Delivery Trips												
Daily Trip Rate	0.00 / Seat (3)			0.08 / Room (3)			0.00 / 1,000 SF (3)			1.74 / Acre (9)		
Temporal Distribution	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(9)	(8)	(8)
	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game	Non-Game	Pre-Game	Post-Game
	0.0%	0.0%	0.0%	9.0%	9.0%	0.0%	0.0%	0.0%	0.0%	9.0%	0.0%	0.0%
Percent In/Out	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(9)	(8)	(8)
In	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Out	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Sources:
(1) New York City Mayor's Office of Environmental Coordination, *City Environmental Quality Review Technical Manual* (2012)
(2) U.S. Census Bureau 2006-2010 American Community Survey 5-Year Estimates. Journey to Work Data.
(3) *Willets Point Development Plan FGEIS* (2008)
(4) U.S. Department of Commerce, Bureau of the Census, *Census 2000.* Reverse Journey to Work Data.
(5) Institute of Transportation Engineers, *Trip Generation Manual, 8th Edition* (2008), Land Use 435 (Multipurpose Recreational Facility). Temporal distribution based on the ratio of peak hour of generator trip rates versus the total daily trip rates.
(6) Linkage accounts for synergy with recreational uses in adjacent Flushing Corona Meadows Park
(7) Assumed the same as the destination retail land use
(8) The recreational uses component would only be in use during non-game days and the off-season, it would not generate any trips during game day related peak hours.
(9) *Coney Island Rezoning FEIS* (2009) - Amusement Park Use. Delivery trip rate converted from per 1,000 square feet to per acre.

RESIDENTIAL

For the residential component, the weekday and Saturday person and delivery trip generation rates are from the 2012 *CEQR Technical Manual.*

For the SEIS, the latest U.S. Census American Community Survey (ACS) 2006-2010 journey-to-work data were used to develop the modal split for the weekday AM, midday, PM, and

evening peak hours based on data for the following census tracts in Queens County (based on 2010 U.S. Census tract boundaries): 381, 383.01, 383.02, 399, 401, 403, 415, 849, 853, 855, 857, 865, 869, and 871. These tracts covered approximately the same areas studied in the 2008 FGEIS with the 2000 Census data. Census Tracts 383.01 and 383.02, which encompass the project site, are large tracts with few residential units; therefore, the study area was expanded to include tracts in Corona and Flushing. These tracts have access and transit characteristics similar to the project site. The Saturday modal split was adjusted from the Census journey-to-work data to reflect anticipated higher auto and walk shares.

Auto occupancy rates from the journey-to-work data were used for all analysis peak hours. The vehicle occupancy for auto trips was applied to taxi trips.

For the weekday AM, midday, and PM peak hours, the temporal distributions are from the 2012 *CEQR Technical Manual* and the directional distributions are from the 2008 FGEIS. For the weekday evening peak hour, the temporal and directional distributions are from the 2008 FGEIS. For the Saturday non-game midday peak, the temporal and directional distributions are from the 2012 *CEQR Technical Manual* and 2008 FGEIS, respectively. The Saturday pre-game and post-game temporal and directional distributions are from the 2008 FGEIS.

The weekday AM, midday, and PM and Saturday non-game midday peak hour delivery trip temporal and directional distributions are from the 2012 *CEQR Technical Manual*. The weekday evening and the Saturday pre-game and post-game delivery trip temporal and directional distributions are from the 2008 FGEIS.

OFFICE

The trip generation analysis for the office component used daily trip generation rates reported in the 2012 *CEQR Technical Manual* for the weekday and Saturday trip generation. The weekday and Saturday delivery trip generation rates are also based on the 2012 *CEQR Technical Manual*.

Census 2000 (U.S. Department of Commerce Bureau of the Census, 2000) reverse journey-to-work data (for the Queens County census tracts 851, 853, 855, 857, 865, 867, 871, and 875, based on 2000 U.S. Census tract boundaries) were used to develop the modal split and vehicle occupancies for the AM, PM, evening, and Saturday peak hours. The weekday midday peak hour modal splits and vehicle occupancies are based on the 2008 FGEIS. As presented in the 2008 FGEIS, the vehicle occupancy for taxi trips was assumed to be the same as for auto trips. Both are from Census reverse journey-to-work data.

The weekday AM, midday, and PM and the Saturday non-game midday/afternoon peak hour temporal and directional distributions are from the 2012 *CEQR Technical Manual* and the 2008 FGEIS, respectively. The weekday evening and the Saturday pre-game and post-game temporal and directional distribution rates are from the 2008 FGEIS.

The weekday AM, midday, and PM and Saturday non-game midday/afternoon peak hour delivery trip temporal and directional distributions are from the 2012 *CEQR Technical Manual*. The weekday evening and the Saturday pre-game and post-game delivery trip temporal and directional distributions are from the 2008 FGEIS.

DESTINATION RETAIL

The weekday and Saturday person and delivery trip generation rates for the project's destination retail component are from the 2012 *CEQR Technical Manual*. The weekday AM, midday, and PM and the Saturday non-game midday/afternoon peak hour temporal and directional

distributions are from the 2012 *CEQR Technical Manual* and the 2008 FGEIS, respectively. The weekday evening and the Saturday pre-game and post-game temporal and directional distribution rates are from the 2008 FGEIS. Because it is expected that some of the retail trips will be made by the project's residents and workers en route to or from their homes or offices on the project site, some internalization of trip-making is expected.

The weekday and Saturday modal splits and vehicle occupancies for the destination retail component are from the 2008 FGEIS. The weekday AM, midday, and PM and Saturday non-game midday/afternoon peak hour delivery trip temporal and directional distributions are from the 2012 *CEQR Technical Manual*. The weekday evening and the Saturday pre-game and post-game delivery trip temporal and directional distributions are from the 2008 FGEIS.

LOCAL RETAIL

The weekday and Saturday daily trip generation and delivery vehicle trip generation rates for the project's local neighborhood retail component are from the 2012 *CEQR Technical Manual*. A 25 percent linked trip credit was applied to the local retail trip generation estimates. The modal splits and vehicle occupancies are from the 2008 FGEIS.

Weekday AM, midday, and PM and Saturday non-game midday peak hour person and delivery trip temporal and directional distributions are from the 2012 *CEQR Technical Manual* and the 2008 FGEIS, respectively. The weekday evening and the Saturday pre-game and post-game person and delivery trip temporal and directional distributions are from the 2008 FGEIS.

CONVENTION / EXPO FACILITY

The weekday and Saturday travel demand assumptions for the project's convention/expo facility component are all based on the 2008 FGEIS.

MOVIE THEATER

The weekday and Saturday person daily trip generation rates for the project's movie theater component were from rates presented in the 2012 *CEQR Technical Manual*. The modal splits and auto and taxi occupancy rates are from the 2008 FGEIS. The weekday AM, midday, and PM and Saturday non-game midday/afternoon peak hour person trip temporal distributions are from the 2012 *CEQR Technical Manual*. The weekday evening and the Saturday pre-game and post-game person trip temporal distributions are from the 2008 FGEIS. The weekday and Saturday directional distributions are from the 2008 FGEIS. Weekday and Saturday delivery trip generation rates and the temporal and directional distributions are from the 2008 FGEIS.

HOTEL

The weekday and Saturday daily trip generation rates are from the 2012 *CEQR Technical Manual*. The weekday AM, midday, and PM and the Saturday non-game midday/afternoon peak hour person trip temporal distributions are also from the 2012 *CEQR Technical Manual*. The weekday evening and Saturday pre-game and post-game person trip temporal distributions are from the 2008 FGEIS. The modal splits, vehicle occupancies, and directional distributions are from the 2008 FGEIS. The weekday and Saturday delivery trip generation rates and temporal and directional distributions are from the 2008 FGEIS.

COMMUNITY FACILITY

The weekday and Saturday travel demand assumptions for the project's community facility component are all based on the 2008 FGEIS. The modal split for the community facility use was

similarly adjusted like the FGEIS based on the latest 2006-2010 ACS journey-to-work data. The journey-to-work data were adjusted to reflect a larger percentage of walk trips and a lesser percentage of trips by other modes. This assumption is predicated on a majority of the community facility trips being made by the project's residents, same as in the FGEIS.

SCHOOL

The weekday and Saturday travel demand assumptions for the project's school component are all based on the 2008 FGEIS.

RECREATIONAL USES (PHASE 1A ONLY)

The weekday and Saturday trip generation rates for the non-game day/off-season recreational uses (which may include a driving range, miniature golf, batting cages, and basketball/volleyball courts among other activities for approximately six months of the year) were derived from factors presented in the *Trip Generation Manual, 8th Edition* (ITE, 2008) for Land Use 435, "Multipurpose Recreational Facility." The recreational uses are likely to have a similar patron draw as the destination retail component described above; therefore, the destination retail modal splits and vehicle occupancies were also assumed for this land use. Accordingly, with these uses' proximity to nearby hotel and retail uses, including the Willets West retail development, and synergy with recreational uses in the adjacent Flushing Corona Meadows Park, a 25 percent linked trip credit was assumed and applied to the trip generation estimates.

Because these recreational uses would only be available on non-game days at CitiField, they would not generate any trips during the weekday pre-game, Saturday pre-game, and Saturday post-game analysis peak hours. The weekday AM and PM and Saturday non-game temporal distributions are based on the ratio of the peak hour of generator trip rates as compared to the total daily trip rates presented in the *Trip Generation Manual, 8th Edition* (ITE, 2008) for Land Use 435, "Multipurpose Recreational Facility." The weekday midday temporal distribution was assumed to be the same as the weekday PM temporal distribution. The weekday and Saturday peak hour directional distributions are based on factors presented in the *Coney Island Rezoning Final Environmental Impact Statement* (2009) for the amusement park land use. The weekday and Saturday delivery trip generation rates and temporal distributions are based on the factors presented in the *Coney Island Rezoning FEIS* for the amusement park land use, converted from per 1,000 square feet to per acre.

These travel demand assumptions were used to calculate the number of person and vehicle trips expected to be generated by development component during each of the proposed project's buildout phases.

PROPOSED ROADWAY IMPROVEMENTS

Over the course of the buildout of the proposed project, there would be several changes to the roadway network within the District occurring in each of the three phases. The roadway changes that would occur in each phase of development are summarized as follows:

- By Phase 1A (2018), 36th, 37th, 38th and 39th Avenues would be closed within the District, and Willets Point Boulevard would be closed between 127th and 126th Streets. These closures would be made to accommodate CitiField parking (2,750 spaces) displaced by the proposed Willets West development and would be used as recreational space in the off-season. In the Willets West area, at its intersection with Boat Basin Road, the eastbound approach of Stadium Road would be reconstructed so that it no longer intersects Boat Basin Road as an unsignalized intersection at the CitiField main parking lot entrance (Entrance 8), and instead intersects Boat Basin Road with the rest of Stadium Road, just to the north.

Additionally, a primary entrance to the proposed Willets West development would be created at the intersection of the GCP Off-Ramp at West Park Loop Road/Stadium Road. The Willets West entrance would become the east leg of this intersection.

- Between Phase 1A (2018) and Phase 1B (2028), a new access ramp from the northbound Van Wyck Expressway would be constructed off of the existing Exit 13 ramp and would connect to the new street network within the District at its northeast corner. A new ramp to the southbound Van Wyck Expressway would connect the northeast corner of the District to the expressway mainline immediately south of the interchange with the Whitestone Expressway via a new connection with the existing westbound Northern Boulevard ramp to the southbound Van Wyck Expressway. The new ramps would provide inbound trip access to the District from the northbound Van Wyck Expressway and outbound trip access from the District to the southbound Van Wyck Expressway. They would also continue to provide access to the eastbound and westbound Grand Central Parkway via the existing ramp that connects to the southbound Whitestone Expressway which travels west along the northern edge of the District. Also, Willets Point Boulevard would be extended southwest to where it currently meets 38th Avenue and then west to intersect with 126th Street (along what is currently 38th Avenue). Additionally, two new east-west retail streets would be created in the District and would intersect 126th Street—one at the CitiField entrance center line, and one near CitiField's northern edge. A third retail street running north-south between 35th Avenue and the current 38th Avenue (Willets Point Boulevard extension in the proposed project), would intersect those connector streets. A short segment of another proposed new north-south street that would traverse the eastern border of the District (adjacent to the abutting MTA lot) would be created. This segment would span the distance of approximately one block, starting from just north of Roosevelt Avenue, and then turn west where it would intersect Willets Point Boulevard.
- Between Phase 1B (2028) and Phase 2 (2032), the District's new internal street network would be completed. The proposed north-south street along the eastern border of the District would be fully extended to the northern end of the District, and would generally run parallel to Willets Point Boulevard. Additional east-west streets would be added to service new development parcels. Additionally, 35th Avenue would be demapped and closed within the District to accommodate new development parcels in the northwest section of the District. It is anticipated that these parcels would be surrounded by new internal roadways as well. Additionally, a new intersection would be created along Roosevelt Avenue at the entrance to Lot B to accommodate proposed development that would occur there.

TRIP DISTRIBUTION AND ASSIGNMENT TO THE ROADWAY NETWORK

The project site lies within a major highway system in north-central Queens, between the Grand Central Parkway (GCP), the Long Island Expressway (LIE), the Van Wyck Expressway, and the Whitestone Expressway. As mentioned, two new ramps are proposed which would provide inbound access to the sites from the northbound Van Wyck Expressway and outbound access from the sites to the southbound Van Wyck Expressway, and would continue access to the eastbound and westbound Grand Central Parkway, currently available via the existing ramp.

The volume of vehicular traffic generated by the proposed project during each phase of development was assigned to the highway and roadway networks using regional and local origin/destination patterns attributed to the proposed land use types. Trips generated by the proposed land uses within the District were assigned to its primary access points. The route assignments for vehicular trips generated by the proposed project under each phase of buildout assume only those ramp access improvements and street network changes that would be in place

within the District by that Build year. However, while site access patterns would vary to a degree under each phase, overall origin-destination assignments would be similar. Similar to the travel demand assumptions, vehicle trip assignments generally reflect those used in the 2008 FGEIS.

OFFICE TRIPS

For office auto trips, 16 percent were assigned to the eastbound GCP, 2 percent were assigned to eastbound Astoria Boulevard, 5 percent were assigned to eastbound Northern Boulevard, 2 percent were assigned to eastbound Roosevelt Avenue, 4 percent were assigned to the eastbound LIE, 20 percent were assigned to the westbound Grand Central Parkway (from south of the LIE); 16 percent were assigned to the westbound LIE, 17 percent were assigned to the southbound Whitestone Expressway, 14 percent were assigned to the northbound Van Wyck Expressway (from south of the LIE); 2 percent were assigned to westbound Northern Boulevard, and a combined 2 percent were assigned to westbound Roosevelt Avenue, westbound Sanford Avenue, and College Point Boulevard. Office taxi trips were assigned with approximately 65 to 70 percent on the highways and the remaining 30 to 35 percent on local streets through the study area, following similar routes as auto trips.

RETAIL TRIPS

Separate trip distribution patterns were estimated for destination retail trips, local retail trips, and the movie theatre trips. Overall, considering all retail uses, for retail trips traveling to the project site from points west of the study area (Manhattan, the Bronx/Westchester, and western/west-central Queens, and surrounding neighborhoods), it was estimated that about 8 to 16 percent would use the eastbound GCP, about 5 to 8 percent would use eastbound Astoria Boulevard, 6 to 12 percent would use eastbound Northern Boulevard, about 3 to 8 percent would use Roosevelt Avenue, and about 6 to 12 percent would use the eastbound LIE. For retail trips traveling to the project site from points east of the study area (eastern/southeastern Queens, Long Island, and surrounding neighborhoods), it was estimated that about 5 to 6 percent would use the westbound GCP, 5 to 10 percent would use westbound Northern Boulevard, about 1 to 5 percent would use westbound Roosevelt Avenue, 1 to 3 percent would use westbound Sanford Avenue, and 10 to 16 percent would use the westbound LIE. For retail trips traveling to the project site from points north of the study area (northeastern Queens, the Bronx, and surrounding neighborhoods), it was estimated that about 8 to 12 percent would use the southbound Whitestone Expressway, up to 1 percent would use southbound College Point Boulevard, and up to 3 percent would use Parsons Boulevard. For retail trips traveling to the project site from points south of the study area (southern Queens, Brooklyn, and surrounding neighborhoods), it was estimated that about 5 to 14 percent would use the northbound Van Wyck Expressway, up to 2 percent would use northbound College Point Boulevard, up to 4 percent would use Kissena Boulevard/Main Street, up to 3 percent would use northbound Parsons Boulevard, and up to 1 percent would use 108th Street. Overall, destination retail and movie theater taxi trips were assigned with approximately 55 to 60 percent on the highways and the remaining 40 to 45 percent on local streets through the study area, following similar routes as auto trips.

CONVENTION CENTER TRIPS

It is expected that a convention center at Willets Point would have regional attractiveness, with trips predominantly on the highway network to the study area. For the convention center, approximately 12 to 18 percent of the trips would be on each of the major highways to the study area, including the eastbound and westbound GCP, the eastbound and westbound LIE, the northbound Van Wyck Expressway, and the southbound Whitestone Expressway. Use of the local streets, including Northern Boulevard, Roosevelt Avenue, and College Point Boulevard, would range from 1 to 6 percent.

Convention center taxi trips were assigned with approximately 90 percent on the highways and the remaining 10 percent on local streets through the study area, following similar routes as auto trips.

HOTEL TRIPS

Regional distributions for hotel trips are expected to be generally similar to those of the convention center, but with a somewhat higher use of the local street network through the study area. It is expected that hotel trip distributions on the highway network would be about 10 to 18 percent on each highway to the District, and local street use would range from 1 to 8 percent each on Astoria Boulevard, Northern Boulevard, Roosevelt Avenue, Sanford Avenue, and College Point Boulevard. Hotel taxi trips were assigned with approximately 75 percent on the highways and the remaining 25 percent on local streets through the study area, following similar routes as auto trips.

SCHOOL TRIPS

Student drop-off trips were assigned to the District from local streets and arterials serving surrounding neighborhoods. School "in" trips for the weekday AM peak hour were assigned as follows: about 10 to 18 percent each on eastbound Astoria Boulevard, eastbound and westbound Northern Boulevard, and eastbound Roosevelt Avenue; and about 2 to 8 percent each on westbound Roosevelt Avenue, westbound Sanford Avenue, Parsons Boulevard in both directions, southbound Union Street, Kissena Boulevard/Main Street, College Point Boulevard in both directions, and 34th Avenue. The small number of faculty trips to the school was assumed to follow similar routes as the weekday AM "in" distributions.

It was assumed that many of the drop-off trips would proceed to places to work; therefore, school "out" trips for the weekday AM peak hour were partly assigned according to morning commuter patterns (weekday AM peak hour residential "out" trip assignments). Weekday PM pick-up "in" trips would arrive along the reverse of the weekday AM "out" trips, and the pick-up "out" trips would route back to the origins of the weekday AM drop-off "in" trips.

COMMUNITY FACILITY/RECREATIONAL TRIPS

The community facility and recreational facilities are expected to serve surrounding neighborhoods, and therefore trips were assigned to the District from local streets and arterials similar to the weekday AM "in"/weekday PM "out" school trips. The very small number of expected community center taxi trips was assigned to Northern Boulevard.

DELIVERIES

Trucks were assigned along NYCDOT-designated truck routes, including the Van Wyck and Whitestone Expressways, the LIE, Northern Boulevard, Astoria Boulevard, Roosevelt Avenue, and College Point Boulevard (trucks are not allowed on the GCP). Overall on the highways, approximately 10 to 15 percent of all truck trips were assigned to the Van Wyck Expressway (south of the LIE), approximately 10 to 15 percent were assigned to the Whitestone Expressway, and approximately 20 to 25 percent were assigned to each the eastbound and westbound LIE (these trucks would access the project area along the Van Wyck Expressway). For local streets, about 10 to 15 percent were assigned to Astoria Boulevard, about 2 to 10 percent were assigned to each eastbound and westbound Northern Boulevard, and about 1 to 5 percent were assigned to Roosevelt Avenue and College Point Boulevard.

GAME DAY CIRCULATION CHANGES

In 2018, the proposed Phase 1A development would displace approximately 4,100 parking spaces from the main CitiField parking lot to make way for the proposed Willets West development. For

the Phase 1A With Action scenario, the displaced parking spaces would be replaced by approximately 2,750 parking spaces provided in a new interim lot located on the east side of 126th Street between Roosevelt Avenue and 35th Avenue, and an additional 950 parking spaces in a new garage located on the South Lot (south side of Roosevelt Avenue between west of 126th Street). The remaining 400 parking spaces would be located within the new Willets West parking facilities. For Phase 1A, game traffic that currently parks at the main CitiField parking lot was reassigned to each of the proposed new CitiField lots. During pre-game conditions, it is expected that fans would originate from the same areas and access the study area via the same highways as in existing conditions. However, due to the proximity of the proposed new South Lot parking garage to the westbound Grand Central Parkway off-ramps, a portion of fans that currently use the northbound Van Wyck Expressway to access the stadium were reassigned from the northbound Van Wyck Expressway to the westbound Grand Central Parkway via Exit 10 (south of the Long Island Expressway). The remaining fans that currently use the northbound Van Wyck Expressway would continue to access CitiField parking via the westbound Northern Boulevard exit and through the World's Fair Marina and local roadway network. In addition, a portion of fans that arrive at the stadium via the westbound Grand Central Parkway ramps to 126th Street are expected to exit the highway further south at Exit 9P or via the ramp to West Park Loop/Stadium Road and proceed to the proposed parking facilities. The remaining fans are expected to continue using the same access points as in existing conditions, but have been locally re-routed to the proposed new parking facilities via the most direct routes. During the post-game conditions under Phase 1A, it is expected that fans would travel the same outbound routes as in existing conditions, but would use alternate ramps depending on their proximity to the new parking lots.

By Phase 1B in 2028 and thereafter, the proposed new ramps linking the northbound and southbound Van Wyck Expressway with the District would be operational, and the temporary CitiField parking lot within the District in Phase 1A would be removed. All CitiField parking spaces that were displaced in Phase 1A would be replaced in three parking garages located on South Lot and Lot D. For Phase 1B and Phase 2, game traffic using the main CitiField parking lot in existing conditions was diverted to the proposed new CitiField parking facilities. During pre-game conditions, the same portion of game traffic that was reassigned from the northbound Van Wyck Expressway to the westbound Grand Central Parkway in Phase 1A would continue to use the westbound Grand Central Parkway since it is the most direct route to the proposed new garages. The portion of game traffic that would continue to use the northbound Van Wyck Expressway was reassigned to the proposed new ramp into the District and to the proposed new parking garages via local streets. As in Phase 1A, a portion of fans that arrive at the stadium via the westbound Grand Central Parkway ramps to 126th Street are expected to exit the highway further south at Exit 9P or via the ramp to West Park Loop/Stadium Road and proceed to the proposed parking facilities. A portion of fans that currently access the stadium via Astoria Boulevard and Northern Boulevard ramps to 126th Street were reassigned to the proposed new garages via southbound 114th Street to Roosevelt Avenue. During the post-game conditions, it is expected that fans would travel the same outbound routes as in existing conditions, but would use alternate ramps depending on their proximity to the new parking lots.

TRAFFIC LEVELS OF SERVICE AND SIGNIFICANT IMPACT CRITERIA

The assessment of potential significant traffic impacts of the proposed project is based on significant impact criteria defined in the *CEQR Technical Manual*. No Action LOS A, B, or C conditions that deteriorate to unacceptable LOS D, E, or F in the future With Action conditions are considered a significant traffic impact. For future No Action LOS A, B, or C conditions that deteriorate to unacceptable LOS D, mitigation to mid-LOS D (45.0 seconds of delay for

signalized intersections and 30.0 seconds of delay for unsignalized intersections) needs to be considered to fully mitigate the impact.

For a No Action LOS D, an increase of delay by five or more seconds in the With Action condition is considered a significant impact if the With Action condition delay meets or exceeds 45.0 seconds. For a No Action LOS E, the threshold is a four second increase in With Action condition delay; for a No Action LOS F, a three second increase in delay in the With Action condition is significant. For unsignalized intersections, for the minor street to generate a significant impact, 90 passenger car equivalents (PCEs) must be identified in the With Action condition in any peak hour.

Detailed summaries of traffic levels of service for analyzed intersections and identification of significant traffic impacts for conditions in the future with the proposed project under each phase of buildout are presented in the sections below.

PHASE 1A (2018) TRAFFIC ANALYSIS RESULTS

This section includes a determination of the volume of vehicle trips generated under the Phase 1 2018 With Action condition, their distribution within the study area roadway network, the analysis of future traffic levels of service, and the identification of significant impacts as per *CEQR Technical Manual* guidelines. Mitigation measures are discussed in Chapter 21.

TRAVEL DEMAND ANALYSIS

As mentioned earlier, proposed development expected to be built out under Phase 1A includes a substantial amount of destination retail including a movie theater and a parking garage (2,900 spaces) on the Willets West site and a smaller amount of hotel and local retail uses, and a surface parking lot (2,825 spaces)/off-season recreational space in the Special Willets Point District. This program is detailed in **Table 14-31**.

Table 14-31
Phase 1A (2018) Buildout Development Program for Analysis

Use	Size
Willets West [1]	
Destination Retail	915,000 SF
Movie Theater	4,000 Seats (80,000 SF) [2]
Special Willets Point District	
Local Retail	30,000 SF
Hotel	200 Rooms
Recreational Uses[3]	20 Acres
Total	
Destination Retail	**915,0000 SF**
Movie Theater	**4,000 Seats**
Local Retail	**30,000 SF**
Hotel	**200 Rooms**
Recreational Uses	**20 Acres**

Notes:
(1) Willets West would contain approximately 1.4 million sf of development, including 400,000 sf of non-leasable common area. This ancillary space is not considered for trip generation purposes.
(2) *Willets Point Development Plan FGEIS* (2008) assumption of 20 sf per seat.
(3) Temporary use. Would be replaced by 2028 with other uses. Programmed only during non-game days and the off-season.
SF = square feet; DU = dwelling unit

The volume of person trips and vehicle trips expected to be generated under Phase 1A of the proposed project would be substantial. **Table 14-32** presents the person trips generated by the

proposed project, and shows that it would generate an estimated 2,658, 8,336, 8,554, and 11,657 person trips during the weekday AM, midday, PM, and Saturday midday (non-game day) peak hours, respectively. On game days, the proposed project would generate an estimated 7,751 person trips during the weekday PM pre-game peak hour and 8,675 and 7,732 person trips in the Saturday pre-game and post-game hours, respectively.

Table 14-33 presents the vehicle trip estimates for the proposed project. The project would generate a total of 883, 2,517, 2,618, and 3,132 vehicle (auto, taxi, and delivery) trips during the weekday AM, midday, PM, and Saturday midday (non-game day) peak hours, respectively. On game days, the project would generate an estimated 2,324 vehicle trips during the weekday PM pre-game peak hour and 2,313 and 2,063 vehicle trips in the Saturday pre-game and post-game hours, respectively. The proposed project's taxi trips were adjusted based on the assumption that 25 percent of the arriving taxis would depart with a fare, per *CEQR Technical Manual* guidelines for this area.

TRAFFIC VOLUMES AND LEVELS OF SERVICE

Vehicle trips generated in Phase 1A were assigned through the study area based on the trip assignments discussed earlier, and produced specific roadway-by-roadway and intersection-by-intersection traffic volume projections within the study area. An overview of this is provided below, and specific and intersection-by-intersection generated volume projections are provided in detail in the technical appendices at the end of this chapter.

In 2018, the Phase 1A generated traffic volume increments would make up approximately 4 percent of the overall traffic volumes in the AM peak hour, 11 percent in the midday peak hour, 9 percent in the PM peak hour, and 11 percent in the Saturday midday peak hour, without a Mets game, when comparing these volume increments to overall Phase 1A With Action traffic volumes entering and exiting the traffic study area's local street network. For conditions with a Mets game, the proposed project's traffic increments would make up about 8 percent of the overall traffic volumes during all peak hours.

Northern Boulevard volumes can be expected to increase by about 20 to 115 vph per direction during the peak analysis hours through Downtown Flushing between Parsons Boulevard and College Point Boulevard. Adjacent to the project site, Northern Boulevard volumes can be expected to increase by approximately 25 to 515 vph per direction during all of the peak hours, with the increase in traffic along this section of the roadway primarily due to traffic from the ramp from the southbound Whitestone Expressway onto westbound Northern Boulevard. Northern Boulevard volumes in the vicinity of 108th and 114th Street can be expected to increase by about 20 to 125 vph per direction during the peak analysis hours.

Roosevelt Avenue volumes can be expected to increase by about 10 to 55 vph per direction during the non-game and game peak hours through Downtown Flushing between Parsons Boulevard and College Point Boulevard. Adjacent to the project site, Roosevelt Avenue volumes can be expected to increase by approximately 15 to 150 vph per direction during the peak hours without a Mets game—with the highest increment due mostly to retail trips during the Saturday midday peak hour, and by about 55 to 115 vph per direction during the peak hours with a Mets game. Roosevelt Avenue volumes in the vicinity of 108th, 111th, and 114th Streets can be expected to increase by about 20 to 150 vph per direction during the peak analysis hours.

Table 14-32
Phase 1A (2018) Program
Person Trips by Mode

Use	Auto		Taxi		Subway		Bus		Walk Only		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
WEEKDAY NON-GAME AM PEAK PERIOD													
Destination Retail	772	494	39	25	196	126	236	151	66	41	1,309	837	2,146
Local Retail	10	10	0	0	3	3	7	7	49	49	69	69	138
Movie Theater	69	4	9	0	22	1	10	1	14	1	124	7	131
Hotel	43	62	9	13	3	4	3	4	4	6	62	89	151
Recreational Uses	27	27	1	1	7	7	8	8	3	3	46	46	92
Total	**921**	**597**	**58**	**39**	**231**	**141**	**264**	**171**	**136**	**100**	**1,610**	**1,048**	**2,658**
WEEKDAY NON-GAME MIDDAY PEAK HOUR													
Destination Retail	2,090	1,710	106	87	531	435	638	522	177	144	3,542	2,898	6,440
Local Retail	66	66	0	0	22	22	44	44	306	306	438	438	876
Movie Theater	136	83	17	10	44	27	19	12	27	17	243	149	392
Hotel	125	59	27	13	9	4	9	4	9	4	179	84	263
Recreational Uses	123	93	6	5	31	24	37	28	11	7	208	157	365
Total	**2,540**	**2,011**	**156**	**115**	**637**	**512**	**747**	**610**	**530**	**478**	**4,610**	**3,726**	**8,336**
WEEKDAY NON-GAME PM PEAK HOUR													
Destination Retail	1,786	2,014	91	102	454	512	545	614	151	171	3,027	3,413	6,440
Local Retail	35	35	0	0	12	12	23	23	161	161	231	231	462
Movie Theater	315	269	39	34	101	86	45	38	63	53	563	480	1,043
Hotel	101	70	22	15	7	5	7	5	7	5	144	100	244
Recreational Uses	106	110	5	6	27	28	32	33	9	9	179	186	365
Total	**2,343**	**2,498**	**157**	**157**	**601**	**643**	**652**	**713**	**391**	**399**	**4,144**	**4,410**	**8,554**
SATURDAY NON-GAME MIDDAY PEAK HOUR													
Destination Retail	2,801	2,692	237	228	617	593	855	821	238	228	4,748	4,562	9,310
Local Retail	45	36	0	0	15	12	30	24	207	171	297	243	540
Movie Theater	434	266	54	33	140	86	62	38	85	52	775	475	1,250
Hotel	67	52	14	11	5	4	5	4	4	3	95	74	169
Recreational Uses	133	96	11	8	29	21	41	29	11	9	225	163	388
Total	**3,480**	**3,142**	**316**	**280**	**806**	**716**	**993**	**916**	**545**	**463**	**6,140**	**5,517**	**11,657**
WEEKDAY EVENING PRE-GAME PEAK HOUR													
Destination Retail	1,647	1,647	84	84	419	419	502	502	139	139	2,791	2,791	5,582
Local Retail	26	26	0	0	9	9	18	18	122	122	175	175	350
Movie Theater	503	446	63	56	162	143	72	64	98	88	898	797	1,695
Hotel	52	35	11	8	4	3	4	3	3	1	74	50	124
Recreational Uses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**2,228**	**2,154**	**158**	**148**	**594**	**574**	**596**	**587**	**362**	**350**	**3,938**	**3,813**	**7,751**
SATURDAY PRE-GAME PEAK HOUR													
Destination Retail	2,141	1,854	181	157	472	408	653	566	182	157	3,629	3,142	6,771
Local Retail	42	35	0	0	14	12	28	23	198	161	282	231	513
Movie Theater	434	266	54	33	140	86	62	38	85	52	775	475	1,250
Hotel	55	43	12	9	4	3	4	3	4	4	79	62	141
Recreational Uses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**2,672**	**2,198**	**247**	**199**	**630**	**509**	**747**	**630**	**469**	**374**	**4,765**	**3,910**	**8,675**
SATURDAY POST-GAME PEAK HOUR													
Destination Retail	1,423	1,573	121	133	314	347	434	480	120	133	2,412	2,666	5,078
Local Retail	35	42	0	0	12	14	23	28	161	198	231	282	513
Movie Theater	426	694	53	87	137	223	61	99	83	137	760	1,240	2,000
Hotel	55	43	12	9	4	3	4	3	4	4	79	62	141
Recreational Uses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**1,939**	**2,352**	**186**	**229**	**467**	**587**	**522**	**610**	**368**	**472**	**3,482**	**4,250**	**7,732**

Table 14-33
Phase 1A (2018) Program
Vehicle Trips by Type

Use	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
WEEKDAY NON-GAME AM PEAK PERIOD									
Destination Retail	377	241			13	13	390	254	644
Local Retail	5	5			0	0	5	5	10
Movie Theater	27	2			5	5	32	7	39
Hotel	27	39			3	3	30	42	72
Recreational Uses	13	13			4	4	17	17	34
Total	**449**	**300**	**42**	**42**	**25**	**25**	**516**	**367**	**883**
WEEKDAY NON-GAME MIDDAY PEAK HOUR									
Destination Retail	1,020	834			18	18	1,038	852	1,890
Local Retail	33	33			1	1	34	34	68
Movie Theater	54	33			4	4	58	37	95
Hotel	78	37			2	2	80	39	119
Recreational Uses	60	45			3	3	63	48	111
Total	**1,245**	**982**	**117**	**117**	**28**	**28**	**1,390**	**1,127**	**2,517**
WEEKDAY NON-GAME PM PEAK HOUR									
Destination Retail	871	982			3	3	874	985	1,859
Local Retail	18	18			0	0	18	18	36
Movie Theater	125	107			0	0	125	107	232
Hotel	63	44			0	0	63	44	107
Recreational Uses	52	54			1	1	53	55	108
Total	**1,129**	**1,205**	**138**	**138**	**4**	**4**	**1,271**	**1,347**	**2,618**
SATURDAY MIDDAY NON-GAME PEAK HOUR									
Destination Retail	1,125	1,081			2	2	1,127	1,083	2,210
Local Retail	23	18			0	0	23	18	41
Movie Theater	172	106			0	0	172	106	278
Hotel	42	33			1	1	43	34	77
Recreational Uses	53	39			2	2	55	41	96
Total	**1,415**	**1,277**	**215**	**215**	**5**	**5**	**1,635**	**1,497**	**3,132**
WEEKDAY EVENING PRE-GAME PEAK HOUR									
Destination Retail	803	803			2	2	805	805	1,610
Local Retail	13	13			0	0	13	13	26
Movie Theater	200	177			0	0	200	177	377
Hotel	33	22			0	0	33	22	55
Recreational Uses	0	0			0	0	0	0	0
Total	**1,049**	**1,015**	**128**	**128**	**2**	**2**	**1,179**	**1,145**	**2,324**
SATURDAY PRE-GAME PEAK HOUR									
Destination Retail	860	745			2	2	862	747	1,609
Local Retail	21	18			0	0	21	18	39
Movie Theater	172	106			0	0	172	106	278
Hotel	34	27			1	1	35	28	63
Recreational Uses	0	0			0	0	0	0	0
Total	**1,087**	**896**	**162**	**162**	**3**	**3**	**1,252**	**1,061**	**2,313**
SATURDAY POST-GAME PEAK HOUR									
Destination Retail	571	632			0	0	571	632	1,203
Local Retail	18	21			0	0	18	21	39
Movie Theater	169	275			0	0	169	275	444
Hotel	34	27			0	0	34	27	61
Recreational Uses	0	0			0	0	0	0	0
Total	**792**	**955**	**158**	**158**	**0**	**0**	**950**	**1,113**	**2,063**

Sanford Avenue volumes through Downtown Flushing between Parsons Boulevard and College Point Boulevard can be expected to increase by about 4 to 45 vph per direction during the peak analysis hours.

Astoria Boulevard volumes in the vicinity of 108th and 114th Streets can be expected to increase by about 50 to 95 vph per direction during the peak analysis hours.

Volumes on 34th Avenue from the District at the intersection with 126th Street are not expected to increase. However, volumes along West Park Loop/Stadium Road at the intersection with 126th

Street can be expected to increase by approximately 70 to 390 vph per direction during the peak hours without a Mets game, and by 170 to 315 vph per direction during the peak hours with a Mets game.

Volumes along 126th Street in the vicinity of 34th Avenue can be expected to increase by approximately 50 to 150 vph per direction during the peak analysis hours. In the vicinity of Roosevelt Avenue, 126th Street volumes can be expected to increase by about 15 to 65 vph per direction during the peak analysis hours.

College Point Boulevard volumes can be expected to increase by about 5 to 60 vph per direction during the peak analysis hours.

Volumes along 114th Street in the vicinity of Roosevelt Avenue can be expected to increase by approximately 25 to 225 vph per direction during the peak analysis hours. Projected volume increments on the other north-south streets, including 108th Street, Main Street, Union Street, and Parsons Boulevard can be expected to 40 vph per direction or less during all of the peak hours.

The remainder of this section provides an overview of significant traffic impacts that would be generated under the With Action conditions. Detailed volume-to-capacity (v/c) ratios, average vehicle delays, and levels of service movement-by-movement at each intersection under the Phase 1A (2018) With Action condition are presented at the end of this chapter. Project-generated traffic volume increment maps and total With Action volume maps are provided within **Appendix C**.

Using the previously discussed volume increases, the levels of service for the Phase 1A With Action condition were determined for 29 of the 31 intersections (both signalized and unsignalized) analyzed under the No Action condition. Two unsignalized intersections, Willets Point Boulevard at 126th Street and Boat Basin Road at Stadium Road, analyzed under the No Action condition, would be eliminated due to street demapping and intersection improvements in the proposed project under Phase 1A. Future traffic levels of service under the With Action condition are shown in **Tables 14-34** through **14-37**.

Table 14-34
Overall Intersection Level of Service Summary Comparison
Phase 1A (2018) No Action vs. With Action Conditions—Non-Game Day

	Phase 1A No Action Condition				Phase 1A With Action Condition			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Signalized Intersections	26 Signalized Intersections				26 Signalized Intersections			
Overall Intersection LOS A/B/C	13	15	13	15	11	12	11	11
Overall Intersection LOS D	5	6	7	3	6	4	4	4
Overall Intersection LOS E	8	2	4	6	9	4	7	1
Overall Intersection LOS F	0	3	2	2	0	6	4	10
No. of Locations with Significant Impacts	--	--	--	--	14	15	19	18

Notes:
During the non-game peak hours in the Phase 1A With Action condition, one of the three unsignalized intersections analyzed would be significantly impacted in the weekday AM and PM peak hours, and two unsignalized intersections would be impacted during the weekday and Saturday midday peak hours.

Table 14-35
Traffic Lane Group Level of Service Summary Comparison
Phase 1A (2018) No Action vs. With Action Conditions—Non-Game Day

	Phase 1A No Action Condition				Phase 1A With Action Condition			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Signalized Movements	26 Signalized Intersections				26 Signalized Intersections			
No. of Lane Groups at LOS A/B/C	62	76	63	74	62	70	57	64
No. of Lane Groups at LOS D	35	28	32	23	35	28	36	31
No. of Lane Groups at LOS E	15	9	12	13	14	13	11	11
No. of Lane Groups at LOS F	17	17	22	20	20	22	29	28

Notes:
During the non-game peak hours in the Phase 1A With Action conditions, one of the ten unsignalized lane groups analyzed would operate at LOS F in the weekday AM peak hour, three lane groups would operate at LOS F in the midday and PM peak hours, and four lane groups would operate at LOS F in the Saturday midday peak hour. All other unsignalized lane groups would operate at LOS D or better during non-game peak hours.

Table 14-36
Overall Intersection Level of Service Summary Comparison
Phase 1A (2018) No Action vs. With Action Conditions—Game Day

	Phase 1A No Action Condition			Phase 1A With Action Condition		
	Weekday Pre-game	Weekend Pre-game	Weekend Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
Signalized Intersections	26 Signalized Intersections			26 Signalized Intersections		
Overall Intersection LOS A/B/C	11	13	10	9	12	9
Overall Intersection LOS D	7	4	5	7	1	4
Overall Intersection LOS E	6	5	8	5	4	3
Overall Intersection LOS F	2	4	3	5	9	10
No. of Locations with Significant Impacts	--	--	--	19	15	18

Notes:
During the game day peak hours in the Phase 1A With Action condition, two of the three unsignalized intersections analyzed would be significantly impacted in the weekday and Saturday pregame peak hours, and one unsignalized intersection would be impacted during the weekday post-game peak hour.

Table 14-37
Traffic Lane Group Level of Service Summary Comparison
Phase 1A (2018) No Action vs. With Action Conditions—Game Day

	Phase 1A No Action Condition			Phase 1A With Action Condition		
	Weekday Pre-game	Weekend Pre-game	Weekend Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
Signalized Movements	26 Signalized Intersections			26 Signalized Intersections		
No. of Lane Groups at LOS A/B/C	61	72	72	53	65	70
No. of Lane Groups at LOS D	37	25	20	36	31	17
No. of Lane Groups at LOS E	11	8	9	16	8	13
No. of Lane Groups at LOS F	21	25	29	26	28	32

Notes:
During the game day peak hours in the Phase 1A With Action conditions, one of the ten unsignalized lane groups analyzed would operate at LOS F and one lane group would operate at LOS E in the weekday pre-game peak hour, and three lane groups would operate at LOS F and one lane group would operate at LOS E in the Saturday pre- and postgame peak hours. All other unsignalized lane groups would operate at LOS A or B during game day peak hours.

The addition of the proposed project's generated traffic for Phase 1A to the already poor future baseline (2018 No Action) conditions would result in relatively few new intersections or lane groups operating at unacceptable levels of service; however, it would cause several already sensitive locations to be significantly impacted. As a result, Phase 1A of the proposed project would have significant traffic impacts at 14 of the 26 signalized intersections analyzed in the weekday AM peak hour, 15 of 26 in the weekday midday peak hour, 19 of 26 in the weekday

PM peak hour, and 18 of 26 in the non-game Saturday midday peak hour. During the weekday pre-game peak hour, 19 of 26 signalized intersections analyzed would have significant traffic impacts, during the Saturday pre-game peak hour 15 of 26 signalized intersections analyzed would have significant impacts, and during the Saturday post-game peak hour 18 of 26 signalized intersections analyzed would have significant impacts. Of the three unsignalized intersections analyzed, one (World's Fair Marina at Boat Basin Road) would be significantly impacted in each of the peak analysis hours.

The summary overview of the Phase 1A With Action condition without a Mets game indicates that:

- In the weekday AM peak hour, 9 of the 26 analyzed signalized intersections are projected to operate at overall LOS E or F, which is one more than under the No Action condition. Fourteen signalized intersections would be significantly impacted. The number of traffic lane groups that are expected to operate at LOS E or F would increase from 32 to 34.
- In the weekday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from five under the No Action condition to ten under the With Action condition, and there would be significant impacts at 15 of the 26 signalized intersections. The number of individual lane groups that would operate at LOS E or F would increase from 26 to 35.
- In the weekday PM peak hour, the number of intersections that are projected to operate at overall LOS E or F would increase from 6 to 11 under the With Action condition, with 19 signalized intersections significantly impacted. The number of individual lane groups that would operate at LOS E or F would increase from 34 to 40.
- In the Saturday midday peak hour, the number of signalized intersections projected to operate at LOS E or F would increase from 8 under the No Action condition to 11 under the With Action condition. Eighteen signalized intersections would be significantly impacted. The number of lane groups at LOS E or F would increase from 33 to 39.
- Two of the three unsignalized intersections would be significantly impacted during at least one peak hour. World's Fair Marina at Boat Basin Road would consistently have a traffic lane group (northbound Boat Basin Road left turn movement) operate at LOS F during the weekday AM, midday, PM, and Saturday midday non-game peak hours and, as a result, would be significantly impacted in all non-game-day peak hours. Also, Stadium Road/West Loop Road at the Grand Central Parkway exit ramp—which would be reconfigured with a new west leg that would serve as an entrance/exit in and out of the proposed Willets West retail development—would have several movements that operate at unacceptable levels of service, one of which (the eastbound left turn movement from the GCP off-ramp) would be significantly impacted during the weekday and Saturday midday peak hours.

The summary overview of the Phase 1A With Action condition with a Mets game indicates that:

- In the weekday PM pre-game peak hour, 10 out of 26 signalized intersections would operate at LOS E or F under the With Action condition, which is an increase from eight signalized intersections at LOS E or F under the No Action condition. There would be significant impacts at 19 of the 26 signalized intersections. The number of lane groups that would operate at LOS E or F would increase from 32 to 42.
- During the Saturday midday pre-game peak hour, the number of intersections that are expected to operate at LOS E or F would increase from 9 to 13 under the With Action

condition, with 15 signalized intersections significantly impacted. The number of lane groups at LOS E or F would increase from 33 to 36.

- In the Saturday PM post-game peak hour, the number of locations that would operate at LOS E or F would increase from 11 to 13 under the With Action condition. Eighteen signalized intersections would be significantly impacted. The number of lane groups that would operate at LOS E or F would increase from 38 to 45.
- Two of the three unsignalized intersections would be significantly impacted during at least one peak hour. At World's Fair Marina at Boat Basin Road, the northbound Boat Basin Road left turn movement would consistently operate at LOS F during all game day peak hours, and would be significantly impacted. At the reconfigured intersection of Stadium Road/West Loop Road at the Grand Central Parkway exit ramp, the eastbound left turn movement from the GCP off-ramp would operate at LOS E during all peak hours and would be significantly impacted during the weekday and Saturday pre-game peak hours.

Table 14-38 shows the locations and time periods where significant impacts would occur in the Phase 1A (2018) With Action condition. Mitigation measures for significantly impacted locations are discussed in Chapter 21, "Mitigation."

Table 14-38
Phase 1A (2018) With Action Condition Significant Impact Summary

	Without a Mets Game				With a Mets Game		
Intersections	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Pre-game Weekday PM	Pre-game Saturday Midday	Post-game Saturday PM
Astoria Boulevard at 108th Street			x		X		x
Northern Boulevard at 108th Street	x	x	x	x	X	x	x
Northern Boulevard at 114th Street	x		x		X	x	x
Northern Boulevard at 126th Street	x	x	x	x	X		x
Northern Boulevard at Prince Street	x	x	x	x	X	x	x
Northern Boulevard at Main Street		x	x	x	X		x
Northern Boulevard at Union Street	x	x	x	x	X	x	x
Northern Boulevard at Parsons Boulevard	x	x	x	x	X	x	x
34th Avenue at 114th Street		x	x	x	X	x	x
34th Avenue at 126th Street	x	x	x	x	X	x	x
Roosevelt Avenue at 108th Street		x	x	x	X	x	x
Roosevelt Avenue at 111th Street			x	x	X	x	x
Roosevelt Avenue at 114th Street	x	x	x	x	X	x	x
Roosevelt Avenue at 126th Street	x	x	x	x	X	x	x
Roosevelt Avenue at College Point Boulevard	x	x	x	x	X	x	x
Roosevelt Avenue at Prince Street	x		x				
Roosevelt Avenue at Main Street	x	x	x	x	X	x	x
Roosevelt Avenue at Union Street	x	x	x	x	X	x	x
Roosevelt Avenue at Parsons Boulevard	x			x	X		
Kissena Boulevard at Main Street				x			
Sanford Avenue at College Point Boulevard							
Sanford Avenue at Union Street							
Sanford Avenue at Parsons Boulevard		x					
32nd Avenue at College Point Boulevard							
Northern Boulevard at College Point Boulevard							
Boat Basin Road at Stadium Road			x	x	X	x	x
Boat Basin Road at World's Fair Marina	x	x	x	x	X	x	x
Stadium Road at Grand Central Parkway		x		x	X	x	
Willets Point Boulevard at Northern Boulevard							

Notes: "x" means the intersection would be significantly impacted.

PHASE 1A (2018) WITH ACTION PARKING

In Phase 1A, the proposed project would provide approximately 2,500 off-street accessory parking spaces to satisfy the projected parking demand due to the development in Willets West and 75 accessory spaces for project demand in the District.[1] As shown in **Table 14-39**, the projected weekday and Saturday peak parking demands for Willets West (1,127 and 2,238 spaces, respectively) is anticipated to be satisfied entirely by the off-street parking facility provided within the site.

Table 14-39
Willets West Phase 1A (2018)
Weekday and Saturday Parking Accumulation

	Weekday							Saturday						
	Destination Retail			Movie Theater				Destination Retail			Movie Theater			Total
Time Begin	In	Out	Acc.	In	Out	Acc.	Total	In	Out	Acc.	In	Out	Acc.	Acc.
Midnight	0	0	0	0	14	14	**14**	0	0	0	0	28	28	**28**
1 AM	0	0	0	0	14	0	**0**	0	0	0	0	28	0	**0**
2 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
3 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
4 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
5 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
6 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
7 AM	62	62	0	14	0	14	**14**	100	0	100	28	0	28	**128**
8 AM	377	241	136	27	2	39	**175**	191	10	281	53	3	78	**359**
9 AM	292	120	308	32	6	65	**373**	180	20	441	94	17	155	**596**
10 AM	393	184	517	58	14	109	**626**	321	80	682	111	28	238	**920**
11 AM	591	439	669	55	23	141	**810**	1,263	541	1,404	108	58	288	**1,692**
Noon	1,020	834	855	54	33	162	**1,017**	881	763	1,522	172	106	354	**1,876**
1 PM	1,581	1,549	887	70	46	186	**1,073**	1,125	1,081	1,566	172	106	420	**1,986**
2 PM	1,008	1,114	781	101	73	214	**995**	1,074	992	1,648	183	150	453	**2,101**
3 PM	939	832	888	114	89	239	**1,127**	1,043	963	1,728	214	175	492	**2,220**
4 PM	855	937	806	143	117	265	**1,071**	579	625	1,682	153	125	520	**2,202**
5 PM	871	982	695	125	107	283	**978**	902	902	1,682	240	204	556	**2,238**
6 PM	896	1,040	551	188	160	311	**862**	812	993	1,501	360	307	609	**2,110**
7 PM	803	803	551	200	177	334	**885**	632	1,173	960	376	347	638	**1,598**
8 PM	436	533	454	178	257	255	**709**	562	1,042	480	342	492	488	**968**
9 PM	175	629	0	59	145	169	**169**	361	841	0	113	276	325	**325**
10 PM	0	0	0	23	94	98	**98**	0	0	0	44	179	190	**190**
11 PM	0	0	0	9	79	28	**28**	0	0	0	17	151	56	**56**
Total	10,299	10,299		1,450	1,450			10,026	10,026		2,780	2,780		

Note: Acc = Accumulation
Source: Based on travel demand estimates

As shown in **Tables 14-40** and **14-41**, parking demand from development within the District would not be fully accommodated by the 75 accessory spaces on weekdays or on Saturdays. During the Mets off-season, there would be an additional parking demand of 5 to 131 spaces on weekdays and Saturdays. During the off-season when the recreational uses would be in place, the additional recreational accessory parking demand, if needed, would be provided in Lot B, the north lot, or within the Willets Point District property itself to satisfy this demand.

[1] Additional parking spaces may be provided for off-season recreation uses within the District if they are warranted.

Table 14-40
Special Willets Point District Phase 1A (2018)
Weekday Parking Accumulation

Time Begin	Local Retail			Hotel			Recreational Uses			Total Acc.
	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	
Midnight	0	0	0	3	1	88	0	0	0	**88**
1 AM	0	0	0	4	0	92	0	0	0	**92**
2 AM	0	0	0	0	0	92	0	0	0	**92**
3 AM	0	0	0	0	0	92	0	0	0	**92**
4 AM	0	0	0	0	0	92	0	0	0	**92**
5 AM	0	0	0	0	0	92	0	0	0	**92**
6 AM	0	0	0	0	0	92	4	4	0	**92**
7 AM	1	0	1	2	3	91	4	4	0	**92**
8 AM	5	5	1	27	39	79	13	13	0	**80**
9 AM	2	2	1	13	24	68	31	10	21	**90**
10 AM	6	4	3	14	14	68	33	11	43	**114**
11 AM	9	9	3	19	19	68	37	12	68	**139**
Noon	33	33	3	78	37	109	60	45	83	**195**
1 PM	26	27	2	13	31	91	58	28	113	**206**
2 PM	17	18	1	10	24	77	41	50	104	**182**
3 PM	15	15	1	10	24	63	41	50	95	**159**
4 PM	15	16	0	12	29	46	38	45	88	**134**
5 PM	18	18	0	63	44	65	52	54	86	**151**
6 PM	13	13	0	39	59	45	0	86	0	**45**
7 PM	13	13	0	33	22	56	0	0	0	**56**
8 PM	0	0	0	29	24	61	0	0	0	**61**
9 PM	0	0	0	19	10	70	0	0	0	**70**
10 PM	0	0	0	14	4	80	0	0	0	**80**
11 PM	0	0	0	7	1	86	0	0	0	**86**
Total	173	173		409	409		412	412		

Note: Acc. = Accumulation
Source: Based on travel demand estimates

Table 14-41
Special Willets Point District Phase 1A (2018)
Saturday Parking Accumulation

Time Begin	Local Retail			Hotel			Recreational Uses			Total Acc.
	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	
Midnight	0	0	0	3	1	88	0	4	4	**92**
1 AM	0	0	0	4	0	92	0	4	0	**92**
2 AM	0	0	0	0	0	92	0	0	0	**92**
3 AM	0	0	0	0	0	92	0	0	0	**92**
4 AM	0	0	0	0	0	92	0	0	0	**92**
5 AM	0	0	0	0	0	92	0	0	0	**92**
6 AM	0	0	0	0	0	92	0	0	0	**92**
7 AM	0	0	0	7	10	89	4	0	4	**93**
8 AM	2	0	2	22	32	79	7	0	11	**92**
9 AM	4	0	6	22	32	69	12	3	20	**95**
10 AM	16	4	18	29	28	70	13	5	28	**116**
11 AM	19	19	18	29	28	71	26	11	43	**132**
Noon	21	17	22	29	28	72	39	21	61	**155**
1 PM	23	18	27	42	33	81	53	39	75	**183**
2 PM	21	17	31	10	23	68	36	32	79	**178**
3 PM	21	17	35	17	41	44	34	32	81	**160**
4 PM	16	20	31	31	31	44	49	60	70	**145**
5 PM	16	16	31	32	32	44	30	36	64	**139**
6 PM	15	18	28	41	41	44	23	28	59	**131**
7 PM	14	18	24	33	22	55	16	20	55	**134**
8 PM	10	19	15	25	16	64	12	18	49	**128**
9 PM	5	20	0	16	7	73	9	20	38	**111**
10 PM	0	0	0	11	3	81	2	20	20	**101**
11 PM	0	0	0	6	1	86	1	13	8	**94**
Total	203	203		409	409		366	366		

Note: Acc. = Accumulation
Source: Based on travel demand estimates

During the Mets season, the weekday and Saturday parking shortfalls would be substantially lower since there would be no parking demand generated by the recreational uses. On weekdays, there would be a slight overnight shortfall (between 10 PM and 8 AM) of 5 to 17 spaces, and a midday shortfall of 3 to 37 spaces. On Saturday, there would be a slight shortfall during most of the day ranging from 4 to 33 spaces. It is expected that this shortfall would be fully absorbed by publicly available on- and off-street spaces within and near the District.

In addition to providing accessory parking for project demand, the proposed Phase 1A program would also include the in-kind replacement of 4,100 Mets parking spaces in the main CitiField lots that would be displaced by the Willets West development. These replacement spaces would be distributed amongst a new parking facility in the District (2,750 spaces, used as recreational space in the off-season), Lot D/South Lot (950 spaces) and the Willets West development (400 spaces).

PHASE 1B (2028) TRAFFIC ANALYSIS RESULTS

This section includes a determination of the volume of vehicle trips generated under the Phase 1B 2028 With Action condition, their distribution within the study area roadway network, the analysis of future traffic levels of service, and the identification of significant impacts as per *CEQR Technical Manual* guidelines. Mitigation measures are discussed in Chapter 21.

TRAVEL DEMAND ANALYSIS

The proposed development expected to be built out under Phase 1B includes the Willets West development (as built by Phase 1A) consisting of destination retail with a movie theater and a parking garage (2,900 spaces), and a substantial amount of the total proposed development in the Special Willets Point District. This includes residential, retail, office, hotel, and community facility uses which would replace the interim surface parking/recreational space developed under the Phase 1A program (parking would be relocated to the lot south of Roosevelt Avenue - the "South Lot"). This program is detailed in **Table 14-42**.

The volume of person trips and vehicle trips expected to be generated under Phase 1B of the proposed project would be substantial. **Table 14-43** presents the person trips generated by the proposed project, and shows that Phases 1A and 1B together would generate an estimated 9,812, 23,284, 20,826, and 25,024 person trips during the weekday AM, midday, PM, and Saturday midday (non-game days) peak hours, respectively. On game days, the proposed project would generate an estimated 16,673 person trips during the weekday PM pre-game peak hour and 20,222 and 18,239 person trips in the Saturday pre-game and post-game hours, respectively.

Table 14-44 presents the vehicle trip estimates for the proposed project. The project would generate a total of 2,649, 5,152, 5,420, and 5,855 vehicle (auto, taxi, and delivery) trips during the weekday AM, midday, PM, and Saturday midday (non-game day) peak hours, respectively. On game days, the project would generate an estimated 4,194 vehicle trips during the weekday PM pre-game peak hour and 4,576 and 4,037 vehicle trips in the Saturday pre-game and post-game hours, respectively. The proposed project's taxi trips were adjusted based on the assumption that 25 percent of the arriving taxis would depart with a fare, per *CEQR Technical Manual* guidelines for this area.

Table 14-42
Phase 1B (2028) Buildout Development Program for Analysis

Use	Size
Willets West [1]	
Destination Retail	915,000 SF
Movie Theater	4,000 Seats (80,000 SF) [2]
Special Willets Point District	
Residential	2,490 DU
Destination Retail	588,300 SF
Local Retail	316,700 SF
Office	500,000 SF
Hotel	490 Rooms
Community Facility	25,000 SF
Public School (K-8)	623 Seats
Total	
Residential	**2,490 DU**
Destination Retail	**1,503,300 SF**
Movie Theater	**4,000 Seats**
Local Retail	**316,700 SF**
Office	**500,000 SF**
Hotel	**490 Rooms**
Community Facility	**25,000 SF**
Public School (K-8)	**623 Seats**

Notes:
(1) Willets West would contain approximately 1.4 million sf of development, including 400,000 sf of non-leasable common area. This ancillary space is not considered for trip generation purposes.
(2) *Willets Point Development Plan FGEIS* (2008) assumption of 20 sf per seat.
SF = square feet
DU = dwelling unit

TRAFFIC VOLUMES AND LEVELS OF SERVICE

Vehicle trips generated under Phase 1B buildout conditions were assigned through the study area based on the trip assignments discussed earlier, and produced specific roadway-by-roadway and intersection-by-intersection traffic volume projections within the study area. An overview of this is provided below, and specific intersection-by-intersection generated volume projections are provided in detail in the technical appendices at the end of this chapter.

In 2028, generated traffic volume increments would make up approximately 10 percent of the overall traffic volumes in the AM peak hour, 20 percent in the midday peak hour, 18 percent in the PM peak hour, and 20 percent in the Saturday midday peak hour, without a Mets game, when comparing these volume increments to overall Phase 1B With Action traffic volumes entering and exiting the traffic study area's local street network. For peak hours with a Mets game, the proposed project's traffic increments would make up about 13 percent and 15 percent of the overall traffic volumes during the weekday PM and Saturday midday pre-game peak hours, and about 14 percent during the Saturday PM post-game peak hour.

Table 14-43
Phase 1B (2028) Program
Person Trips by Mode

Use	Auto		Taxi		Subway		Bus		Walk Only		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
WEEKDAY NON-GAME AM PEAK HOUR													
Residential	105	418	4	16	209	837	40	161	44	177	402	1,609	2,011
Office	530	21	10	0	166	7	145	6	188	7	1,039	41	1,080
Destination Retail	1,269	811	64	41	322	207	388	248	108	68	2,151	1,375	3,526
Local Retail	110	110	0	0	37	37	73	73	510	510	730	730	1,460
Movie Theater	69	4	9	0	22	1	10	1	14	1	124	7	131
Hotel	106	152	23	33	8	11	8	11	6	10	151	217	368
Community Facility	8	1	0	0	15	1	3	0	32	2	58	4	62
School	110	84	0	0	110	84	56	56	337	337	613	561	1,174
Total	**2,307**	**1,601**	**110**	**90**	**889**	**1,185**	**723**	**556**	**1,239**	**1,112**	**5,268**	**4,544**	**9,812**
WEEKDAY NON-GAME MIDDAY PEAK HOUR													
Residential	133	128	5	5	267	256	51	49	57	55	513	493	1,006
Office	165	179	3	4	52	56	45	49	383	414	648	702	1,350
Destination Retail	3,433	2,809	174	143	873	714	1,048	857	291	238	5,819	4,761	10,580
Local Retail	694	694	0	0	231	231	463	463	3,238	3,238	4,626	4,626	9,252
Movie Theater	136	83	17	10	44	27	19	12	27	17	243	149	392
Hotel	307	144	66	31	22	10	22	10	21	11	438	206	644
Community Facility	4	4	0	0	7	9	1	2	15	18	27	33	60
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**4,872**	**4,041**	**265**	**193**	**1,496**	**1,303**	**1,649**	**1,442**	**4,032**	**3,991**	**12,314**	**10,970**	**23,284**
WEEKDAY NON-GAME PM PEAK HOUR													
Residential	374	201	14	8	748	402	144	77	158	86	1,438	774	2,212
Office	32	610	1	12	10	192	9	168	11	215	63	1,197	1,260
Destination Retail	2,934	3,308	149	168	746	841	895	1,009	249	281	4,973	5,607	10,580
Local Retail	365	365	0	0	122	122	244	244	1,704	1,704	2,435	2,435	4,870
Movie Theater	315	269	39	34	101	86	45	38	63	53	563	480	1,043
Hotel	247	172	53	37	18	12	18	12	17	12	353	245	598
Community Facility	4	5	0	0	8	11	2	2	16	23	30	41	71
School	14	17	0	0	14	17	9	9	56	56	93	99	192
Total	**4,285**	**4,947**	**256**	**259**	**1,767**	**1,683**	**1,366**	**1,559**	**2,274**	**2,430**	**9,948**	**10,878**	**20,826**
SATURDAY NON-GAME MIDDAY PEAK HOUR													
Residential	371	279	11	8	349	263	33	25	326	247	1,090	822	1,912
Office	101	68	2	1	32	21	28	19	36	24	199	133	332
Destination Retail	4,602	4,422	390	375	1,014	974	1,405	1,349	390	375	7,801	7,495	15,296
Local Retail	470	385	0	0	157	128	314	257	2,194	1,795	3,135	2,565	5,700
Movie Theater	434	266	54	33	140	86	62	38	85	52	775	475	1,250
Hotel	162	127	35	27	12	9	12	9	11	10	232	182	414
Community Facility	8	8	0	0	15	16	3	3	33	34	59	61	120
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**3,929**	**3,681**	**240**	**218**	**1,569**	**1,208**	**1,211**	**1,140**	**1,777**	**1,700**	**8,726**	**7,947**	**16,673**
WEEKDAY EVENING PRE-GAME PEAK HOUR													
Residential	304	130	12	5	607	261	117	50	128	55	1,168	501	1,669
Office	8	33	0	1	3	10	2	9	3	12	16	65	81
Destination Retail	2,705	2,705	138	138	688	688	825	825	229	229	4,585	4,585	9,170
Local Retail	278	278	0	0	93	93	185	185	1,294	1,294	1,850	1,850	3,700
Movie Theater	503	446	63	56	162	143	72	64	98	88	898	797	1,695
Hotel	127	85	27	18	9	6	9	6	10	7	182	122	304
Community Facility	4	4	0	0	7	7	1	1	15	15	27	27	54
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**3,929**	**3,681**	**240**	**218**	**1,569**	**1,208**	**1,211**	**1,140**	**1,777**	**1,700**	**8,726**	**7,947**	**16,673**
SATURDAY PRE-GAME PEAK HOUR													
Residential	285	285	8	8	268	268	25	25	251	251	837	837	1,674
Office	22	127	0	2	7	40	6	35	9	45	44	249	293
Destination Retail	3,517	3,046	298	258	775	671	1,073	930	299	257	5,962	5,162	11,124
Local Retail	447	366	0	0	149	122	298	244	2,085	1,705	2,979	2,437	5,416
Movie Theater	434	266	54	33	140	86	62	38	85	52	775	475	1,250
Hotel	135	106	29	23	10	8	10	8	9	7	193	152	345
Community Facility	8	8	0	0	15	16	3	3	33	34	59	61	120
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**4,848**	**4,204**	**389**	**324**	**1,364**	**1,211**	**1,477**	**1,283**	**2,771**	**2,351**	**10,849**	**9,373**	**20,222**
SATURDAY POST-GAME PEAK HOUR													
Residential	293	293	9	9	276	276	26	26	257	257	861	861	1,722
Office	90	60	2	1	28	19	25	16	31	21	176	117	293
Destination Retail	2,338	2,584	199	219	516	570	713	789	197	218	3,963	4,380	8,343
Local Retail	366	447	0	0	122	149	244	298	1,705	2,085	2,437	2,979	5,416
Movie Theater	426	694	53	87	137	223	61	99	83	137	760	1,240	2,000
Hotel	135	106	29	23	10	8	10	8	9	7	193	152	345
Community Facility	8	8	0	0	15	16	3	3	32	35	58	62	120
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**3,656**	**4,192**	**292**	**339**	**1,104**	**1,261**	**1,082**	**1,239**	**2,314**	**2,760**	**8,448**	**9,791**	**18,239**

Table 14-44
Phase 1B (2028) Program
Vehicle Trips by Type

Use	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
WEEKDAY NON-GAME AM PEAK HOUR									
Residential	76	301			9	9	85	310	395
Office	465	18			8	8	473	26	499
Destination Retail	619	396			21	21	640	417	1,057
Local Retail	55	55			4	4	59	59	118
Movie Theater	27	2			5	5	32	7	39
Hotel	66	95			7	7	73	102	175
Community Facility	5	1			0	0	5	1	6
School	87	65			1	1	88	66	154
Total	**1,400**	**933**	**103**	**103**	**55**	**55**	**1,558**	**1,091**	**2,649**
WEEKDAY NON-GAME MIDDAY PEAK HOUR									
Residential	96	92			7	7	103	99	202
Office	145	157			9	9	154	166	320
Destination Retail	1,675	1,370			29	29	1,704	1,399	3,103
Local Retail	347	347			6	6	353	353	706
Movie Theater	54	33			4	4	58	37	95
Hotel	192	90			5	5	197	95	292
Community Facility	3	3			1	1	4	4	8
School	0	0			1	1	1	1	2
Total	**2,512**	**2,092**	**212**	**212**	**62**	**62**	**2,786**	**2,366**	**5,152**
WEEKDAY NON-GAME PM PEAK HOUR									
Residential	269	145			1	1	270	146	416
Office	28	535			2	2	30	537	567
Destination Retail	1,431	1,613			5	5	1,436	1,618	3,054
Local Retail	183	183			1	1	184	184	368
Movie Theater	125	107			0	0	125	107	232
Hotel	154	108			0	0	154	108	262
Community Facility	3	3			0	0	3	3	6
School	11	14			1	1	12	15	27
Total	**2,204**	**2,708**	**244**	**244**	**10**	**10**	**2,458**	**2,962**	**5,420**
SATURDAY NON-GAME MIDDAY PEAK HOUR									
Residential	267	201			2	2	269	203	472
Office	89	60			0	0	89	60	149
Destination Retail	1,848	1,776			3	3	1,851	1,779	3,630
Local Retail	235	193			1	1	236	194	430
Movie Theater	172	106			0	0	172	106	278
Hotel	101	79			2	2	103	81	184
Community Facility	5	5			0	0	5	5	10
School	0	0			0	0	0	0	0
Total	**2,717**	**2,420**	**351**	**351**	**8**	**8**	**3,076**	**2,779**	**5,855**
WEEKDAY EVENING PRE-GAME PEAK HOUR									
Residential	219	94			1	1	220	95	315
Office	7	29			2	2	9	31	40
Destination Retail	1,319	1,319			3	3	1,322	1,322	2,644
Local Retail	139	139			1	1	140	140	280
Movie Theater	200	177			0	0	200	177	377
Hotel	79	53			0	0	79	53	132
Community Facility	3	3			0	0	3	3	6
School	0	0			0	0	0	0	0
Total	**1,966**	**1,814**	**200**	**200**	**7**	**7**	**2,173**	**2,021**	**4,194**
SATURDAY PRE-GAME PEAK HOUR									
Residential	205	205			2	2	207	207	414
Office	19	111			0	0	19	111	130
Destination Retail	1,413	1,224			3	3	1,416	1,227	2,643
Local Retail	224	183			1	1	225	184	409
Movie Theater	172	106			0	0	172	106	278
Hotel	84	66			2	2	86	68	154
Community Facility	5	5			0	0	5	5	10
School	0	0			0	0	0	0	0
Total	**2,122**	**1,900**	**269**	**269**	**8**	**8**	**2,399**	**2,177**	**4,576**
SATURDAY POST-GAME PEAK HOUR									
Residential	211	211			0	0	211	211	422
Office	79	53			0	0	79	53	132
Destination Retail	938	1,038			0	0	938	1,038	1,976
Local Retail	183	224			0	0	183	224	407
Movie Theater	169	275			0	0	169	275	444
Hotel	84	66			0	0	84	66	150
Community Facility	5	5			0	0	5	5	10
School	0	0			0	0	0	0	0
Total	**1,669**	**1,872**	**248**	**248**	**0**	**0**	**1,917**	**2,120**	**4,037**

Northern Boulevard volumes can be expected to increase by about 50 to 200 vph per direction during the peak analysis hours through Downtown Flushing between Parsons Boulevard and College Point Boulevard. Adjacent to the project site, Northern Boulevard volumes can be expected to increase by approximately 20 to 225 vph in the eastbound direction and 50 to 875 vph in the westbound direction during the peak analysis hours, with the increase in traffic along this section of the roadway primarily due to traffic from the ramp from the southbound Whitestone Expressway onto westbound Northern Boulevard. Northern Boulevard volumes in the vicinity of 108th and 114th Street can be expected to increase by about 80 to 235 vph per direction during the peak analysis hours.

Roosevelt Avenue volumes can be expected to increase by about 25 to 90 vph per direction during the non-game and game peak hours through Downtown Flushing between Parsons Boulevard and College Point Boulevard. Adjacent to the project site, Roosevelt Avenue volumes can be expected to increase by approximately 75 to 330 vph per direction during the peak hours without a Mets game and by about 115 to 275 vph per direction during the peak hours with a Mets game. Roosevelt Avenue volumes in the vicinity of 108th, 111th, and 114th Streets can be expected to increase by about 45 to 130 vph per direction during the peak analysis hours.

Sanford Avenue volumes through Downtown Flushing between Parsons Boulevard and College Point Boulevard can be expected to increase by up to 15 vph in the eastbound direction and 15 to 70 vph in the westbound direction during the peak analysis hours.

Astoria Boulevard volumes in the vicinity of 108th and 114th Streets can be expected to increase by about 45 to 160 vph per direction during the peak analysis hours.

Volumes on 34th Avenue to/from the District at the intersection with 126th Street are expected to increase by 150 to 350 vph during all seven peak hours, and volumes along West Park Loop/Stadium Road at the intersection with 126th Street can be expected to increase by approximately 150 to 635 vph per direction during the peak analysis hours.

Volumes along 126th Street in the vicinity of 34th Avenue can be expected to increase by approximately 255 to 410 vph per direction during non-game peak hours, and 170 to 635 vph during game day peak hours. In the vicinity of Roosevelt Avenue, 126th Street volumes can be expected to increase by about 100 to 300 vph per direction during the peak analysis hours.

College Point Boulevard volumes can be expected to increase by about 10 to 110 vph per direction during the peak analysis hours.

Volumes along 114th Street in the vicinity of Roosevelt Avenue can be expected to increase by approximately 50 to 280 vph in the northbound direction and 15 to 40 vph in the southbound direction during the peak analysis hours. Projected volume increments on the other north-south streets, including 108th Street, Main Street, Union Street, and Parsons Boulevard can be expected to 60 vph per direction or less during the peak analysis hours.

The remainder of this section provides an overview of significant traffic impacts that would be generated under 2028 With Action conditions. Detailed volume-to-capacity (v/c) ratios, average vehicle delay, and levels of service movement-by-movement at each intersection under the 2028 With Action conditions are provided at the end of this chapter. Project-generated traffic volume increment maps and total With Action volume maps are provided in **Appendix C**.

Levels of service for 2028 With Action conditions were determined for 29 of the 31 intersections (both signalized and unsignalized) analyzed under the No Action condition. Two unsignalized intersections, Willets Point Boulevard at 126th Street and Boat Basin Road at Stadium Road,

analyzed under the No Action condition, would be eliminated due to street demapping and intersection improvements, and one new signalized intersection—126th Street at New Willets Point Boulevard—would be created as part of the proposed project under Phase 1B. Future traffic levels of service under the With Action condition are shown in **Tables 14-45** through **14-48**.

The addition of the proposed project's generated traffic for Phase 1B to the already poor future baseline (2028 No Action) conditions would cause several already sensitive locations to be significantly impacted. As a result, Phase 1B of the proposed project would have significant traffic impacts at 18 of the 27 signalized intersections analyzed in the weekday AM peak hour, 18 of 27 in the weekday midday peak hour, 19 of 27 in the weekday PM peak hour, and 22 of 27 in the non-game Saturday midday peak hour. During the weekday pre-game peak hour, 20 of 27 signalized intersections analyzed would have significant traffic impacts, during the Saturday pre-game peak hour 18 of 27 signalized intersections analyzed would have significant impacts, and during the Saturday post-game peak hour 18 of 27 signalized intersections analyzed would have significant impacts. Of the three unsignalized intersections analyzed, one (World's Fair Marina at Boat Basin Road) would be significantly impacted in each of the peak analysis hours.

The summary overview of the Phase 1B With Action condition without a Mets game indicates that:

- In the weekday AM peak hour, 11 of the 27 analyzed signalized intersections are projected to operate at overall LOS E or F, which is three more than under the No Action condition. Eighteen signalized intersections would be significantly impacted. The number of traffic lane groups that are expected to operate at LOS E or F would increase from 33 to 42.
- In the weekday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from six under the No Action condition to 12 under the With Action condition, and there would be significant impacts at 18 of the 27 signalized intersections. The number of individual lane groups that would operate at LOS E or F would increase from 27 to 47.
- In the weekday PM peak hour, the number of intersections that are projected to operate at overall LOS E or F would increase from 9 to 15 under the With Action condition, with 19 signalized intersections significantly impacted. The number of individual lane groups that would operate at LOS E or F would increase from 35 to 49.
- In the Saturday midday peak hour, the number of signalized intersections projected to operate at LOS E or F would increase from 9 under the No Action condition to 13 under the With Action condition. Twenty-two signalized intersections would be significantly impacted. The number of lane groups at LOS E or F would increase from 37 to 55.
- All three unsignalized intersections would be significantly impacted during at least one peak hour. World's Fair Marina at Boat Basin Road would consistently have a traffic lane group (northbound Boat Basin Road left turn movement) operate at LOS F during the weekday AM, midday, PM, and Saturday midday non-game peak hours and, as a result, would be significantly impacted in all non-game-day peak hours. Also, Stadium Road/West Loop Road at the Grand Central Parkway exit ramp—which would be reconfigured with a new west leg that would serve as an entrance/exit in and out of the proposed Willets West retail development—would have several movements that operate at unacceptable levels of service, two of which (the eastbound left turn movement and right turn movement from the GCP off-ramp) would be significantly impacted during at least one peak hour. At the intersection of Northern Boulevard and Willets Point Boulevard, northbound Willets Point Boulevard would operate at LOS F and be significantly impacted during the weekday midday, PM, and Saturday midday peak hours.

Table 14-45
Overall Intersection Level of Service Summary Comparison
Phase 1B (2028) No Action vs. With Action Conditions—Non-Game Day

	Phase 1B No Action Condition				Phase 1B With Action Condition			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Signalized Intersections	26 Signalized Intersections				27 Signalized Intersections			
Overall Intersection LOS A/B/C	11	15	12	14	10	11	8	6
Overall Intersection LOS D	7	5	5	3	6	4	4	8
Overall Intersection LOS E	8	2	7	6	4	4	3	3
Overall Intersection LOS F	0	4	2	3	7	8	12	10
No. of Locations with Significant Impacts	--	--	--	--	18	18	19	22

Notes:
During the non-game peak hours in the Phase 1B With Action condition, one of the three unsignalized intersections analyzed would be significantly impacted in the weekday AM peak hour, and all three unsignalized intersections would be impacted during the weekday midday and PM peak hours and during the Saturday midday peak hour.

Table 14-46
Traffic Lane Group Level of Service Summary Comparison
Phase 1B (2028) No Action vs. With Action Conditions—Non-Game Day

	Phase 1B No Action Condition				Phase 1B With Action Condition			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Signalized Movements	26 Signalized Intersections				27 Signalized Intersections			
No. of Lane Groups at LOS A/B/C	58	72	59	71	63	65	51	59
No. of Lane Groups at LOS D	38	31	35	22	32	29	38	26
No. of Lane Groups at LOS E	12	9	11	17	15	14	9	17
No. of Lane Groups at LOS F	21	18	24	20	27	33	40	38

Notes:
During the non-game peak hours in the Phase 1B With Action conditions, one of the ten unsignalized lane groups analyzed would operate at LOS F in the weekday AM peak hour, one lane group would operate at LOS E and four lane groups would operate at LOS F in the weekday midday and PM peak hours, and five lane groups would operate at LOS F during the Saturday midday peak hour. All other unsignalized lane groups would operate at LOS C or better during non-game peak hours.

Table 14-47
Overall Intersection Level of Service Summary Comparison
Phase 1B (2028) No Action vs. With Action Conditions—Game Day

	Phase 1B No Action Condition			Phase 1B With Action Condition		
	Weekday Pre-game	Weekend Pre-game	Weekend Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
Signalized Intersections	26 Signalized Intersections			27 Signalized Intersections		
Overall Intersection LOS A/B/C	11	13	10	8	12	7
Overall Intersection LOS D	7	2	3	5	2	3
Overall Intersection LOS E	5	7	6	3	2	4
Overall Intersection LOS F	3	4	7	11	11	13
No. of Locations with Significant Impacts	--	--	--	20	18	18

Notes:
During the game day peak hours in the Phase 1B With Action condition, two of the three unsignalized intersections analyzed would be significantly impacted in the weekday and Saturday pregame peak hours, and one unsignalized intersection would be impacted during the weekday post-game peak hour.

Table 14-48
Traffic Lane Group Level of Service Summary Comparison
Phase 1B (2028) No Action vs. With Action Conditions—Game Day

	Phase 1B No Action Condition			Phase 1B With Action Condition		
Signalized Movements	Weekday Pre-game	Weekend Pre-game	Weekend Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
	26 Signalized Intersections			27 Signalized Intersections		
No. of Lane Groups at LOS A/B/C	59	68	69	48	60	61
No. of Lane Groups at LOS D	34	27	24	33	27	26
No. of Lane Groups at LOS E	16	7	9	16	10	12
No. of Lane Groups at LOS F	21	28	29	39	39	38

Notes:
During the game day peak hours in the Phase 1B With Action conditions, five of the ten unsignalized lane groups analyzed would operate at LOS F in all three game day peak hours. All other unsignalized lane groups would operate at LOS C or better during game day peak hours.

The summary overview of the Phase 1B With Action condition with a Mets game indicates that:

- In the weekday PM pre-game peak hour, 14 out of 27 signalized intersections would operate at LOS E or F under the With Action condition, which is an increase from eight signalized intersections at LOS E or F under the No Action condition. There would be significant impacts at 20 of the 27 signalized intersections. The number of lane groups that would operate at LOS E or F would increase from 37 to 55.
- During the Saturday midday pre-game peak hour, the number of intersections that are expected to operate at LOS E or F would increase from 11 to 13 under the With Action condition, with 18 signalized intersections significantly impacted. The number of lane groups at LOS E or F would increase from 35 to 49.
- In the Saturday PM post-game peak hour, the number of locations that would operate at LOS E or F would increase from 13 to 17 under the With Action condition. Eighteen signalized intersections would be significantly impacted. The number of lane groups that would operate at LOS E or F would increase from 38 to 50.
- All three unsignalized intersections would be significantly impacted during at least one peak hour. At World's Fair Marina at Boat Basin Road, the northbound Boat Basin Road left turn movement would consistently operate at LOS F during the weekday pre-game and Saturday pre-game and post-game peak hours and would be significantly impacted. Stadium Road/West Loop Road at the Grand Central Parkway exit ramp would have multiple movements operate at unacceptable levels of service and would be significantly impacted during at least one peak hour. At the intersection of Northern Boulevard and Willets Point Boulevard, northbound Willets Point Boulevard would operate at LOS F and be significantly impacted during the Saturday post-game peak hour.

Table 14-49 shows the locations and time periods where significant impacts would occur in the Phase 1B (2028) With Action condition. Mitigation measures for significantly impacted locations are discussed in Chapter 21, "Mitigation."

Table 14-49
Phase 1B (2028) With Action Condition Significant Impact Summary

Intersections	Without a Mets Game				With a Mets Game		
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Pre-game Weekday PM	Pre-game Saturday Midday	Post-game Saturday PM
Astoria Boulevard at 108th Street			x	x	x	x	x
Northern Boulevard at 108th Street	x	x	x	x	x	x	x
Northern Boulevard at 114th Street	x		x	x	x	x	x
Northern Boulevard at 126th Street	x	x	x	x	x	x	x
Northern Boulevard at Prince Street	x	x	x	x	x	x	x
Northern Boulevard at Main Street	x	x	x	x	x	x	x
Northern Boulevard at Union Street	x	x	x	x	x	x	x
Northern Boulevard at Parsons Boulevard	x	x	x	x	x	x	x
34th Avenue at 114th Street		x	x	x	x	x	x
34th Avenue at 126th Street	x	x	x	x	x	x	x
Roosevelt Avenue at 108th Street	x	x	x	x	x	x	x
Roosevelt Avenue at 111th Street		x	x	x	x	x	x
Roosevelt Avenue at 114th Street	x	x	x	x	x	x	x
Roosevelt Avenue at 126th Street	x	x	x	x	x	x	x
Roosevelt Avenue at College Point Boulevard	x	x	x	x	x	x	x
Roosevelt Avenue at Prince Street	x		x				
Roosevelt Avenue at Main Street	x	x	x	x	x	x	x
Roosevelt Avenue at Union Street	x	x	x	x	x	x	x
Roosevelt Avenue at Parsons Boulevard	x			x	x		
Kissena Boulevard at Main Street				x			
Sanford Avenue at College Point Boulevard							
Sanford Avenue at Union Street							
Sanford Avenue at Parsons Boulevard	x	x		x	x		
32nd Avenue at College Point Boulevard							
Northern Boulevard at College Point Boulevard	x	x		x			
Boat Basin Road at Stadium Road		x	x	x	x	x	x
Boat Basin Road at World's Fair Marina	x	x	x	x	x	x	x
Stadium Road at Grand Central Parkway		x	x	x	x	x	x
Willets Point Boulevard at Northern Boulevard		x	x	x			x
New Willets Point Boulevard at 126th Street	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Notes: "x" means the intersection would be significantly impacted. n/a means the intersection is new for With Action conditions.

PHASE 1B (2028) WITH ACTION PARKING

Under the proposed Phase 1B (2028) buildout, a total of 2,700 accessory off-street parking spaces would be provided to accommodate parking demand generated by proposed development within the District. It is also anticipated that on-street parking would be provided on existing and new streets expected to be in place within the District by 2028. As detailed street configurations and curbside parking regulations have not yet been defined, it is expected that some level of on-street parking would be available. The proposed regulations would be designed to satisfy the needs of adjacent land uses; metered parking would likely be installed adjacent to retail uses or other commercial buildings, alternate side regulations would likely be installed near residential uses, and curbside parking restrictions would likely be imposed near the hotel, community facilities, or along primary delivery routes. Specific regulations would be determined at a later date.

As was done in the 2008 FGEIS, project parking for residential use was separated from the other proposed uses. **Table 14-50** shows a peak residential parking demand of 1,320 spaces occurring overnight. Assuming 10 percent of residential trips would park on-street (as was assumed in the 2008 FGEIS), 1,188 of the parking spaces proposed within the District would be needed to satisfy the residential parking demand. Residential parking demand is typically lowest during the daytime hours when office, community uses, and primary school parking demands are at a maximum. Therefore, shared parking strategies would be implemented and, where possible, office, community, and primary school parking demands would use parking spaces vacated by residents during the daytime hours. This would maximize usage of vacant residential parking spaces during daytime hours and minimize the need for additional dedicated parking spaces for office, community, and primary school uses.

The remaining 1,512 spaces would be available for the other uses—destination retail, local retail, and hotel. Based on the total accumulation for these uses shown in **Tables 14-50** and **14-51**, there would be enough parking to satisfy demand for these uses on a weekday, but there would be an additional need for up to approximately 45 spaces on Saturday during the midday hours 2 to 4 PM. However, it is expected that this could be accommodated by available on-street spaces or by vacant residential parking spaces within the District should such shared parking arrangements be made. Alternatively, this could be satisfied by available spaces in off-street facilities within an approximate quarter-mile radius of the District.

Parking demand and supply in Willets West would be the same as in Phase 1A; as detailed in the Phase 1A (2018) Parking section (in **Table 14-39**), the 2,500 parking spaces provided would accommodate weekday and Saturday peak parking demands.

As in Phase 1A, all Mets parking displaced by the proposed project in Phase 1B (2028), would be replaced. There would continue to be 400 spaces in Willets West; however, the 2,750 interim spaces provided in the District under Phase 1A would be relocated to Lot D/South Lot in addition to the 950 spaces already provided there. In total, including the 1,795 existing spaces, there would be 5,495 parking spaces in Lot D/South Lot under Phase 1B.

PHASE 2 (2032) TRAFFIC ANALYSIS RESULTS

This section includes a determination of the volume of vehicle trips generated under the Phase 2 2032 With Action condition, their distribution within the study area roadway network, the analysis of future traffic levels of service, and the identification of significant impacts as per *CEQR Technical Manual* guidelines. Mitigation measures are discussed in Chapter 21.

TRAVEL DEMAND ANALYSIS

The proposed project is expected to be built out in its entirety under Phase 2. This cumulative development program includes the full Willets West development which would be built under Phase 1A in 2018, development proposed within the Special Willets Point District that would be developed within Phases 1A, 1B, and 2, and the proposed Lot B development (which assumes the same office/retail projected in the 2008 FGEIS). This program is detailed in **Table 14-52**.

Table 14-50
Special Willets Point District Phase 1B (2028)
Weekday Parking Accumulation

Time	Residential			Office			Destination Retail			Local Retail			
Begin	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	
Midnight	28	28	1,320	0	0	0	0	0	0	0	0	0	
1 AM	13	13	1,320	0	0	0	0	0	0	0	0	0	
2 AM	8	8	1,320	0	0	0	0	0	0	0	0	0	
3 AM	6	6	1,320	0	0	0	0	0	0	0	0	0	
4 AM	6	6	1,320	0	0	0	0	0	0	0	0	0	
5 AM	6	6	1,320	0	0	0	0	0	0	0	0	0	
6 AM	11	11	1,320	0	0	0	0	0	0	0	0	0	
7 AM	15	132	1,203	41	3	38	40	40	0	14	1	13	
8 AM	76	301	978	465	18	485	242	155	87	55	55	13	
9 AM	50	199	829	395	68	812	188	77	198	24	16	21	
10 AM	47	141	735	85	68	829	252	118	332	63	43	41	
11 AM	66	99	702	34	97	766	380	282	430	91	95	37	
Noon	96	92	706	145	157	754	655	536	549	347	347	37	
1 PM	87	87	706	172	104	822	1,016	996	569	274	285	26	
2 PM	79	79	706	89	56	855	648	716	501	183	190	19	
3 PM	104	100	710	63	77	841	604	535	570	156	162	13	
4 PM	162	108	764	48	295	594	549	602	517	157	164	6	
5 PM	269	145	888	28	535	87	560	631	446	183	183	6	
6 PM	249	105	1,032	14	79	22	576	669	353	141	147	0	
7 PM	219	94	1,157	7	29	0	516	516	353	139	139	0	
8 PM	95	41	1,211	0	0	0	280	342	291	0	0	0	
9 PM	76	33	1,254	0	0	0	113	404	0	0	0	0	
10 PM	63	27	1,290	0	0	0	0	0	0	0	0	0	
11 PM	53	23	1,320	0	0	0	0	0	0	0	0	0	
Total	1,884	1,884		1,586	1,586		6,619	6,619		1,827	1,827		

Time	Hotel			Community Facility			School – Students			School – Staff			Total
Begin	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	Acc.
Midnight	9	2	214	0	0	0	0	0	0	0	0	0	**1,534**
1 AM	9	1	222	0	0	0	0	0	0	0	0	0	**1,542**
2 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
3 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
4 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
5 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
6 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
7 AM	6	8	220	3	0	3	4	4	0	2	0	2	**1,479**
8 AM	66	95	191	5	1	7	65	65	0	22	0	24	**1,785**
9 AM	32	59	164	4	2	9	4	4	0	0	0	24	**2,057**
10 AM	35	35	164	3	2	10	0	0	0	0	0	24	**2,135**
11 AM	45	45	164	2	3	9	0	0	0	0	0	24	**2,132**
Noon	192	90	266	3	3	9	0	0	0	0	0	24	**2,345**
1 PM	33	76	223	2	3	8	0	0	0	0	0	24	**2,378**
2 PM	26	60	189	2	2	8	0	0	0	0	0	24	**2,302**
3 PM	26	60	155	2	3	7	54	54	0	0	19	5	**2,301**
4 PM	30	71	114	3	4	6	8	8	0	0	2	3	**2,004**
5 PM	154	108	160	3	3	6	11	11	0	0	3	0	**1,593**
6 PM	96	144	112	3	4	5	0	0	0	0	0	0	**1,524**
7 PM	79	53	138	3	3	5	0	0	0	0	0	0	**1,653**
8 PM	72	59	151	1	4	2	0	0	0	0	0	0	**1,655**
9 PM	46	25	172	0	2	0	0	0	0	0	0	0	**1,426**
10 PM	35	13	194	0	0	0	0	0	0	0	0	0	**1,484**
11 PM	16	3	207	0	0	0	0	0	0	0	0	0	**1,527**
Total	1,007	1,007		39	39		0	0	0	24	24		

Note: Acc. = Accumulation
Source: Based on travel demand estimates

Table 14-51
Special Willets Point District Phase 1B (2028)
Saturday Parking Accumulation

Time	Residential			Office			Destination Retail			Local Retail			
Begin	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	
Midnight	15	15	1,320	0	0	0	0	0	0	0	0	0	
1 AM	15	15	1,320	0	0	0	0	0	0	0	0	0	
2 AM	0	0	1,320	0	0	0	0	0	0	0	0	0	
3 AM	0	0	1,320	0	0	0	0	0	0	0	0	0	
4 AM	0	0	1,320	0	0	0	0	0	0	0	0	0	
5 AM	29	29	1,320	0	0	0	0	0	0	0	0	0	
6 AM	15	44	1,291	0	0	0	0	0	0	0	0	0	
7 AM	47	140	1,198	7	2	5	64	0	64	0	0	0	
8 AM	58	175	1,081	17	9	13	122	6	180	19	2	17	
9 AM	73	219	935	29	19	23	116	13	283	38	4	51	
10 AM	88	263	760	39	26	36	206	52	437	171	43	179	
11 AM	95	285	570	65	44	57	812	348	901	203	203	179	
Noon	102	307	365	65	44	78	567	491	977	223	183	219	
1 PM	267	201	431	89	60	107	723	695	1,005	235	193	261	
2 PM	248	173	506	49	60	96	691	637	1,059	223	183	301	
3 PM	249	166	589	38	71	63	670	619	1,110	223	183	341	
4 PM	246	164	671	22	52	33	372	402	1,080	173	212	302	
5 PM	246	164	753	9	26	16	580	580	1,080	171	171	302	
6 PM	266	143	876	4	16	4	522	638	964	154	188	268	
7 PM	287	123	1,040	2	6	0	406	753	617	144	175	237	
8 PM	246	105	1,181	0	0	0	361	669	309	107	191	153	
9 PM	216	77	1,320	0	0	0	232	541	0	51	204	0	
10 PM	88	88	1,320	0	0	0	0	0	0	0	0	0	
11 PM	29	29	1,320	0	0	0	0	0	0	0	0	0	
Total	2,925	2,925		435	435		6,444	6,444		2,135	2,135		

Time	Hotel			Community Facility			School – Students			School – Staff			Total
Begin	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	Acc.
Midnight	9	2	214	0	0	0	0	0	0	0	0	0	**1,534**
1 AM	9	1	222	0	0	0	0	0	0	0	0	0	**1,542**
2 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
3 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
4 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
5 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,542**
6 AM	0	0	222	0	0	0	0	0	0	0	0	0	**1,513**
7 AM	17	24	215	0	0	0	0	0	0	0	0	0	**1,482**
8 AM	55	78	192	0	0	0	0	0	0	0	0	0	**1,483**
9 AM	55	78	169	3	1	2	0	0	0	0	0	0	**1,463**
10 AM	72	69	172	3	1	4	0	0	0	0	0	0	**1,588**
11 AM	72	69	175	2	2	4	0	0	0	0	0	0	**1,886**
Noon	72	69	178	5	5	4	0	0	0	0	0	0	**1,821**
1 PM	101	79	200	5	5	4	0	0	0	0	0	0	**2,008**
2 PM	23	57	166	5	5	4	0	0	0	0	0	0	**2,132**
3 PM	41	100	107	5	5	4	0	0	0	0	0	0	**2,214**
4 PM	76	76	107	5	5	4	0	0	0	0	0	0	**2,197**
5 PM	78	78	107	2	3	3	0	0	0	0	0	0	**2,261**
6 PM	101	101	107	2	3	2	0	0	0	0	0	0	**2,221**
7 PM	80	53	134	2	4	0	0	0	0	0	0	0	**2,028**
8 PM	60	40	154	0	0	0	0	0	0	0	0	0	**1,797**
9 PM	42	18	178	0	0	0	0	0	0	0	0	0	**1,498**
10 PM	29	10	197	0	0	0	0	0	0	0	0	0	**1,517**
11 PM	15	5	207	0	0	0	0	0	0	0	0	0	**1,527**
Total	1,007	1,007		39	39		0	0		0	0		

Note: Acc. = Accumulation
Source: Based on travel demand estimates

Table 14-52
Phase 2 (2032) Buildout Development Program for Analysis

Use	Size
Willets West [1]	
Destination Retail	915,000 SF
Movie Theater	4,000 Seats (80,000 SF) [2]
Special Willets Point District	
Residential	5,850 DU
Destination Retail	657,000 SF
Local Retail	593,000 SF
Office	500,000 SF
Convention Center	400,000 SF
Hotel	700 Rooms
Community Facility	150,000 SF
Public School (K-8)	1,463 Seats
Lot B Development	
Destination Retail	184,500 SF
Office	280,000 SF
Total	
Residential	**5,850 DU**
Destination Retail	**1,756,500 SF**
Movie Theater	**4,000 Seats**
Local Retail	**593,000 SF**
Office	**780,000 SF**
Hotel	**700 Rooms**
Community Facility	**150,000 SF**
Public School (K-8)	**1,463 Seats**

Notes:
(1) Willets West would contain approximately 1.4 million sf of development, including 400,000 sf of non-leasable common area. This ancillary space is not considered for trip generation purposes.
(2 *Willets Point Development Plan FGEIS* (2008) assumption of 20 sf per seat.
SF = square feet
DU = dwelling unit

The volume of person trips and vehicle trips expected to be generated under Phase 2 (full buildout) of the proposed project would be substantial. **Table 14-53** presents the person trips generated by the proposed project, and shows that it would generate an estimated 18,060, 37,141, 33,764, and 38,780 person trips during the weekday AM, midday, PM, and Saturday midday (non-game day) peak hours, respectively. On game days, the fully built-out proposed project would generate an estimated 26,312 person trips during the weekday PM pre-game peak hour and 32,206 and 30,152 person trips in the Saturday pre-game and post-game hours, respectively.

Table 14-54 presents the vehicle trip estimates for the proposed project. The project would generate a total of 4,533, 7,551, 8,361, and 8,740 vehicle (auto, taxi, and delivery) trips during the weekday AM, midday, PM, and Saturday midday (non-game days) peak hours, respectively. On game days, the project would generate an estimated 6,339 vehicle trips during the weekday PM pre-game peak hour and 6,981 and 6,445 vehicle trips in the Saturday pre-game and post-game hours, respectively. The proposed project's taxi trips were adjusted based on the assumption that 25 percent of the arriving taxis would depart with a fare, per *CEQR Technical Manual* guidelines for this area.

Table 14-53
Phase 2 (2032) Program
Person Trips by Type

Use	Auto		Taxi		Subway		Bus		Walk Only		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
WEEKDAY NON-GAME AM PEAK HOUR													
Residential	246	983	9	38	491	1,965	95	378	104	415	945	3,779	4,724
Office	827	33	16	0	259	11	226	9	293	11	1,621	64	1,685
Destination Retail	1,483	949	75	48	377	241	453	289	125	80	2,513	1,607	4,120
Local Retail	205	205	0	0	68	68	137	137	958	958	1,368	1,368	2,736
Movie Theater	69	4	9	0	22	1	10	1	14	1	124	7	131
Hotel	151	218	32	47	11	16	11	16	11	14	216	311	527
Convention/Expo	691	0	81	0	122	0	20	0	102	0	1,016	0	1,016
Community Facility	45	3	2	0	90	6	17	1	191	12	345	22	367
School	258	198	0	0	258	198	132	132	789	789	1,437	1,317	2,754
Total	**3,975**	**2,593**	**224**	**133**	**1,698**	**2,506**	**1,101**	**963**	**2,587**	**2,280**	**9,585**	**8,475**	**18,060**
WEEKDAY NON-GAME MIDDAY PEAK HOUR													
Residential	313	301	12	12	627	602	121	116	132	126	1,205	1,157	2,362
Office	258	279	5	6	81	87	70	77	597	646	1,011	1,095	2,106
Destination Retail	4,011	3,283	203	167	1,019	835	1,225	1,002	341	276	6,799	5,563	12,362
Local Retail	1,299	1,299	0	0	433	433	866	866	6,064	6,064	8,662	8,662	17,324
Movie Theater	136	83	17	10	44	27	19	12	27	17	243	149	392
Hotel	438	207	94	44	31	15	31	15	32	14	626	295	921
Convention/Expo	651	241	77	28	115	42	19	7	96	36	958	354	1,312
Community Facility	21	26	1	1	42	52	8	10	91	110	163	199	362
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**7,127**	**5,719**	**409**	**268**	**2,392**	**2,093**	**2,359**	**2,105**	**7,380**	**7,289**	**19,667**	**17,474**	**37,141**

Table 14-53 (cont'd)
Phase 2 (2032) Program
Person Trips by Type

Use	Auto		Taxi		Subway		Bus		Walk Only		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
WEEKDAY NON-GAME PM PEAK HOUR													
Residential	878	473	34	18	1,757	946	338	182	371	200	3,378	1,819	5,197
Office	50	952	1	19	16	299	14	262	17	335	98	1,867	1,965
Destination Retail	3,428	3,866	174	197	872	983	1,046	1,179	290	327	5,810	6,552	12,362
Local Retail	684	684	0	0	228	228	456	456	3,191	3,191	4,559	4,559	9,118
Movie Theater	315	269	39	34	101	86	45	38	63	53	563	480	1,043
Hotel	354	246	76	53	25	18	25	18	25	16	505	351	856
Convention/Expo	48	1,548	6	182	8	273	1	46	7	228	70	2,277	2,347
Community Facility	23	32	1	1	46	64	9	12	99	137	178	246	424
School	33	40	0	0	33	40	22	22	131	131	219	233	452
Total	**5,813**	**8,110**	**331**	**504**	**3,086**	**2,937**	**1,956**	**2,215**	**4,194**	**4,618**	**15,380**	**18,384**	**33,764**
SATURDAY NON-GAME MIDDAY PEAK HOUR													
Residential	871	657	26	19	820	618	77	58	767	580	2,561	1,932	4,493
Office	158	106	3	2	50	33	44	29	55	37	310	207	517
Destination Retail	5,377	5,168	455	438	1,184	1,139	1,641	1,577	457	436	9,114	8,758	17,872
Local Retail	881	720	0	0	294	240	587	480	4,109	3,363	5,871	4,803	10,674
Movie Theater	434	266	54	33	140	86	62	38	85	52	775	475	1,250
Hotel	232	183	50	39	17	13	17	13	16	13	332	261	593
Convention/Expo	932	932	80	80	160	160	27	27	132	132	1,331	1,331	2,662
Community Facility	46	48	2	2	92	95	18	18	194	204	352	367	719
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**8,931**	**8,080**	**670**	**613**	**2,757**	**2,384**	**2,473**	**2,240**	**5,815**	**4,817**	**20,646**	**18,134**	**38,780**
WEEKDAY EVENING PRE-GAME PEAK HOUR													
Residential	714	306	27	12	1,427	612	275	118	302	128	2,745	1,176	3,921
Office	13	51	0	1	4	16	3	14	5	19	25	101	126
Destination Retail	3,161	3,161	161	161	804	804	964	964	268	268	5,358	5,358	10,716
Local Retail	520	520	0	0	173	173	347	347	2,425	2,425	3,465	3,465	6,930
Movie Theater	503	446	63	56	162	143	72	64	98	88	898	797	1,695
Hotel	183	122	39	26	13	9	13	9	13	8	261	174	435
Convention/Expo	15	1,456	2	171	3	257	0	43	2	214	22	2,141	2,163
Community Facility	21	21	1	1	42	42	8	8	91	91	163	163	326
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**5,130**	**6,083**	**293**	**428**	**2,628**	**2,056**	**1,682**	**1,567**	**3,204**	**3,241**	**12,937**	**13,375**	**26,312**
SATURDAY PRE-GAME PEAK HOUR													
Residential	668	668	20	20	629	629	59	59	590	590	1,966	1,966	3,932
Office	35	198	0	3	11	62	10	54	13	71	69	388	457
Destination Retail	4,111	3,558	348	302	906	783	1,254	1,086	348	302	6,967	6,031	12,998
Local Retail	837	684	0	0	279	228	558	456	3,903	3,195	5,577	4,563	10,140
Movie Theater	434	266	54	33	140	86	62	38	85	52	775	475	1,250
Hotel	193	152	41	33	14	11	14	11	14	10	276	217	493
Convention/Expo	993	559	85	48	170	96	28	16	143	79	1,419	798	2,217
Community Facility	46	48	2	2	92	95	18	18	194	204	352	367	719
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**7,317**	**6,133**	**550**	**441**	**2,241**	**1,990**	**2,003**	**1,738**	**5,290**	**4,503**	**17,401**	**14,805**	**32,206**
SATURDAY POST-GAME PEAK HOUR													
Residential	687	687	20	20	647	647	61	61	607	607	2,022	2,022	4,044
Office	140	94	3	2	44	30	39	25	48	32	274	183	457
Destination Retail	2,732	3,019	232	256	602	666	833	922	231	255	4,630	5,118	9,748
Local Retail	684	837	0	0	228	279	456	558	3,195	3,903	4,563	5,577	10,140
Movie Theater	426	694	53	87	137	223	61	99	83	137	760	1,240	2,000
Hotel	193	152	41	33	14	11	14	11	14	10	276	217	493
Convention/Expo	732	1,054	63	90	126	181	21	30	104	150	1,046	1,505	2,551
Community Facility	45	49	2	2	90	97	17	19	191	207	345	374	719
School	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**5,639**	**6,586**	**414**	**490**	**1,888**	**2,134**	**1,502**	**1,725**	**4,473**	**5,301**	**13,916**	**16,236**	**30,152**

Table 14-54
Phase 2 (2032) Program
Vehicle Trips by Type

Use	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
WEEKDAY NON-GAME AM PEAK HOUR									
Residential	177	707			21	21	198	728	926
Office	726	29			12	12	738	41	779
Destination Retail	724	463			25	25	749	488	1,237
Local Retail	103	103			8	8	111	111	222
Movie Theater	27	2			5	5	32	7	39
Hotel	94	136			10	10	104	146	250
Convention/Expo	300	0			11	11	311	11	322
Community Facility	30	2			2	2	32	4	36
School	202	152			3	3	205	155	360
Total	**2,383**	**1,594**	**181**	**181**	**97**	**97**	**2,661**	**1,872**	**4,533**
WEEKDAY NON-GAME MIDDAY PEAK HOUR									
Residential	225	217			16	16	241	233	474
Office	227	245			14	14	241	259	500
Destination Retail	1,957	1,601			35	35	1,992	1,636	3,628
Local Retail	650	650			11	11	661	661	1,322
Movie Theater	54	33			4	4	58	37	95
Hotel	274	129			8	8	282	137	419
Convention/Expo	283	105			21	21	304	126	430
Community Facility	14	17			3	3	17	20	37
School	0	0			2	2	2	2	4
Total	**3,684**	**2,997**	**321**	**321**	**114**	**114**	**4,119**	**3,432**	**7,551**
WEEKDAY NON-GAME PM PEAK HOUR									
Residential	632	340			4	4	636	344	980
Office	44	835			3	3	47	838	885
Destination Retail	1,672	1,885			6	6	1,678	1,891	3,569
Local Retail	342	342			2	2	344	344	688
Movie Theater	125	107			0	0	125	107	232
Hotel	221	154			0	0	221	154	375
Convention/Expo	21	673			2	2	23	675	698
Community Facility	15	21			0	0	15	21	36
School	25	31			1	1	26	32	58
Total	**3,097**	**4,388**	**420**	**420**	**18**	**18**	**3,535**	**4,826**	**8,361**
SATURDAY NON-GAME MIDDAY PEAK HOUR									
Residential	627	473			5	5	632	478	1,110
Office	139	93			0	0	139	93	232
Destination Retail	2,160	2,075			3	3	2,163	2,078	4,241
Local Retail	441	360			1	1	442	361	803
Movie Theater	172	106			0	0	172	106	278
Hotel	145	114			3	3	148	117	265
Convention/Expo	358	358			1	1	359	359	718
Community Facility	31	32			0	0	31	32	63
School	0	0			0	0	0	0	0
Total	**4,073**	**3,611**	**515**	**515**	**13**	**13**	**4,601**	**4,139**	**8,740**
WEEKDAY EVENING PRE-GAME PEAK HOUR									
Residential	514	220			4	4	518	224	742
Office	11	45			3	3	14	48	62
Destination Retail	1,542	1,542			3	3	1,545	1,545	3,090
Local Retail	260	260			1	1	261	261	522
Movie Theater	200	177			0	0	200	177	377
Hotel	114	76			0	0	114	76	190
Convention/Expo	7	633			2	2	9	635	644
Community Facility	14	14			0	0	14	14	28
School	0	0			0	0	0	0	0
Total	**2,662**	**2,967**	**342**	**342**	**13**	**13**	**3,017**	**3,322**	**6,339**

Table 14-54 (cont'd)
Phase 2 (2032) Program
Vehicle Trips by Type

Use	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
SATURDAY PRE-GAME PEAK HOUR									
Residential	481	481			5	5	486	486	972
Office	30	173			0	0	30	173	203
Destination Retail	1,651	1,430			3	3	1,654	1,433	3,087
Local Retail	419	342			1	1	420	343	763
Movie Theater	172	106			0	0	172	106	278
Hotel	121	95			3	3	124	98	222
Convention/Expo	382	215			1	1	383	216	599
Community Facility	31	32			0	0	31	32	63
School	0	0			0	0	0	0	0
Total	**3,287**	**2,874**	**397**	**397**	**13**	**13**	**3,697**	**3,284**	**6,981**
SATURDAY POST-GAME PEAK HOUR									
Residential	494	494			1	1	495	495	990
Office	123	83			0	0	123	83	206
Destination Retail	1,096	1,212			0	0	1,096	1,212	2,308
Local Retail	342	419			0	0	342	419	761
Movie Theater	169	275			0	0	169	275	444
Hotel	121	95			0	0	121	95	216
Convention/Expo	282	405			0	0	282	405	687
Community Facility	30	33			0	0	30	33	63
School	0	0			0	0	0	0	0
Total	**2,657**	**3,016**	**385**	**385**	**1**	**1**	**3,043**	**3,402**	**6,445**

TRAFFIC VOLUMES AND LEVELS OF SERVICE

Vehicle trips generated under full buildout conditions were assigned through the study area based on the trip assignments discussed earlier, and produced specific roadway-by-roadway and intersection-by-intersection traffic volume projections within the study area. An overview of this is provided below, and specific intersection-by-intersection generated volume projections are provided in detail in the technical appendices at the end of this chapter.

In 2032, project-generated traffic volume increments would make up approximately 17 percent of the overall traffic volumes in the AM peak hour, 29 percent in the midday peak hour, 26 percent in the PM peak hour, and 29 percent in the Saturday midday peak hour, without a Mets game, when comparing these volume increments to overall Phase 2 With Action traffic volumes entering and exiting the traffic study area's local street network. For peak hours with a Mets game, the proposed project's traffic increments would make up about 19 percent of the overall traffic volumes during the weekday PM pre-game peak hour, 22 percent during the Saturday midday pre-game peak hour, and about 21 percent during the Saturday PM post-game peak hour.

Northern Boulevard volumes can be expected to increase by about 90 to 300 vph per direction during the peak analysis hours through Downtown Flushing between Parsons Boulevard and College Point Boulevard. Adjacent to the project site, Northern Boulevard volumes can be expected to increase by approximately 30 to 440 vph in the eastbound direction and 90 to 1,300 vph in the westbound direction during the peak analysis hours, with the increase in traffic along this section of the roadway primarily due to traffic from the ramp from the southbound Whitestone Expressway onto westbound Northern Boulevard. Northern Boulevard volumes in the vicinity of 108th and 114th Street can be expected to increase by about 150 to 340 vph per direction during the seven peak hours.

Roosevelt Avenue volumes can be expected to increase by about 30 to 125 vph per direction during the non-game and game peak hours through Downtown Flushing between Parsons Boulevard and College Point Boulevard. Adjacent to the project site, Roosevelt Avenue volumes

can be expected to increase by approximately 125 to 500 vph per direction during the peak hours without a Mets game and by about 150 to 415 vph per direction during the peak hours with a Mets game. Roosevelt Avenue volumes in the vicinity of 108th, 111th, and 114th Streets can be expected to increase by about 75 to 200 vph per direction during the peak analysis hours.

Sanford Avenue volumes through Downtown Flushing between Parsons Boulevard and College Point Boulevard can be expected to increase by up to 15 vph in the eastbound direction and 25 to 90 vph in the westbound direction during the peak analysis hours.

Astoria Boulevard volumes in the vicinity of 108th and 114th Streets can be expected to increase by about 7 to 215 vph per direction during the peak analysis hours.

Volumes on 34th Avenue to/from the District at the intersection with 126th Street are expected to increase by 275 to 650 vph during all seven peak hours, and volumes along West Park Loop/Stadium Road at the intersection with 126th Street can be expected to increase by approximately 175 to 975 vph per direction during the peak analysis hours.

Volumes along 126th Street in the vicinity of 34th Avenue can be expected to increase by approximately 300 to 1,050 vph per direction during non-game peak hours, and 500 to 675 vph during game day peak hours. In the vicinity of Roosevelt Avenue, 126th Street volumes can be expected to increase by about 335 to 710 vph per direction during non-game peak hours, and 400 to 525 vph per direction during game day peak hours.

College Point Boulevard volumes can be expected to increase by about 28 to 185 vph per direction during the peak analysis hours.

Volumes along 114th Street in the vicinity of Roosevelt Avenue can be expected to increase by approximately 65 to 450 vph in the northbound direction and 25 to 45 vph in the southbound direction during the peak analysis hours. Projected volume increments on the other north-south streets, including 108th Street, Main Street, Union Street, and Parsons Boulevard can be expected to be 65 vph per direction or less during the peak analysis hours.

The remainder of this section provides an overview of significant traffic impacts that would be generated under 2032 full buildout With Action conditions. Detailed volume-to-capacity (v/c) ratios, average vehicle delay, and levels of service movement-by-movement at each intersection under the 2032 With Action condition are provided at the end of this chapter. Project-generated traffic volume increment maps and total With Action volume maps are provided in **Appendix C**.

Levels of service for the 2032 With Action condition were determined for 29 of the 31 intersections (both signalized and unsignalized) analyzed under the No Action condition. Two unsignalized intersections, Willets Point Boulevard at 126th Street and Boat Basin Road at Stadium Road, analyzed under the No Action condition, would be eliminated due to street demapping and intersection improvements, and two new signalized intersections, 126th Street at New Willets Point Boulevard and CitiField/Lot B Internal Street at Roosevelt Avenue, would be created as part of the proposed project under Phase 2. Future traffic levels of service under the With Action condition are shown in **Tables 14-55** through **14-58**.

Table 14-55
Overall Intersection Level of Service Summary Comparison
Phase 2 (2032) No Action vs. With Action Conditions—Non-Game Day

	Phase 2 No Action Condition				Phase 2 With Action Condition			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Signalized Intersections	26 Signalized Intersections				28 Signalized Intersections			
Overall Intersection LOS A/B/C	11	15	12	14	9	8	6	6
Overall Intersection LOS D	7	4	5	2	6	3	5	4
Overall Intersection LOS E	7	3	7	7	4	5	2	5
Overall Intersection LOS F	1	4	2	3	9	12	15	13
No. of Locations with Significant Impacts	--	--	--	--	20	23	23	23

Note: During the non-game peak hours in the Phase 2 With Action condition, two of the three unsignalized intersections analyzed would be significantly impacted in the weekday AM peak hour, and all three unsignalized intersections would be impacted during the weekday midday and PM peak hours and during the Saturday midday peak hour.

Table 14-56
Traffic Lane Group Level of Service Summary Comparison
Phase 2 (2032) No Action vs. With Action Conditions—Non-Game Day

	Phase 2 No Action Condition				Phase 2 With Action Condition			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Signalized Movements	26 Signalized Intersections				28 Signalized Intersections			
No. of Lane Groups at LOS A/B/C	56	72	57	69	58	57	47	55
No. of Lane Groups at LOS D	38	30	38	24	33	26	36	21
No. of Lane Groups at LOS E	13	10	9	16	11	17	12	17
No. of Lane Groups at LOS F	22	18	25	21	37	43	47	51

Note: During the non-game peak hours in the Phase 2 With Action conditions, two of the ten unsignalized lane groups analyzed would operate at LOS F in the weekday AM peak hour and five lane groups would operate at LOS F during the weekday midday, weekday PM, and Saturday midday peak hours. One lane group would operate at LOS D during the weekday AM peak hour, and all other movements would operate at LOS C or better during all peak hours.

Table 14-57
Overall Intersection Level of Service Summary Comparison
Phase 2 (2032) No Action vs. With Action Conditions—Game Day

	Phase 2 No Action Condition			Phase 2 With Action Condition		
	Weekday Pre-game	Weekend Pre-game	Weekend Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
Signalized Intersections	26 Signalized Intersections			28 Signalized Intersections		
Overall Intersection LOS A/B/C	8	12	10	7	8	7
Overall Intersection LOS D	10	2	2	4	7	3
Overall Intersection LOS E	5	7	7	4	1	2
Overall Intersection LOS F	3	5	7	13	12	16
No. of Locations with Significant Impacts	--	--	--	22	20	20

Note: During the game day peak hours in the Phase 2 With Action condition, all three unsignalized intersections analyzed would be significantly impacted in game day peak hours.

Table 14-58
Traffic Lane Group Level of Service Summary Comparison
Phase 2 (2032) No Action vs. With Action Conditions—Game Day

Signalized Movements	Phase 2 No Action Condition			Phase 2 With Action Condition		
	Weekday Pre-game	Weekend Pre-game	Weekend Post-game	Weekday Pre-game	Saturday Pre-game	Saturday Post-game
	26 Signalized Intersections			28 Signalized Intersections		
No. of Lane Groups at LOS A/B/C	57	64	69	48	54	58
No. of Lane Groups at LOS D	34	28	23	32	27	25
No. of Lane Groups at LOS E	16	7	6	13	14	6
No. of Lane Groups at LOS F	23	31	32	47	44	51

Note: During the game day peak hours in the Phase 2 With Action conditions, six of the ten unsignalized lane groups analyzed would operate at LOS F during the weekday and Saturday pre-game peak hours. Five of the ten unsignalized lane groups would operate at LOS F during the Saturday post-game peak hour. All other unsignalized lane groups would operate at LOS C or better during game day peak hours.

The addition of the proposed project's generated traffic under full buildout conditions to the already poor future baseline (2032 No Action) conditions would cause the majority of locations to be significantly impacted. During non-game peak hours, full buildout of the proposed project would have significant traffic impacts at 20 of the 28 signalized intersections analyzed in the weekday AM peak hour, and 23 of 28 in the weekday midday, weekday PM, and Saturday midday peak hours. During the weekday pre-game peak hour, 22 of 28 signalized intersections analyzed would have significant traffic impacts, and during the Saturday pre-game and post-game peak hours 20 of 28 signalized intersections analyzed would have significant impacts. Two of the three unsignalized intersections analyzed would be significantly impacted during the weekday AM peak hour, and all three unsignalized intersections would be impacted during the other six peak analysis hours.

The summary overview of the Phase 2 With Action condition without a Mets game indicates that:

- In the weekday AM peak hour, 13 of the 28 analyzed signalized intersections are projected to operate at overall LOS E or F, which is five more than under the No Action condition (Note: there would be two more intersections in the Phase 2 With Action condition as compared to the No Action condition). Twenty signalized intersections would be significantly impacted. The number of traffic lane groups that are expected to operate at LOS E or F would increase from 35 to 48.
- In the weekday midday peak hour, the number of signalized intersections that would operate at overall LOS E or F would increase from seven under the No Action condition to 17 under the With Action condition, and there would be significant impacts at 23 of the 28 signalized intersections. The number of individual lane groups that would operate at LOS E or F would increase from 28 to 60.
- In the weekday PM peak hour, the number of intersections that are projected to operate at overall LOS E or F would increase from 9 to 17 under the With Action condition, with 23 signalized intersections significantly impacted. The number of individual lane groups that would operate at LOS E or F would increase from 34 to 59.
- In the Saturday midday peak hour, the number of signalized intersections projected to operate at LOS E or F would increase from 10 under the No Action condition to 18 under the With Action condition. Twenty-three signalized intersections would be significantly impacted. The number of lane groups at LOS E or F would increase from 37 to 68.
- All three unsignalized intersections would operate at overall LOS F and would be significantly impacted during all four non-game peak hours with the exception of the Grand Central Parkway exit ramp at West Park Loop/Stadium Road which would operate at LOS C during the weekday

AM peak hour and would not be significantly impacted. Two of the ten unsignalized lane groups analyzed would operate at LOS F in the weekday AM peak hour and five lane groups would operate at LOS F during the weekday midday, weekday PM, and Saturday midday peak hours.

The summary overview of the Phase 2 With Action condition with a Mets game indicates that:

- In the weekday PM pre-game peak hour, 17 out of 28 signalized intersections would operate at LOS E or F under the With Action condition, which is an increase from eight signalized intersections at LOS E or F under the No Action condition. There would be significant impacts at 22 of the 28 signalized intersections. The number of lane groups that would operate at LOS E or F would increase from 39 to 60.
- During the Saturday midday pre-game peak hour, the number of intersections that are expected to operate at LOS E or F would increase from 12 to 13 under the With Action condition, with 20 signalized intersections significantly impacted. The number of lane groups at LOS E or F would increase from 38 to 58.
- In the Saturday PM post-game peak hour, the number of locations that would operate at LOS E or F would increase from 14 to 18 under the With Action condition. Twenty signalized intersections would be significantly impacted. The number of lane groups that would operate at LOS E or F would increase from 38 to 57.
- All three unsignalized intersections would operate at overall LOS F and would be significantly impacted during all gameday peak hours. Six of the ten unsignalized lane groups analyzed would operate at LOS F during the weekday and Saturday pre-game peak hours and five of the ten unsignalized lane groups would operate at LOS F during the Saturday post-game peak hour.

Table 14-59 shows the locations and time periods where significant impacts would occur in the Phase 2 (2032) With Action condition. Mitigation measures for significantly impacted locations are discussed in Chapter 21, "Mitigation."

PHASE 2 (2032) WITH ACTION PARKING

Under Phase 2, the remainder of the District would be built out. The number of parking spaces provided under the full buildout would be based on project demand. It is anticipated that sufficient off-street and on-street parking would be provided to satisfy these demands under the full buildout. As detailed street configurations and curbside parking regulations have not yet been defined for existing and new streets within the District, it is expected that some level of on-street parking would be available. The proposed regulations would be designed to satisfy the needs of adjacent land uses; metered parking would likely be installed adjacent to retail uses or other commercial buildings, alternate side regulations would likely be installed near residential uses, and curbside parking restrictions would likely be imposed near the convention center, hotel, community facilities, or along primary delivery routes. Specific regulations would be determined at a later date.

Table 14-59
Phase 2 (2032) With Action Condition Significant Impact Summary

Intersections	Without a Mets Game				With a Mets Game		
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Pre-game Weekday PM	Pre-game Saturday Midday	Post-game Saturday PM
Astoria Boulevard at 108th Street		x	x	x	x	x	x
Northern Boulevard at 108th Street	x	x	x	x	x	x	x
Northern Boulevard at 114th Street	x	x	x	x	x	x	x
Northern Boulevard at 126th Street	x	x	x	x	x	x	x
Northern Boulevard at Prince Street	x	x	x	x	x	x	x
Northern Boulevard at Main Street	x	x	x	x	x	x	x
Northern Boulevard at Union Street	x	x	x	x	x	x	x
Northern Boulevard at Parsons Boulevard	x	x	x	x	x	x	x
34th Avenue at 114th Street		x	x	x	x	x	x
34th Avenue at 126th Street	x	x	x	x	x	x	x
Roosevelt Avenue at 108th Street	x	x	x	x	x	x	x
Roosevelt Avenue at 111th Street	x	x	x	x	x	x	x
Roosevelt Avenue at 114th Street	x	x	x	x	x	x	x
Roosevelt Avenue at 126th Street	x	x	x	x	x	x	x
Roosevelt Avenue at College Point Boulevard	x	x	x	x	x	x	x
Roosevelt Avenue at Prince Street	x	x	x		x		
Roosevelt Avenue at Main Street	x	x	x	x	x	x	x
Roosevelt Avenue at Union Street	x	x	x	x	x	x	x
Roosevelt Avenue at Parsons Boulevard	x	x	x	x	x		x
Kissena Boulevard at Main Street		x		x		x	
Sanford Avenue at College Point Boulevard			x	x			
Sanford Avenue at Union Street							
Sanford Avenue at Parsons Boulevard	x	x	x	x	x		x
32nd Avenue at College Point Boulevard							
Northern Boulevard at College Point Boulevard	x	x	x	x	x	x	
Boat Basin Road at Stadium Road	x	x	x	x	x	x	x
Boat Basin Road at World's Fair Marina	x	x	x	x	x	x	x
Stadium Road at Grand Central Parkway		x	x	x	x	x	x
Willets Point Boulevard at Northern Boulevard	x	x	x	x	x	x	x
New Willets Point Boulevard at 126th Street	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Roosevelt Avenue at CitiField / Lot B	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Notes: "x" means the intersection would be significantly impacted. n/a means the intersection is new for With Action conditions.

Parking demand for the proposed residential component would be satisfied through on-street and off-street parking opportunities. As in the 2008 FGEIS, it is assumed that approximately 10 percent of residents would use available on-street parking opportunities, which would reduce the need for off-street parking demand by about 300 spaces. Given the anticipated residential demand of 3,101 spaces, approximately 2,800 off-street residential parking spaces would need to be provided. Residential parking demand is typically lowest during the daytime hours when office, community uses, and primary school parking demands are at a maximum. Therefore, shared parking strategies would be implemented and, where possible, office, community, and primary school parking demands would use parking spaces vacated by residents during the daytime hours. This would maximize usage of vacant residential parking spaces during daytime hours and minimize the need for additional dedicated parking spaces for office, community, and primary school uses.

It is expected that the remaining land uses—retail, hotel, and convention center space—could also share common parking areas. However, because peaking patterns among these uses are similar to each other, there would be minimal savings in the number of required parking spaces. Hence, the projected weekday and Saturday parking demands for these uses are based on the sum of the individual peak demands, or approximately 3,050 spaces and 2,900 spaces, respectively. These

accumulations by land use are detailed in **Tables 14-60** and **14-61**. The parking supply in the District would be provided to accommodate the highest demand, 3,047 spaces, which would be expected to occur on a weekday. Since parking areas designated for the retail, hotel, and convention center would likely be underutilized during the weekday, shared parking strategies could again be implemented and these parking facilities could also be used to accommodate office, community, and primary school parking demands, and further reduce the overall parking demand. In total, 5,850 parking spaces would be provided in the full buildout under Phase 2.

As detailed in the Phase 1A and Phase 1B Parking sections, parking provided for the Willets West development would fully satisfy its demand.

The CitiField Lot B development project is anticipated to be in place in Phase 2. The existing VIP/ADA parking spaces on Lot B are assumed to be replaced on site; however, accessory parking for the Lot B development is anticipated to be satisfied within a new parking structure on Lot D, located on the south side of Roosevelt Avenue. **Table 14-62** shows the projected parking accumulation by hour for the proposed Lot B development on a weekday and on a Saturday, and indicates a peak parking demand of 648 spaces on a weekday and 389 spaces on Saturday. Most of the weekday demand would be generated by office space and overall parking demand would decrease to less than 200 spaces by the 5-6 PM hour when Mets game attendees would begin to arrive. Within the footprint of the new South Lot/Lot D structures, a total of 5,495 spaces would be constructed, which would provide Mets parking and would continue to accommodate existing usage. Based on game day parking occupancy rates under the No Action conditions, there would be enough available parking spaces to also satisfy all of Lot B's parking demand.

H. HIGHWAY NETWORK ANALYSIS

INTRODUCTION AND METHODOLOGY

Because of the proximity of the project site to the regional highway network through north-central Queens, analyses were performed to assess the potential for significant adverse impacts on the Grand Central Parkway, the Van Wyck/Whitestone Expressway (both designated as I-678), and the ramps connecting the highways to the local street network. The highway analyses include the following locations:

- Grand Central Parkway mainline in both directions between the LIE and Roosevelt Avenue
- Van Wyck Expressway mainline in both directions between the LIE and Roosevelt Avenue
- Whitestone Expressway mainline in both directions between Northern Boulevard and Linden Place
- Ramp from World's Fair Marina/Boat Basin Road to the Grand Central Parkway
- Ramps from the northbound Van Wyck Expressway to eastbound and westbound Northern Boulevard
- Ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway
- Ramp from westbound Northern Boulevard to the southbound Van Wyck Expressway
- Ramp from eastbound Astoria Boulevard and eastbound Northern Boulevard to the northbound Whitestone Expressway

Table 14-60
Phase 2 (2032) Special Willets Point District
Weekday Parking Accumulation

Time	Residential			Office			Destination Retail			Local Retail			Convention/Expo		
Begin	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.
Midnight	66	66	3,101	0	0	0	0	0	0	0	0	0	0	0	0
1 AM	31	31	3,101	0	0	0	0	0	0	0	0	0	0	0	0
2 AM	18	18	3,101	0	0	0	0	0	0	0	0	0	0	0	0
3 AM	13	13	3,101	0	0	0	0	0	0	0	0	0	0	0	0
4 AM	13	13	3,101	0	0	0	0	0	0	0	0	0	0	0	0
5 AM	13	13	3,101	0	0	0	0	0	0	0	0	0	0	0	0
6 AM	27	27	3,101	0	0	0	0	0	0	0	0	0	27	0	27
7 AM	34	310	2,825	41	3	38	44	44	0	26	1	25	191	0	218
8 AM	177	707	2,295	465	18	485	271	173	98	103	103	25	300	0	518
9 AM	117	467	1,945	395	68	812	210	86	222	45	30	40	696	14	1,200
10 AM	110	331	1,724	85	68	829	282	132	372	118	81	77	418	74	1,544
11 AM	156	233	1,647	34	97	766	424	315	481	171	178	70	350	87	1,807
Noon	225	217	1,655	145	157	754	732	599	614	650	650	70	283	105	1,985
1 PM	203	203	1,655	172	104	822	1,135	1,113	636	513	534	49	264	310	1,939
2 PM	186	186	1,655	89	56	855	723	800	559	342	356	35	44	146	1,837
3 PM	243	234	1,664	63	77	841	674	598	635	292	303	24	68	308	1,597
4 PM	382	254	1,792	48	295	594	614	673	576	295	307	12	61	347	1,311
5 PM	632	340	2,084	28	535	87	625	705	496	342	342	12	21	673	659
6 PM	585	246	2,423	14	79	22	644	746	394	265	277	0	7	633	33
7 PM	514	220	2,717	7	29	0	577	577	394	260	260	0	0	33	0
8 PM	223	95	2,845	0	0	0	313	382	325	0	0	0	0	0	0
9 PM	179	77	2,947	0	0	0	126	451	0	0	0	0	0	0	0
10 PM	148	64	3,031	0	0	0	0	0	0	0	0	0	0	0	0
11 PM	124	54	3,101	0	0	0	0	0	0	0	0	0	0	0	0
Total	4,419	4,419		1,586	1,586		7,394	7,394		3,422	3,422		2,730	2,730	

Time	Hotel			Community Facility			School – Students			School – Staff			Total
Begin	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	Acc.
Midnight	12	2	306	0	0	0	0	0	0	0	0	0	**3,407**
1 AM	13	1	318	0	0	0	0	0	0	0	0	0	**3,419**
2 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,419**
3 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,419**
4 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,419**
5 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,419**
6 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,446**
7 AM	8	12	314	17	1	16	8	8	0	6	0	6	**3,442**
8 AM	94	136	272	30	2	44	152	152	0	50	0	56	**3,793**
9 AM	45	84	233	22	9	57	8	8	0	0	0	56	**4,565**
10 AM	50	50	233	19	12	64	0	0	0	0	0	56	**4,899**
11 AM	65	65	233	14	17	61	0	0	0	0	0	56	**5,121**
Noon	274	129	378	14	17	58	0	0	0	0	0	56	**5,570**
1 PM	47	109	316	11	15	54	0	0	0	0	0	56	**5,527**
2 PM	37	86	267	9	13	50	0	0	0	0	0	56	**5,314**
3 PM	37	86	218	15	21	44	127	127	0	0	44	12	**5,035**
4 PM	43	101	160	17	23	38	16	16	0	0	6	6	**4,489**
5 PM	221	154	227	15	21	32	25	25	0	0	6	0	**3,597**
6 PM	137	206	158	19	26	25	0	0	0	0	0	0	**3,055**
7 PM	114	76	196	14	14	25	0	0	0	0	0	0	**3,332**
8 PM	103	84	215	4	18	11	0	0	0	0	0	0	**3,396**
9 PM	65	34	246	1	12	0	0	0	0	0	0	0	**3,193**
10 PM	50	18	278	0	0	0	0	0	0	0	0	0	**3,309**
11 PM	23	5	296	0	0	0	0	0	0	0	0	0	**3,397**
Total	1,438	1,438		221	221		336	336		56	56		

Note: Acc. = Accumulation
Source: Based on travel demand estimates

Table 14-61
Phase 2 (2032) Special Willets Point District
Saturday Parking Accumulation

Time	Residential			Office			Destination Retail			Local Retail			Convention/Expo		
Begin	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.
Midnight	34	34	3,101	0	0	0	0	0	0	0	0	0	0	0	0
1 AM	34	34	3,101	0	0	0	0	0	0	0	0	0	0	0	0
2 AM	0	0	3,101	0	0	0	0	0	0	0	0	0	0	0	0
3 AM	0	0	3,101	0	0	0	0	0	0	0	0	0	0	0	0
4 AM	0	0	3,101	0	0	0	0	0	0	0	0	0	0	0	0
5 AM	69	69	3,101	0	0	0	0	0	0	0	0	0	0	0	0
6 AM	34	103	3,032	0	0	0	0	0	0	0	0	0	0	0	0
7 AM	110	330	2,812	7	2	5	72	0	72	0	0	0	0	0	0
8 AM	137	412	2,537	17	9	13	137	7	202	36	4	32	0	0	0
9 AM	172	515	2,194	29	19	23	130	14	318	72	8	96	129	0	129
10 AM	206	618	1,782	39	26	36	230	58	490	320	80	336	468	29	568
11 AM	223	670	1,335	65	44	57	907	389	1,008	380	380	336	522	174	916
Noon	240	721	854	65	44	78	633	548	1,093	418	342	412	348	348	916
1 PM	627	473	1,008	89	60	107	808	776	1,125	441	360	493	358	358	916
2 PM	584	406	1,186	49	60	96	771	712	1,184	418	342	569	348	347	917
3 PM	585	390	1,381	38	71	63	749	691	1,242	418	342	645	174	521	570
4 PM	577	385	1,573	22	52	33	416	448	1,210	324	396	573	124	372	322
5 PM	577	385	1,765	9	26	16	648	648	1,210	320	320	573	12	235	99
6 PM	625	336	2,054	4	16	4	583	713	1,080	288	352	509	0	99	0
7 PM	673	287	2,440	2	6	0	454	842	692	270	330	449	0	0	0
8 PM	577	246	2,771	0	0	0	403	749	346	200	360	289	0	0	0
9 PM	508	178	3,101	0	0	0	259	605	0	96	385	0	0	0	0
10 PM	206	206	3,101	0	0	0	0	0	0	0	0	0	0	0	0
11 PM	69	69	3,101	0	0	0	0	0	0	0	0	0	0	0	0
Total	6,867	6,867		435	435		7,200	7,200		4,001	4,001		2,483	2,483	

Time	Hotel			Community Facility			School – Students			School – Staff			Total
Begin	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	In	Out	Acc.	Acc.
Midnight	12	2	306	0	0	0	0	0	0	0	0	0	**3,407**
1 AM	13	1	318	0	0	0	0	0	0	0	0	0	**3,419**
2 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,419**
3 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,419**
4 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,419**
5 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,419**
6 AM	0	0	318	0	0	0	0	0	0	0	0	0	**3,350**
7 AM	24	34	308	0	0	0	0	0	0	0	0	0	**3,197**
8 AM	78	112	274	0	0	0	0	0	0	0	0	0	**3,058**
9 AM	78	112	240	18	4	14	0	0	0	0	0	0	**3,014**
10 AM	103	99	244	18	4	28	0	0	0	0	0	0	**3,484**
11 AM	103	99	248	11	11	28	0	0	0	0	0	0	**3,928**
Noon	103	99	252	31	32	27	0	0	0	0	0	0	**3,632**
1 PM	145	114	283	31	32	26	0	0	0	0	0	0	**3,958**
2 PM	33	82	234	30	32	24	0	0	0	0	0	0	**4,210**
3 PM	58	143	149	30	32	22	0	0	0	0	0	0	**4,072**
4 PM	108	108	149	30	32	20	0	0	0	0	0	0	**3,880**
5 PM	111	111	149	10	12	18	0	0	0	0	0	0	**3,830**
6 PM	144	144	149	7	15	10	0	0	0	0	0	0	**3,806**
7 PM	114	76	187	5	15	0	0	0	0	0	0	0	**3,768**
8 PM	86	58	215	0	0	0	0	0	0	0	0	0	**3,621**
9 PM	60	26	249	0	0	0	0	0	0	0	0	0	**3,350**
10 PM	43	13	279	0	0	0	0	0	0	0	0	0	**3,380**
11 PM	22	5	296	0	0	0	0	0	0	0	0	0	**3,397**
Total	1,438	1,438		221	221		0	0		0	0		

Note: Acc. = Accumulation
Source: Based on travel demand estimates

Table 14-62
Lot B Weekday and Saturday Parking Accumulation

Time Begin	Weekday							Saturday						
	Office			Destination Retail				Office			Destination Retail			Total
	In	Out	Acc.	In	Out	Acc.	Total	In	Out	Acc.	In	Out	Acc.	Acc.
Midnight	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
1 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
2 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
3 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
4 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
5 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
6 AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
7 AM	22	2	20	12	12	0	**20**	4	1	3	20	0	20	**23**
8 AM	261	11	270	76	49	27	**297**	10	5	8	38	2	56	**64**
9 AM	220	38	452	59	24	62	**514**	16	11	13	36	4	88	**101**
10 AM	47	38	461	79	37	104	**565**	22	15	20	65	16	137	**157**
11 AM	18	54	425	119	88	135	**560**	37	24	33	255	109	283	**316**
Noon	82	88	419	205	168	172	**591**	37	24	46	178	154	307	**353**
1 PM	97	58	458	319	312	179	**637**	50	33	63	227	218	316	**379**
2 PM	50	31	477	203	225	157	**634**	27	34	56	217	200	333	**389**
3 PM	36	43	470	189	168	178	**648**	21	40	37	210	194	349	**386**
4 PM	27	165	332	172	189	161	**493**	12	29	20	117	126	340	**360**
5 PM	16	300	48	176	198	139	**187**	5	14	11	182	182	340	**351**
6 PM	8	44	12	181	210	110	**122**	2	10	3	164	200	304	**307**
7 PM	4	16	0	162	162	110	**110**	1	4	0	127	237	194	**194**
8 PM	0	0	0	88	107	91	**91**	0	0	0	113	210	97	**97**
9 PM	0	0	0	36	127	0	**0**	0	0	0	73	170	0	**0**
10 PM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
11 PM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**
Total	888	888		1,765	1,765			101	101		1,730	1,730		

Note: Acc. = Accumulation
Source: Based on travel demand estimates.

- Ramps from the southbound Whitestone Expressway to the eastbound and westbound Grand Central Parkway
- Ramp from westbound Northern Boulevard and southbound Whitestone Expressway to westbound Astoria Boulevard
- Ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway and eastbound Northern Boulevard
- Ramp from the eastbound Grand Central Parkway toward Stadium Road and the northbound Whitestone Expressway
- Ramp from the southbound Whitestone Expressway to westbound Northern Boulevard

The ramps from eastbound Northern Boulevard and the Grand Central Parkway to 126th Street as well as the combined ramp section from the northbound Van Wyck Expressway and southbound Whitestone Expressway to westbound Northern Boulevard at 126th Street are signalized approaches and, as such, are included in the intersection analyses instead of the highway analyses.

It is beyond the scope of the *2000 HCM* to analyze a highway section that is operating at low speeds or over-saturated conditions. Therefore, a simulation of the highway network with the CORSIM model (Version 6.2) was used instead (as was done for the 2008 FGEIS and has been done on numerous recent EISs in New York City), because it better replicates existing and projected future conditions in the study area. The ability to account for traffic conditions that influence the immediate study area is critical when modeling traffic conditions on typical weekdays and, even more importantly, before and after Mets games at CitiField.

The CORSIM model reports the density and an average speed for the highway section being analyzed, but does not readily report the levels of service. Levels of service are necessary to assess potential impacts of the proposed development on the highway as per *CEQR Technical Manual* guidelines. The 2000 HCM defines levels of service thresholds for merge and diverge areas using density in passenger cars per mile per lane (pc/mi/ln), and these thresholds have been applied to the results of the CORSIM model. The levels of service thresholds for each density range are as follows:

- LOS A describes operations with very low densities (i.e., less than or equal to 10 pc/mi/ln) and high free flow speeds.
- LOS B describes operations with fairly low densities (i.e., greater than 10 to 20 pc/mi/ln) and moderate to high free flow speeds.
- LOS C describes operations with moderate densities (i.e., greater than 20 to 28 pc/mi/ln) and moderate free flow speeds.
- LOS D describes operations with moderate to high densities (i.e., greater than 28 to 35 pc/mi/ln) and moderate to low free flow speeds. A mid-LOS D density of 31.5 pc/mi/ln is considered the high range of acceptable density. Densities greater than 31.5 pc/mi/ln are unacceptable but are commonplace on highways in New York City.
- LOS E describes operations with high densities (i.e., greater than 35 pc/mi/ln) and low free flow speeds. 45 pc/mi/ln is considered the maximum density for sustained flows at capacity on a typical freeway. Queuing can begin at densities higher than this.
- LOS F describes operations with very high densities and very low free flow speeds. Queuing is common within LOS F, which leads to failure conditions and congestion.

According to the *CEQR Technical Manual*, for highway or ramp sections being analyzed—including mainline capacity sections, weaving areas, and ramp junctions—a significant adverse impact occurs when conditions deteriorate by more than half an LOS between No Action and With Action conditions when No Action LOS is in the D, E, or F range. The following significant impact criteria are used in the With Action analyses to assess potential impacts of the proposed development on the highway network:

- For No Action LOS D to With Action LOS D: Since the starting value of LOS D is 28 pc/mi/ln and the highest value of LOS D is 35 pc/mi/ln, one half of the difference between these two is 3.5 pc/mi/ln. Hence, an increase in the projected density of 4 pc/mi/ln or more as a result of traffic volume added between the No Action and With Action conditions is considered a significant impact.
- For No Action LOS D to With Action LOS E: Since the value of mid-LOS D is 31.5 pc/mi/ln and the starting value of LOS E is 35 pc/mi/ln, one half of the difference between these two is 1.75 pc/mi/ln. Therefore, an increase in the projected density of 2 pc/mi/ln or more between No Action and With Action is considered a significant impact.
- For No Action LOS E to With Action LOS F: The same criteria as No Action LOS D to With Action LOS E applies.

EXISTING CONDITIONS

GRAND CENTRAL PARKWAY VOLUMES

Traffic volumes on the eastbound Grand Central Parkway mainline approaching the diverge to the Whitestone Expressway and eastbound Northern Boulevard (designated as eastbound Exit

9E), range from 2,650–4,050 vph during typical non-game weekday AM, midday, PM and Saturday midday peak hours, and from 3,900–4,800 vph during game conditions. The ramp from the eastbound Grand Central Parkway to the Whitestone Expressway and eastbound Northern Boulevard, which is a major split toward the District from the eastbound mainline, carries approximately 2,250–3,750 vph during the non-game analysis periods and 2,750–4,400 vph during game periods. South of the diverge, the Grand Central Parkway receives approximately 450–800 vph from the ramp from the Whitestone Expressway and westbound Northern Boulevard during the non-game periods and 600–750 vph during the game periods. The next merge onto the eastbound mainline (from the 34th Avenue/114th Street intersection and from Astoria Boulevard) adds approximately 800–1,055 vph during the various analysis peak hours. Farther south along the eastbound Grand Central Parkway, between the Roosevelt Avenue overpass and the LIE, traffic volumes range 4,800–6,250 vph during the non-game analysis time periods, and 6,100–6,550 vph for game conditions.

Traffic volumes on the Grand Central Parkway westbound mainline just north of the ramps from the LIE range from 4,350–5,800 vph during typical non-game weekday AM, midday, PM and Saturday midday peak hours, and from 5,300–5,850 vph during game conditions. Farther north, the westbound mainline divides: traffic destined for the ramp to the Whitestone Expressway and eastbound Northern Boulevard (designated as westbound Exit 9E) as well as a portion of traffic that continues on the mainline through the study area take the east side of the highway; and traffic destined for the ramp to westbound Northern Boulevard (designated as westbound Exit 9W) as well as the remaining traffic that continues on the mainline through the study area take the west side of the highway. The east half of the mainline carries approximately 1,900–2,500 vph and 2,400–3,050 vph during the non-game and game peak hours, respectively. The west half of the mainline carries approximately 2,500–3,350 vph and 2,700–2,900 vph during the non-game and game peak hours, respectively. The ramp to the Whitestone Expressway and eastbound Northern Boulevard (Exit 9E), which provides access to the vicinity of CitiField and the District from the westbound mainline, carries approximately 250–350 vph during the non-game analysis periods and 350–1,050 vph during game periods. The ramp to westbound Northern Boulevard (Exit 9W) carries approximately 700–1,150 vph during the non-game analysis periods and 700–1,250 vph during game periods. Farther north just prior to the point where the two segments of the westbound mainline rejoin, traffic entering the east half of the mainline from the combined ramp from the Whitestone Expressway and westbound Northern Boulevard as well as the World's Fair Marina/Boat Basin Road ranges from 2,000–2,450 vph and 1,450–2,500 vph during the non-game and game peak hours, respectively.

VAN WYCK / WHITESTONE EXPRESSWAY VOLUMES

The Van Wyck Expressway (I-678) northbound mainline, north of the LIE and the on-ramp from College Point Boulevard, is traveled by approximately 3,500–5,100 vph during typical non-game weekday AM, midday, PM and Saturday midday peak hours, and from 3,700–4,150 vph during game conditions. The northbound diverge toward Northern Boulevard (Exit 13) carries approximately 1,100–1,450 vph and 1,050–1,200 vph during the non-game and game analysis periods, respectively. Of the total volumes during all of the analysis peak hours, approximately 600–700 vph take Exit 13E toward Downtown Flushing, while 250–450 vph take Exit 13W toward westbound Northern Boulevard, the Grand Central Parkway and access to CitiField. North of the District, the continuation of I-678 northbound, the Whitestone Expressway, is traveled by approximately 4,350–6,900 vph and 5,350–7,150 vph during non-game and game analysis periods, respectively.

North of the District, the southbound Whitestone Expressway mainline splits, with one section of the highway continuing south as the Van Wyck Expressway and the other turning west toward the Grand Central Parkway. Upstream of this split, the Whitestone Expressway is traveled by approximately 3,900–5,700 vph and 4,000–5,500 vph during non-game and game analysis periods, respectively. In the vicinity of Northern Boulevard, the southbound mainline (now the Van Wyck Expressway) receives traffic from two ramps: the merge from westbound Northern Boulevard, which adds approximately 550–800 vph during the seven analysis peak hours; and the merge with the ramp from the northbound Whitestone Expressway (with the combined traffic entering from the Grand Central Parkway, eastbound Northern Boulevard, and Astoria Boulevard), which totals approximately 450–950 vph during all of the peak hours. The Van Wyck Expressway southbound mainline, north of the exit to College Point Boulevard (Exit 12A), carries approximately 2,750–3,650 vph during typical non-game weekday AM, midday, PM and Saturday midday peak hours, and from 3,250–3,700 vph during game conditions.

EXISTING LEVELS OF SERVICE

NON-GAME DAY CONDITIONS

Table 14-63 presents existing speeds, densities, and levels of service for 19 segments of the mainlines or ramps of the highway network analyzed for typical non-game-day peak hours. Average travel speeds on the highway mainlines are generally between 35 and 50 miles per hour (mph) during the AM peak hour, except for the southbound Whitestone Expressway, which has an average travel speed of approximately 27 mph. Average travel speeds on the highway mainlines during the weekday midday, PM, and Saturday midday peak hours generally range from 32 to 46 mph.

For the highway mainline sections, unacceptable LOS E or F conditions occur along the eastbound and west side of the westbound Grand Central Parkway mainline split, northbound Van Wyck Expressway, and southbound Whitestone Expressway during the AM peak hour, and along the eastbound Grand Central Parkway, northbound Van Wyck Expressway, and northbound Whitestone Expressway during the PM peak hour. The other mainline sections generally operate at LOS B, C, or D during the weekday AM and PM peak hours. During the weekday midday peak hours, all analyzed highway mainline sections operate at acceptable LOS B, C or D. During the Saturday midday peak hour, the eastbound and west side of the westbound Grand Central Parkway mainline split generally operates at unacceptable LOS E; the other mainline sections generally operate at a LOS C or D.

The ramp from the southbound Whitestone Expressway to the westbound Grand Central Parkway operates at unacceptable LOS D during the weekday PM peak hour. All other ramps operate at acceptable levels of service during all non-game day peak hours.

Table 14-63
Existing Highway Levels of Service Summary—Non-Game Day

Mainlines	Weekday AM			Weekday midday			Weekday PM			Saturday midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (Between Roosevelt Ave & Long Island Expwy)	37.1	36.9	E	37.5	31.3	D	33.0	43.5	E	37.3	42.0	E
Grand Central Parkway WB Mainline (East Side) (Between Roosevelt Ave & Long Island Expwy)	49.1	20.8	C	43.2	17.9	B	37.8	23.6	C	38.3	26.0	C
Grand Central Parkway WB Mainline (West Side) (Between Roosevelt Ave & Long Island Expwy)	44.4	35.4	E	45.4	26.0	C	44.6	31.4	D	44.1	35.5	E
Van Wyck Expressway NB Mainline (Between Roosevelt Ave & Long Island Expwy)	35.0	44.9	E	39.2	27.5	C	33.8	37.2	E	38.8	32.6	D
Van Wyck Expressway SB Mainline (Between Roosevelt Ave & Long Island Expwy)	39.6	24.1	C	38.8	22.9	C	39	29.1	D	41.1	26.8	C
Whitestone Expressway NB Mainline (Between Northern Boulevard & Linden Place)	45.2	22.3	C	45.5	19.5	B	35.1	48.0	F	37.1	26.7	C
Whitestone Expressway SB Mainline (Between Northern Boulevard & Linden Place)	26.7	43.6	E	34.4	23.2	C	32.0	33.9	D	33.1	29.2	D
Ramps												
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.2	18.4	B	34.4	15.6	B	34.1	18.7	B	34.2	19.4	B
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	23.9	26.5	C	23.9	24.9	C	24.1	22.0	C	23.7	26.2	C
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	23.2	31.3	D	23.5	22.8	C	24.3	19.2	B	25.9	16.7	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.6	12.9	B	45.4	10.2	B	39.5	19.9	B	43.4	13.0	B
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.8	23.8	C	28.8	23.6	C	28.9	20.7	C	28.4	29.4	D
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	41.6	4.9	A	41.4	6.3	A	39.2	18.4	B	40.2	6.1	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.5	30.3	D	33.7	26.1	C	33.3	31.8	D	33.4	30.7	D
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	29.3	16.0	B	27.6	9.6	A	31.2	14.9	B	30.5	10.5	B
Ramp from Northern Boulevard WB & Whitestone Expressway SB to Astoria Boulevard WB	30.1	21.9	C	31.4	7.8	A	32.1	9.1	A	39.7	6.9	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	37.5	18.4	B	32.2	18.9	B	34.8	25.0	C	29.6	24.0	C
Ramp from Grand Central Parkway WB toward Stadium Road & Whitestone Expressway NB	44.6	6.7	A	42.3	6.2	A	41.5	4.3	A	43.4	6.0	A
Ramp from Whitestone Expressway SB to Northern Boulevard WB	23.4	30.7	D	30.7	12.9	B	30.4	18.4	B	30.6	17.8	B

Note: "n/a" signifies not available

GAME DAY CONDITIONS

Table 14-64 presents existing speeds, densities, and levels of service for the 19 sections or ramps of the highway network during the game-day peak hours. Pre-game traffic to CitiField on the highways primarily uses the southbound Whitestone Expressway, taking the exit to westbound Northern Boulevard; the eastbound Grand Central Parkway, taking the exit to 126th Street; and the westbound Grand Central Parkway, taking the exit to Stadium Road and the exit to 126th Street. These exit ramps frequently spill back onto the highway mainlines during the pre-game peak hours, causing additional slowdown for through (non-exiting) traffic. Departing traffic during the post-game peak hour accesses the northbound Whitestone Expressway,

Table 14-64
Existing Highway Levels of Service Summary—Game Day

Mainlines	Weekday Pregame			Saturday Pregame			Saturday Postgame		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	38.2	37.4	E	35.3	43.6	E	29.2	55.5	F
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	39.5	24.9	C	35.7	31.5	D	35.8	26.9	C
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.7	32.3	D	44.3	31.8	D	44.1	32.7	D
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	38.7	32.9	D	35.8	35.9	E	35.1	32.7	D
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	38.4	30.4	D	46.8	23.5	C	47.4	21.7	C
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	40.1	42.8	E	39.0	27.5	C	38.7	35.5	E
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	13.1	80.3	F	34.0	28.7	D	29.4	27.8	C
Ramps									
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.5	15.7	B	34.8	12.8	B	33.4	26.0	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	23.7	24.2	C	23.7	27.1	C	23.6	26.5	C
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	25.0	19.2	B	31.2	15.3	B	31.4	10.8	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	39.3	19.5	B	35.7	14.2	B	26.4	31.2	D
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	29.1	19.0	B	28.6	29.5	D	29.0	22.7	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	38.7	24.5	C	39.8	7.8	A	39.8	6.5	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.9	24.8	C	33.3	17.3	B	32.9	25.9	C
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	31.4	10.6	B	26.8	15.8	B	24.9	17.9	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	31.0	8.9	A	39.3	6.0	A	38.0	7.9	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	38.1	22.8	C	35.2	23.9	C	35.0	28.7	D
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	41.7	10.5	B	43.9	13.9	B	42.0	8.4	A
Ramp from Whitestone Expressway SB to Northern Boulevard WB	6.5	173.4	F	26.0	41.9	E	30.6	14.1	B

Note: "n/a" signifies not available

southbound Van Wyck Expressway, and the westbound Grand Central Parkway from the entrance ramps from Stadium Road; exiting game traffic also accesses the westbound Grand Central Parkway via the entrance ramp from World's Fair Marina/Boat Basin Road. Exiting game traffic to the eastbound Grand Central Parkway uses the entrance ramp from 114th Street and the entrance ramp farther south from Flushing Meadow Park internal roads (United Nations Avenue and Avenue of Science).

Weekday PM and weekend midday pre-game average travel speeds on the highway mainlines generally range between approximately 35 and 47 mph except for the southbound Whitestone Expressway whose travel speed is approximately 13 mph during the weekday PM pre-game peak hour, due to spillback from the exit ramp to westbound Northern Boulevard. That ramp operates with a travel speed of about 6 mph during the weekday PM pre-game peak hour.

Pre-game highway traffic toward CitiField and its surrounding lots causes unacceptable LOS E or F conditions on the northbound and southbound Whitestone Expressway mainline during the weekday pre-game peak hour. The eastbound and west side of the westbound Grand Central Parkway mainline split, and northbound Van Wyck Expressway operate at unacceptable LOS D or E during both the weekday PM and Saturday midday pre-game peak hours. The other highway mainlines generally operate at LOS C and acceptable D during the pre-game peak hours.

The Saturday post-game highway conditions are the most congested of all the time periods due to the surge of game traffic from the parking lots onto the adjacent streets and onto the ramps and highway mainlines. As a result, post-game peak hour average travel speeds generally range between 23 and 47 mph. The eastbound and west side of the westbound Grand Central Parkway mainline split as well as the northbound Van Wyck Expressway and northbound Whitestone Expressway experience unacceptable LOS D, E or F conditions. The southbound Van Wyck Expressway and the southbound Whitestone Expressway operate at LOS C.

The ramp from the southbound Whitestone Expressway to westbound Northern Boulevard experiences LOS E/F conditions during the weekday and Saturday pre-game periods. All other ramp locations operate at acceptable levels of service during the pre-game and post-game peak hours.

THE FUTURE WITHOUT THE PROPOSED PROJECT

This section details the expected traffic volume increases, levels of service, density and speeds along the highway network for each year of buildout: Phase 1A in 2018; Phase 1B in 2028; and Phase 2 in 2032. Overall, highway conditions generally deteriorated or remained the same under the Phase 1A, Phase 1B and Phase 2 No Action conditions as compared to existing conditions; however, in some instances, speeds and levels of service improved slightly between the existing and No Action conditions due to saturation of one analyzed mainline or ramp, which causes a metering of vehicles arriving at (and consequential improvement of) downstream analysis locations.

PHASE 1A (2018) NO ACTION CONDITION

Traffic volumes on the analyzed sections of the highway network are expected to increase by a background growth rate of 0.5 percent per year for the first five years (between 2012 and 2017) and 0.25 percent per year for every year beyond that (between 2017 and 2018), plus traffic expected to be generated by other projected No Action development projects. In the Phase 1A No Action condition, traffic volumes along the Grand Central Parkway eastbound mainline would increase by about 250 to 375 vph. In the westbound direction along the Grand Central Parkway, volumes would increase by approximately 110 to 150 vph on the east side split and by 110 to 135 vph on the west side split. Traffic volumes along the northbound mainline of the Van Wyck Expressway would increase by 260 to 315 vph, and by 200 to 320 vph along the southbound mainline. Traffic volumes along the Whitestone Expressway would increase by 135 to 210 vph in the northbound direction and by 125 to 165 vph in the southbound direction.

HIGHWAY LEVELS OF SERVICE

Under the Phase 1A No Action conditions, increased vehicular volumes would result in higher densities and lower speeds on several ramps and highway sections. In a few instances, conditions improved slightly between existing and Phase 1A No Action conditions. This is

primarily a result of congested ramps and merges having a "metering" effect on adjacent downstream segments of the highway network.

Non-Game Day

Table 14-65 presents the projected No Action Phase 1A levels of service, speeds, and densities for the 19 sections of the highway network analyzed during the non-game day peak hours.

Mainlines

The eastbound Grand Central Parkway mainline would deteriorate from an acceptable LOS D to unacceptable LOS D during the weekday midday peak hour and would deteriorate from an unacceptable LOS E to unacceptable LOS F in the weekday PM peak hour, and would continue to operate with average speeds of 33 to 37 mph. The west side of the westbound Grand Central Parkway mainline split would deteriorate from an acceptable LOS D to an unacceptable LOS D during the weekday PM peak hour and would continue to operate with average speeds of approximately 45 mph.

The northbound Van Wyck Expressway mainline would deteriorate from unacceptable LOS E to unacceptable LOS F during the weekday AM peak hour, and would deteriorate from an unacceptable LOS D to unacceptable LOS E during the Saturday midday peak hour, but would continue to operate with similar average speeds as under existing conditions during all time periods. The southbound Van Wyck Expressway mainline would deteriorate from an acceptable LOS D to an unacceptable LOS D during the weekday PM peak hour and would deteriorate in average speed from 39 mph to 36 mph. The southbound Whitestone Expressway mainline would deteriorate from LOS E to LOS F during the weekday AM peak hour but would continue to operate with average speeds around 27 mph.

Ramps

The ramp from the northbound Van Wyck Expressway to eastbound Northern Boulevard would deteriorate from acceptable LOC C to unacceptable LOS D during the weekday AM and midday peak hours and from LOS C to LOS E during the Saturday midday peak hour. The ramp from the northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from an acceptable LOS D to unacceptable LOS D during the weekday AM peak hour. The ramp from the southbound Whitestone Expressway to the westbound Grand Central Parkway would deteriorate from an acceptable LOS D to unacceptable LOS D during the Saturday midday peak hour. However, none of these ramps would experience a drop in average speed. The ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would deteriorate from an acceptable LOS D to an unacceptable LOS F during the weekday AM peak hour and would experience a drop in average speed from approximately 23 mph to 13 mph.

Game Day

The Phase 1A No Action levels of service, speeds, and densities for the analyzed sections during the game day peak hours are shown in **Table 14-66** and are summarized below.

Table 14-65
Phase 1A (2018) No Action Highway Levels of Service Summary
Non-Game Day

Mainlines	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	37.0	38.7	E	37.2	34.7	D	33.0	45.5	F	37.1	44.2	E
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	48.8	22.1	C	43.0	19.2	B	37.7	25.1	C	38.1	27.0	C
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.5	36.2	E	45.2	27.1	C	44.5	32.6	D	43.8	37.8	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	34.6	48.1	F	38.9	30.2	D	33.6	39.9	E	38.5	35.5	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	39.4	25.2	C	38.6	25.1	C	35.5	34.9	D	40.9	28.7	D
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	45.2	23.4	C	45.4	20.3	C	35.1	49.4	F	37.1	27.1	C
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	26.6	45.0	F	34.3	24.0	C	31.9	34.9	D	33.1	30.1	D
Ramps												
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.2	18.9	B	34.4	16.5	B	34.1	19.5	B	34.0	20.4	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	23.7	33.4	D	23.5	33.8	D	23.5	30.2	D	23.4	36.2	E
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	23.2	33.6	D	23.5	24.2	C	24.2	20.8	C	26.0	17.7	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.5	13.1	B	45.3	10.7	B	39.3	19.8	B	43.4	13.1	B
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.7	26.3	C	28.5	30.4	D	28.4	29.2	D	28.1	36.6	E
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	41.5	5.6	A	41.5	7.1	A	39.1	20.0	C	40.2	7.0	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.5	30.4	D	33.7	27.6	C	33.1	33.2	D	33.3	32.2	D
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	29.5	17.1	B	28.8	11.5	B	31.7	16.9	B	31.3	11.7	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	29.8	28.4	D	31.2	9.9	A	32.0	11.0	B	39.3	9.1	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	37.4	20.3	C	32.1	20.5	C	34.7	25.8	C	29.7	25.4	C
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	44.5	7.7	A	42.3	7.2	A	41.3	5.6	A	43.5	6.9	A
Ramp from Whitestone Expressway SB to Northern Boulevard WB	13.2	60.3	F	30.5	14.4	B	30.4	20.4	C	30.0	20.5	C

Table 14-66
Phase 1A (2018) No Action Highway Levels of Service Summary
Game Day

Mainlines	Weekday Pregame			Saturday Pregame			Saturday Postgame		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	38.1	37.6	E	35.6	40.0	E	29.0	58.4	F
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	39.3	26.2	C	19.4	50.8	F	35.7	28.4	D
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.4	33.9	D	44.1	33.6	D	42.9	34.9	D
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	38.4	35.5	E	35.6	38.7	E	34.9	35.1	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	39.3	31.3	D	46.9	24.7	C	47.3	22.9	C
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	40.0	42.4	E	39.0	25.2	C	38.8	34.3	D
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	8.6	119.5	F	34.0	29.5	D	29.4	28.6	D
Ramps									
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.5	15.7	B	34.8	13.5	B	33.4	24.2	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	23.5	30.6	D	23.5	33.5	D	23.3	33.2	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	25.1	20.2	C	31.3	15.8	B	31.3	11.5	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	38.8	19.8	B	35.3	13.2	B	26.5	29.7	D
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.8	24.5	C	28.2	36.2	E	28.6	27.4	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	38.4	25.5	C	39.6	9.0	A	39..8	7.4	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.7	23.7	C	33.2	18.5	B	32.8	27.2	C
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	31.3	10.4	B	27.2	17.7	B	25.0	19.1	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	31.0	8.8	A	38.9	9.4	A	38.1	6.6	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	9.0	88.5	F	5.2	120.1	F	35.5	28.1	D
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	41.4	11.4	B	4.7	103.6	F	41.8	9.7	A
Ramp from Whitestone Expressway SB to Northern Boulevard WB	6.1	180.3	F	15.7	72.7	F	30.8	14.9	B

Mainlines

The eastbound Grand Central Parkway would continue to operate at unacceptable LOS E or F during all peak hours with similar speeds. The east side of the westbound Grand Central Parkway would deteriorate from an acceptable LOS D to an unacceptable LOS F during the Saturday pre-game peak hour and would incur a drop in average travel speed from 36 mph to 19 mph. The northbound Van Wyck Expressway would deteriorate from an unacceptable LOS D to an unacceptable LOS E in both the weekday pre-game and Saturday post-game peak hours but would continue to operate with similar travel speeds. The rest of the mainline segments would operate at similar levels of service to existing conditions.

Ramps

The ramp from northbound Van Wyck Expressway to eastbound Northern Boulevard would deteriorate from LOS C to LOS D during the Saturday pre-game and post-game peak hours but would maintain similar average travel speeds. Along the ramp from westbound Northern Boulevard to the southbound Van Wyck Expressway, levels of service would deteriorate from LOS D to LOS E during the Saturday pre-game peak hour yet travel speeds would remain similar to existing conditions. The ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway/eastbound Northern Boulevard would deteriorate from LOS C to LOS F during the weekday pre-game and Saturday pre-game peak hours. The ramp from the westbound Grand Central Parkway toward Stadium Road and the northbound Whitestone Expressway would deteriorate from LOS B to LOS F during the Saturday pre-game peak hour and travel speeds would drop correspondingly from an average of approximately 44 mph to 5 mph. The ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would deteriorate from LOS E to LOS F during the Saturday pre-game peak hour and would experience a reduction in average travel speed from 26 mph to 16 mph.

PHASE 1B (2028) NO ACTION CONDITION

Traffic volumes on the analyzed sections of the highway network are expected to increase by a background growth rate of 0.5 percent per year for the first five years (between 2012 and 2017) and 0.25 percent per year for every year beyond that (between 2017 and 2028), plus traffic expected to be generated by other projected No Action development projects. In the Phase 1B No Action condition, traffic volumes along the Grand Central Parkway eastbound mainline would increase by about 425 to 640 vph. In the westbound direction along the Grand Central Parkway, volumes would increase by approximately 170 to 230 vph on the east side split and by 185 to 225 vph on the west side split. Traffic volumes along the northbound mainline of the Van Wyck Expressway would increase by 355 to 435 vph, and by 275 to 415 vph along the southbound mainline. Traffic volumes along the Whitestone Expressway would increase by 245 to 390 vph in the northbound direction and by 225 to 305 vph in the southbound direction.

HIGHWAY LEVELS OF SERVICE

Under the Phase 1B No Action conditions, increased vehicular volumes would result in higher densities and lower speeds on several ramps and highway sections. In a few instances, conditions improved slightly between existing and Phase 1B No Action conditions. This is primarily a result of congested ramps and merges having a “metering” effect on adjacent downstream segments of the highway network.

Non-Game Day

Table 14-67 presents the projected No Action Phase 1B levels of service, speeds, and densities for the 19 sections of the highway network analyzed during the non-game day peak hours.

Table 14-67
Phase 1B (2028) No Action Highway Levels of Service Summary
Non-Game Day

Mainlines	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	36.6	40.2	E	37.2	35.2	E	33.0	45.4	F	37.1	44.1	E
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	48.9	22.4	C	43.0	19.7	B	37.6	25.5	C	38.1	27.7	C
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.1	37.7	E	45.1	28.1	D	44.5	33.8	D	43.6	39.1	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	34.3	49.8	F	38.9	30.9	D	33.6	41.1	E	38.5	36.4	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	37.9	28.5	D	38.4	27.1	C	25.1	48.9	F	40.7	30.3	D
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	45.0	24.1	C	45.4	20.9	C	35.0	50.1	F	37.1	27.3	C
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	26.6	46.2	F	34.3	24.5	C	31.9	35.9	E	33.1	30.8	D
Ramps												
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.1	19.5	B	34.5	16.7	B	33.9	20.2	C	33.9	20.8	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	25.9	26.8	C	23.6	27.3	C	23.4	23.9	C	22.3	30.1	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	23.3	32.5	D	23.6	20.4	C	24.3	17.6	B	26.0	16.2	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.6	14.1	B	44.9	11.1	B	38.8	20.6	C	43.5	13.3	B
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.5	22.8	C	28.4	24.7	C	28.4	23.4	C	28.0	29.0	D
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	41.5	5.7	A	41.5	7.2	A	38.9	20.8	C	40.1	6.9	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.3	31.7	D	33.7	28.1	D	33.0	34.4	D	33.2	33.0	D
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	29.7	18.0	B	28.8	11.3	B	31.7	16.7	B	31.4	11.7	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	29.7	29.1	D	31.3	9.9	A	32.0	11.1	B	39.5	9.1	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	37.5	20.7	C	32.1	21.6	C	34.6	26.0	C	29.6	25.9	C
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	44.6	7.7	A	42.4	7.7	A	41.4	5.4	A	43.4	7.1	A
Ramp from Whitestone Expressway SB to Northern Boulevard WB	9.6	80.0	F	30.8	14.0	B	30.4	20.8	C	30.0	20.7	C

Mainlines

The eastbound Grand Central Parkway mainline would deteriorate from an acceptable LOS D to unacceptable LOS E during the weekday midday peak hour and would deteriorate from an unacceptable LOS E to unacceptable LOS F in the weekday PM peak hour, and would continue to operate with average speeds of 33 to 37 mph. The west side of the westbound Grand Central Parkway mainline split would deteriorate from an acceptable LOS D to an unacceptable LOS D during the weekday PM peak hour and would continue to operate with average speeds of

approximately 45 mph. This segment would continue to operate at LOS E during the Saturday midday peak hour and maintain a similar average speed.

The northbound Van Wyck Expressway mainline would deteriorate from unacceptable LOS E to unacceptable LOS F during the weekday AM peak hour dropping slightly in average speed from 35 mph to 34 mph, and would also deteriorate from an unacceptable LOS D to unacceptable LOS E during the Saturday midday peak hour, but would continue to operate with similar average speeds as under existing conditions during all time periods. The southbound Van Wyck Expressway mainline would deteriorate from an acceptable LOS D to LOS F during the weekday PM peak hour and average speeds would deteriorate from 39 mph to 25 mph.

The southbound Whitestone Expressway mainline would deteriorate from LOS E to LOS F during the weekday AM peak hour and from LOS D to LOS E during the Saturday midday peak hour but would continue to operate with similar average speeds as in existing conditions.

Ramps

The ramp from the northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from an acceptable LOS D to unacceptable LOS D during the weekday AM peak hour. The ramp from the southbound Whitestone Expressway to the westbound Grand Central Parkway would deteriorate from an acceptable LOS D to unacceptable LOS D during the weekday AM and Saturday midday peak hours. However, these ramps would not experience a drop in average speed. The ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would deteriorate from an acceptable LOS D to an unacceptable LOS F during the weekday AM peak hour and would experience a drop in average speed from approximately 23 mph to 10 mph.

Game Day

The Phase 1B No Action levels of service, speeds, and densities for the analyzed sections during the game day peak hours are shown in **Table 14-68** and are summarized below.

Mainlines

The eastbound Grand Central Parkway would continue to operate at unacceptable LOS E or F during all peak hours with similar speeds. The east side of the westbound Grand Central Parkway would deteriorate from an acceptable LOS D to an unacceptable LOS F during the Saturday pre-game peak hour and would incur a drop in average travel speed from 36 mph to 16 mph. The northbound Van Wyck Expressway would deteriorate from an unacceptable LOS D to an unacceptable LOS E in both the weekday pre-game and Saturday post-game peak hours but would continue to operate with similar travel speeds, while the southbound Van Wyck Expressway would deteriorate from LOS D to LOS F during the weekday pre-game peak hour and would experience a drop in average travel speed from approximately 38 mph to 23 mph. The rest of the mainline segments would operate at similar levels of service to existing conditions.

Ramps

The ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway/eastbound Northern Boulevard would deteriorate from LOS C to LOS F during the weekday and Saturday pre-game peak hours and would experience a drop in average speeds from 35-38 mph to 5-6 mph. The ramp from the westbound Grand Central Parkway towards Stadium Road and the northbound Whitestone Expressway would deteriorate from LOS B to LOS F during the Saturday pre-game peak hour and would experience a corresponding

Table 14-68
Phase 1B (2028) No Action Highway Levels of Service Summary
Game Day

Mainlines	Weekday Pregame			Saturday Pregame			Saturday Postgame		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	38.3	35.3	E	35.8	37.1	E	29.2	56.8	F
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	39.2	27.0	C	15.5	63.6	F	35.7	29.5	D
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.4	34.7	D	44.0	36.9	E	43.0	35.7	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	38.4	36.3	E	35.5	39.7	E	34.8	36.2	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	23.1	52.3	F	46.8	25.2	C	47.2	23.4	C
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	40.0	41.6	E	39.1	23.0	C	38.8	34.8	D
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	8.7	120.0	F	34.0	30.2	D	29.4	29.3	D
Ramps									
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.3	15.5	B	34.9	13.7	B	33.3	25.2	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	22.1	26.0	C	21.7	28.9	C	21.9	28.5	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	25.0	19.9	B	31.4	14.9	B	31.4	10.8	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	38.3	19.6	B	35.5	11.3	B	26.4	30.9	D
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	27.9	19.9	B	28.2	28.1	D	28.7	21.1	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	38.6	26.2	C	39.7	9.3	A	39.7	7.3	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.7	23.8	C	33.3	18.6	B	32.8	28.0	C
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	31.4	10.6	B	27.3	17.7	B	25.1	19.3	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	31.0	9.5	A	38.9	9.5	A	38.2	6.8	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	5.7	120.8	F	4.5	119.1	F	35.4	28.3	D
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	41.4	12.1	B	2.7	146.7	F	41.9	9.9	A
Ramp from Whitestone Expressway SB to Northern Boulevard WB	6.1	179.2	F	14.3	81.7	F	30.8	15.3	B

reduction in average travel speed from 44 mph to 3 mph. The ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would continue to operate at LOS F during the weekday pre-game peak hour, and would deteriorate from LOS E to LOS F in the Saturday pre-game peak hour where it would also experience a drop in average travel speed from about 26 mph to 14 mph.

PHASE 2 (2032) NO ACTION CONDITION

Traffic volumes on the analyzed sections of the highway network are expected to increase by a background growth rate of 0.5 percent per year for the first five years (between 2012 and 2017) and 0.25 percent per year for every year beyond that (between 2017 and 2032), or approximately

6.5 percent overall, plus traffic expected to be generated by other projected No Action development projects. In the Phase 2 No Action condition, traffic volumes along the Grand Central Parkway eastbound mainline would increase by about 460 to 600 vph. In the westbound direction along the Grand Central Parkway, volumes would increase by approximately 195 to 260 vph on the east side split and by 210 to 260 vph on the west side split. Traffic volumes along the northbound mainline of the Van Wyck Expressway would increase by 265 to 490 vph, and by 225 to 410 vph along the southbound mainline. Traffic volumes along the Whitestone Expressway would increase by 150 to 470 vph in the northbound direction and by 250 to 375 vph in the southbound direction.

HIGHWAY LEVELS OF SERVICE

Under the Phase 2 No Action conditions, increased vehicular volumes would result in higher densities and lower speeds on several ramps and highway sections. In a few instances, conditions improved slightly between existing and Phase 2 No Action conditions. This is primarily a result of congested ramps and merges having a "metering" effect on adjacent downstream segments of the highway network.

Non-Game Day

Table 14-69 presents the projected No Action Phase 2 levels of service, speeds, and densities for the 19 sections of the highway network analyzed during the non-game day peak hours.

Mainlines

The eastbound Grand Central Parkway mainline would deteriorate from an acceptable LOS D to unacceptable LOS E during the weekday midday peak hour and would deteriorate from an unacceptable LOS E to unacceptable LOS F in the weekday PM peak hour, and would continue to operate with average speeds of 33 to 37 mph. The west side of the westbound Grand Central Parkway mainline split would deteriorate from an acceptable LOS D to an unacceptable LOS D during the weekday PM peak hour and would continue to operate with average speeds of approximately 45 mph. This segment would continue to operate at LOS E during the Saturday midday peak hour and maintain a similar average speed as for existing conditions.

The northbound Van Wyck Expressway mainline would deteriorate from unacceptable LOS E to unacceptable LOS F during the weekday AM peak hour dropping slightly in average speed from 35 mph to 34 mph. The southbound Van Wyck Expressway mainline would deteriorate from an acceptable LOS D to LOS F during the weekday PM peak hour and would deteriorate in average speed from 39 mph to 17 mph, and from LOS C to LOS E during the Saturday midday peak hour with a drop in average speed from about 41 mph to 32 mph.

The southbound Whitestone Expressway mainline would deteriorate from LOS E to LOS F during the weekday AM peak hour and from LOS D to LOS E during the Saturday midday peak hour but would continue to operate with similar average speeds as in existing conditions.

Table 14-69
Phase 2 (2032) No Action Highway Levels of Service Summary
Non-Game Day

Mainlines	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	36.5	40.5	E	37.2	35.2	E	33.0	45.4	F	37.1	44.5	E
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	48.8	22.7	C	43.0	19.9	B	37.7	25.8	C	38.1	28.4	D
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.1	38.1	E	45.1	28.3	D	44.2	34.1	D	43.4	39.0	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	34.3	50.1	F	38.8	31.4	D	33.7	39.8	E	38.8	32.6	D
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	38.8	28.6	D	38.5	26.8	C	17.3	69.7	F	31.8	38.2	E
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	45.1	24.7	C	45.4	21.9	C	35.1	50.1	F	37.0	27.8	C
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	26.3	47.2	F	34.3	24.8	C	31.8	36.2	E	33.1	31.2	D
Ramps												
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.2	19.7	B	34.4	16.8	B	34.1	20.0	B	33.8	21.1	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	25.0	26.5	C	23.5	28.5	D	23.8	19.1	B	22.6	24.2	C
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	23.3	31.8	D	23.6	20.0	B	24.3	18.1	B	26.1	13.5	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.6	14.1	B	45.0	11.0	B	19.5	40.5	E	43.5	13.3	B
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.4	23.1	C	28.4	24.3	C	14.9	41.2	E	28.1	29.2	D
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	41.5	5.8	A	41.5	7.4	A	38.9	21.0	C	40.1	7.0	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.4	31.8	D	33.7	28.2	D	33.1	33.9	D	33.3	32.7	D
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	29.6	18.1	B	28.7	11.4	B	31.8	16.9	B	31.4	11.7	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	29.7	28.9	D	31.2	10.0	B	32.0	11.1	B	39.3	8.9	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	37.2	21.1	C	32.0	22.1	C	34.8	25.8	C	29.6	25.9	C
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	44.2	7.8	A	42.4	7.6	A	41.4	5.4	A	43.3	7.3	A
Ramp from Whitestone Expressway SB to Northern Boulevard WB	6.0	128.1	F	30.9	14.5	B	30.4	20.9	C	30.4	21.0	C

Ramps

The ramp from the northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from an acceptable LOS D to unacceptable LOS D during the weekday AM peak hour. The ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway would deteriorate from LOS B to LOS E during the weekday PM peak hour and would drop in average speed from approximately 40 mph to 20 mph. The ramp from westbound Northern Boulevard to the southbound Van Wyck Expressway would deteriorate from LOS C to LOS E during the weekday PM peak hour and would experience a drop in average speed, from

29 mph to 15 mph. The ramp from the southbound Whitestone Expressway to the westbound Grand Central Parkway would deteriorate from an acceptable LOS D to unacceptable LOS D during the weekday AM, weekday PM and Saturday midday peak hours. However, these ramps would not experience a drop in average speed. The ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would deteriorate from an acceptable LOS D to an unacceptable LOS F during the weekday AM peak hour and would experience a drop in average speed, from approximately 23 mph to 6 mph.

In a few instances, conditions improved slightly between existing and Phase 2 No Action. This is primarily a result of congested ramps and merges having a "metering" effect on adjacent downstream segments of the highway network.

Game Day

The Phase 2 No Action levels of service, speeds, and densities for the analyzed sections during the game day peak hours are shown in **Table 14-70** and are summarized below.

Mainlines

The east side of the westbound Grand Central Parkway would deteriorate from an acceptable LOS D to an unacceptable LOS F during the Saturday pre-game peak hour and would incur a drop in average travel speed from 36 mph to 3 mph, and the west side of the westbound Grand Central Parkway would deteriorate from unacceptable LOS D during both the Saturday pre- and post-game peak hours to LOS F during the Saturday pre-game peak hour and LOS E during the Saturday post-game peak hour. The average travel speeds would reduce from approximately 44 mph to 39 mph in the Saturday pre-game peak hour and from 44 to 43 mph in the post-game peak hour. The northbound Van Wyck Expressway would deteriorate from an unacceptable LOS D to an unacceptable LOS F during the weekday pre-game peak hour and would drop in average speed from 38 mph to 22 mph. This segment would also deteriorate from LOS D to LOS E in the Saturday post-game peak hour but would maintain similar average speeds to existing conditions. The southbound Van Wyck Expressway would deteriorate from acceptable LOS D to unacceptable LOS D during the weekday pre-game peak hour and would experience a drop in average travel speed from approximately 38 mph to 32 mph. The rest of the mainline segments would operate at similar levels of service to existing conditions.

Ramps

The ramp from the northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from LOS B to LOS F during the weekday pre-game peak hour and would experience a drop in average speed from approximately 25 mph to 4 mph. The ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway/eastbound Northern Boulevard would deteriorate from LOS C to LOS F during the weekday and Saturday pre-game peak hours and would experience a drop in average speeds from 35-38 mph to 4-5 mph. The ramp from westbound Grand Central Parkway towards Stadium Road and the northbound Whitestone Expressway would deteriorate from LOS B to LOS F during the weekday and Saturday pre-game peak hours and would experience a corresponding reduction in average travel spend from about 42 mph to 3 mph in the weekday pre-game peak hour and from 44 mph to 1 mph in the Saturday pre-game peak hour. The ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would continue to operate at LOS F during the weekday pre-game peak hour, and would deteriorate from LOS E to LOS F in the Saturday pre-game peak hour where it would also experience a drop in average travel speed from about 26 mph to 17 mph.

Table 14-70
Phase 2 (2032) No Action Highway Levels of Service Summary
Game Day

Mainlines	Weekday Pregame			Saturday Pregame			Saturday Postgame		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	38.4	33.1	D	36.0	33.0	D	29.0	59.3	F
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	39.1	27.5	C	3.1	141.4	F	35.7	29.2	D
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.4	34.8	D	38.6	45.9	F	42.8	36.7	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	22.3	49.6	F	35.5	40.2	E	35.0	36.5	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	32.4	34.1	D	46.9	25.2	C	47.2	23.6	C
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	40.1	39.8	E	39.2	20.8	C	38.8	34.5	D
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	5.9	111.5	F	33.9	30.7	D	29.4	29.7	D
Ramps									
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.6	15.4	B	34.6	11.3	B	33.4	24.6	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	22.0	23.8	C	21.7	29.9	D	22.0	28.7	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	4.0	54.0	F	31.6	15.3	B	31.4	11.4	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	39.2	17.7	B	35.8	10.6	B	26.4	30.3	D
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.8	19.1	B	28.2	28.3	D	28.7	21.3	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	38.3	26.0	C	39.6	9.4	A	39.6	7.5	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.7	22.2	C	33.3	18.7	B	32.8	28.6	D
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	30.2	10.3	B	23.2	20.5	C	25.0	19.8	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	31.0	8.4	A	38.8	9.6	A	38.1	6.3	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	4.6	126.3	F	3.6	122.8	F	35.5	28.1	D
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	5.1	51.9	F	0.9	191.5	F	41.9	9.7	A
Ramp from Whitestone Expressway SB to Northern Boulevard WB	1.3	191.4	F	16.7	71.4	F	30.8	15.4	B

PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would generate a significant number of trips during all analyzed peak hours on both directions of the Van Wyck Expressway and the Whitestone Expressway. The eastbound Grand Central Parkway mainline and the east side of the westbound Grand Central Parkway mainline split would also experience a higher volume during the peak hours. Overall, highway conditions would generally deteriorate or remain the same under the Phase 1A, Phase 1B and Phase 2 With Action conditions as compared to the No Action condition; however, in some instances, speeds and levels of service improved slightly between the No Action and With Action conditions. The two reasons for these improvements are: (1) the diversion of Mets fans to

alternate ramps which are more convenient to the newly relocated Mets fan parking facilities (during game day peak hours), and (2) the saturation of one analyzed mainline or ramp, which causes a metering of vehicles arriving at (and consequential improvement of) downstream analysis locations.

The following sections provide a description of expected highway volume increments, resulting levels of service, and the identification of significant adverse highway impacts for each of the three buildout phases.

PHASE 1A (2018) WITH ACTION CONDITIONS

The Phase 1A With Action volumes on the eastbound mainline of the Grand Central Parkway north of Roosevelt Avenue would increase by approximately 450 to 1,000 vehicles during all seven peak hours, a roughly 14 to 29 percent increase compared to 2018 No Action volumes; the east side of the westbound Grand Central Parkway split would increase by 185 to 570 vph, a 7 to 23 percent increase. The Whitestone Expressway would experience volume increases of approximately 50 to 205 vph in the northbound and southbound directions, an approximate 1 to 4 percent increase per direction compared with the No Action volumes. The Van Wyck Expressway volumes would increase by about 50 to 100 vph in the northbound direction during non-game and post-game peak hours and an overall net decrease by 205 to 225 vph during game day peak hours (due to the game day circulation changes resulting from relocated CitiField parking facilitates), and would range between a 5 percent decrease and a 5 percent increase compared to the No Action volume during peak hours. Volumes along the southbound Van Wyck Expressway would increase by 120 to 450 during all peak hours, which is an increase of about 4 to 12 percent over the No Action volumes.

NON-GAME DAY

Table 14-71 shows the Phase 1A With Action levels of service, speeds and densities for the highway sections and ramps analyzed during the non-game-day peak hours. A discussion of these conditions and identification of significant impacts is provided below.

Mainlines

Under the Phase 1A With Action condition, the east side of the westbound Grand Central Parkway mainline split would deteriorate from LOS B to LOS E during the weekday midday peak hour (density increase of approximately 25 pc/mi/ln), from LOS C to unacceptable LOS D during the weekday PM peak hour (density increase of 8 pc/mi/ln), and from LOS C to LOS F (density increase of 80 pc/mi/ln) during the Saturday midday peak hour and would be significantly impacted. The west side of the westbound Grand Central Parkway mainline split would deteriorate from LOS E to LOS F during the Saturday midday peak hour (density increase of 11 pc/mi/ln) and would be significantly impacted. The southbound Whitestone Expressway would operate at LOS F (as in the No Action) during the weekday AM peak hour and would be significantly impacted (density increase of 24 pc/mi/ln), and would deteriorate from LOS D to LOS E during the Saturday midday peak hour (density increase of 9 pc/mi/ln). Average speeds along the significantly impacted segments would decrease by 1 to 33 mph, the most significant of which would occur on the east side of the westbound Grand Central Parkway mainline split during the Saturday midday peak hour.

Table 14-71
Phase 1A (2018) With Action Highway Levels of Service Summary
Non-Game Day

Mainlines	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	36.8	38.9	E	37.2	34.9	D	33.0	46.0	F	37.6	36.9	E
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	48.7	23.2	C	18.5	44.0	E	30.9	33.4	D	4.9	107.0	F
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.1	37.2	E	45.0	29.1	D	44.2	34.1	D	37.7	48.4	F
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	34.5	48.6	F	38.8	31.0	D	33.6	41.0	E	38.4	36.4	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	39.2	28.4	D	38.5	27.0	C	38.7	34.6	D	40.8	30.1	D
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	45.1	24.3	C	45.4	18.5	B	35.1	48.6	F	37.3	20.6	C
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	17.0	68.5	F	33.1	25.8	C	31.9	35.9	E	26.0	39.1	E
Ramps												
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.3	18.5	B	34.3	17.8	B	33.8	21.2	C	33.8	19.8	B
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	23.7	33.4	D	23.5	35.2	E	23.6	29.1	D	23.4	35.6	E
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	23.1	36.2	E	23.3	27.6	C	24.2	23.5	C	21.5	25.8	C
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.3	17.1	B	43.5	15.6	B	37.5	29.8	D	42.3	16.3	B
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.7	26.5	C	28.4	30.2	D	28.4	28.9	D	28.1	36.6	E
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	41.5	5.8	A	41.4	7.7	A	39.0	20.4	C	39.7	7.3	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.6	29.0	D	33.6	27.5	C	33.1	33.0	D	33.3	31.9	D
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	29.4	16.4	B	28.6	11.0	B	31.8	17.6	B	31.2	11.5	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	29.9	26.1	C	31.3	10.0	B	32.0	10.8	B	39.6	8.4	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	37.3	21.6	C	4.6	123.3	F	9.0	104.9	F	3.7	134.0	F
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	44.1	11.2	B	2.3	165.3	F	5.8	71.7	F	0.9	198.6	F
Ramp from Whitestone Expressway SB to Northern Boulevard WB	3.6	199.6	F	3.1	191.3	F	14.2	59.7	F	4.1	160.5	F

Note: Highlight indicates a significant impact

Ramps

The ramp from the northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from marginally unacceptable LOS D to unacceptable LOS E during the non-game weekday AM peak hour and would be significantly impacted (density increase of 3 pc/ln/mi). The ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway and eastbound Northern Boulevard would deteriorate from an acceptable LOS C to unacceptable LOS F during the weekday midday, weekday PM, and Saturday midday peak hours where average travel speeds would drop from 30-35 mph to 4-9 mph, and would be significantly impacted (density increases of approximately 100-110 pc/ln/mi). Similarly, the ramp

from the westbound Grand Central Parkway toward Stadium Road and the Northbound Whitestone Expressway would deteriorate from LOS A to LOS F during the weekday midday, weekday PM, and Saturday midday peak hours where average travel speeds would drop from 41-44 mph to less than 6 mph, and would be significantly impacted (density increases ranging from approximately 65-190 pc/ln/mi). Also, the ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would continue to operate at LOS F during the weekday AM peak hour and would deteriorate from LOS B to LOS F during the weekday midday peak hour and would deteriorate from LOS C to LOS F during the other two peak hours, and would be significantly impacted during all non-game peak hours (density increases of 40 to 175 pc/ln/mi). Average speeds at this ramp would drop from 13-30 mph to 3-14 mph during non-game peak hours.

GAME DAY

Table 14-72 shows the Phase 1A With Action levels of service, speeds and densities for the highway sections and ramps analyzed during the game day peak hours. A discussion of these conditions and identification of significant impacts is provided below.

Mainlines

Under the Phase 1A With Action condition, the east side of the westbound Grand Central Parkway mainline split would continue to operate at LOS F during the Saturday pre-game peak hour (density increase of 61 pc/mi/ln) and would be significantly impacted. The southbound Whitestone Expressway would continue to operate at LOS F during the weekday pre-game peak hour and would deteriorate from LOS D to LOS F during the Saturday pre-game peak hour and would be significantly impacted (with density increases of about 20 and 76 pc/mi/ln, respectively). Average speeds along the impacted segments would decrease by 4 to 24 mph, the most significant of which would occur on the southbound Whitestone Expressway mainline during the Saturday pre-game peak hour.

Ramps

The ramp from the northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from LOS C to unacceptable LOS E during the weekday pre-game peak hour and would be significantly impacted (density increase of 19.3 pc/ln/mi). The ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway would deteriorate from LOS D to LOS E during the Saturday post-game peak hour and would be significantly impacted (density increase of 10.1 pc/ln/mi). The ramp from eastbound Astoria Boulevard and the Grand Central Parkway to northbound Whitestone Expressway and eastbound Northern Boulevard would continue to operate at LOS F during the weekday and Saturday pre-game peak hours and would deteriorate from an acceptable LOS D to unacceptable LOS F during the Saturday post-game peak hour and would be significantly impacted (density increases of approximately 22 pc/ln/mi during both pre-game peak hours and about 75 pc/ln/mi during the Saturday post-game peak hour). The ramp from the westbound Grand Central Parkway toward Stadium Road and the Northbound Whitestone Expressway would deteriorate from LOS A/B to LOS F during the weekday pre-game and Saturday post-game peak hours and would continue to operate at LOS F during the Saturday pre-game peak hour, and would be significantly impacted during all game day peak hours (density increases from approximately 115-123 pc/ln/mi). Also, the ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would

Table 14-72
Phase 1A (2018) With Action Highway Level of Service Summary
Game Day

Mainlines	Weekday Pregame			Saturday Pregame			Saturday Postgame		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	38.3	34.8	D	35.8	36.2	E	29.3	56.2	F
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	39.2	28.0	D	3.4	111.4	F	35.6	31.1	D
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.5	33.8	D	43.4	30.7	D	43.4	35.5	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	38.0	34.0	D	35.8	36.7	E	35.0	35.9	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	41.4	25.7	C	46.9	22.7	C	47.3	24.1	C
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	40.2	40.1	E	39.0	22.8	C	38.9	31.7	D
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	4.5	140.4	F	6.3	105.8	F	29.4	29.4	D
Ramps									
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.7	15.0	B	34.8	11.2	B	33.6	24.3	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	23.7	29.7	D	23.2	35.1	E	23.5	33.2	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	3.6	39.5	E	12.9	30.2	D	31.2	13.3	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	38.1	24.6	C	34.7	17.8	B	25.4	39.8	E
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.7	24.8	C	28.1	36.5	E	28.4	27.5	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	38.5	26.0	C	39.7	9.4	A	39.7	7.4	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.8	18.8	B	33.4	15.2	B	32.9	27.2	C
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	29.7	8.8	A	26.6	15.2	B	25.0	19.7	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	31.0	6.5	A	38.9	6.4	A	38.2	5.7	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	5.8	120.7	F	4.6	122.4	F	8.7	103.8	F
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	4.0	126.7	F	0.8	226.2	F	3.9	120.5	F
Ramp from Whitestone Expressway SB to Northern Boulevard WB	1.6	223.3	F	2.4	208.5	F	30.0	19.9	B

Note: Highlight indicates a significant impact

continue to operate at LOS F during the weekday and Saturday pre-game peak hours, and would be significantly impacted (density increases of 43 to 135.8 pc/ln/mi, respectively). Average speeds at the significantly impacted ramp locations would drop to 9 mph or less except for the ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway which would continue to operate at around 25 mph compared to the Phase 1A No Action.

Mitigation measures to improve overall highway network conditions are discussed in Chapter 21, "Mitigation."

PHASE 1B (2028) WITH ACTION CONDITIONS

The Phase 1B With Action volumes on the eastbound mainline of the Grand Central Parkway north of Roosevelt Avenue would increase by approximately 450 to 1,550 vehicles during all

seven peak hours, a roughly 10 to 45 percent increase compared to 2028 No Action volumes; the east side of the westbound Grand Central Parkway split would increase by 340 to 750 vph, a 13 to 30 percent increase. The Whitestone Expressway would experience volume increases of approximately 110 to 365 vph in the northbound and southbound directions, an approximate 2 to 6 percent increase per direction compared with the No Action volumes. The Van Wyck Expressway volumes would increase by about 370 to 600 vph in the northbound direction during non-game and post-game peak hours and by 235 to 390 vph during game day peak hours, which are slightly lower due to the game day diversions of CitiField trips to the relocated parking lots. These increments represent a 5 to 15 percent increase compared to the No Action volume during all peak hours. Volumes along the southbound Van Wyck Expressway would increase by 385 to 965 during all peak hours, which is an increase of about 12 to 25 percent over the No Action volumes. The substantial increases on the Van Wyck Expressway in both directions would be due to traffic entering from and exiting to the new access ramps connecting the highway to the District.

NON-GAME DAY

Table 14-73 shows the Phase 1B With Action levels of service, speeds and densities for the highway sections and ramps analyzed during the non-game-day peak hours. A discussion of these conditions and identification of significant impacts is provided below.

Mainlines

Because of the increase in volume on the highway network, most analyzed highway mainline locations would operate at LOS D, E or F during most of the non-game day peak hours, with the exception of the northbound Whitestone Expressway which would operate at LOS B during the weekday AM, weekday midday, and Saturday midday peak hours, and the east side of the westbound Grand Central parkway split which would operate at LOS C during the weekday AM peak hour. Under the Phase 1B With Action condition, the east side of the westbound Grand Central Parkway mainline split would deteriorate from LOS B and C to LOS F during the weekday midday, weekday PM, and Saturday midday peak hours (density increases of approximately 127 to 156 pc/mi/ln) compared to the Phase 1B No Action condition and would be significantly impacted. Average travel speeds along this segment would decrease from around 40 mph to 2 mph or less during these peak hours. The west side of the westbound Grand Central Parkway mainline split would deteriorate from LOS D and E to LOS E and F during the weekday midday, weekday PM and Saturday midday peak hour (density increases of about 9 to 17 pc/mi/ln). Average travel speeds along this segment would drop approximately 5 to 10 mph (to the 33-40 mph range) during these peak hours. The northbound Van Wyck Expressway would deteriorate to LOS E or F during all non-game peak hours and would be significantly impacted. Density increases along this segment would range from approximately 5 to 23 pc/mi/ln and average travel speeds would drop by 1 to 18 mph, the most significant of which would occur during the weekday midday peak hour. The southbound Van Wyck Expressway mainline would deteriorate from LOS D to LOS E in the weekday AM peak hour and would be significantly impacted (density increase of about 8 pc/mi/ln). The southbound Whitestone Expressway would operate at LOS F during all non-game day peak hours and would be significantly impacted (density increases of 20 to 86 pc/mi/ln). Average speeds along this segment would decrease by 12 to 26 mph.

Table 14-73
Phase 1B (2028) With Action Highway Levels of Service Summary
Non-Game Day

Mainlines	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	37.2	32.4	D	37.5	30.3	D	33.5	35.3	E	38.1	29.4	D
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	48.2	25.0	C	0.4	160.1	F	1.7	152.0	F	0.5	184.0	F
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	43.9	39.0	E	40.7	36.9	E	34.4	51.2	F	33.1	56.2	F
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	31.1	58.3	F	20.5	53.4	F	33.0	46.5	F	37.7	42.0	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	35.4	36.3	E	38.3	30.7	D	29.0	48.9	F	40.5	32.7	D
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	45.1	18.8	B	45.8	16.1	B	35.4	31.4	D	37.5	17.6	B
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	8.9	126.7	F	12.2	67.5	F	20.3	56.0	F	7.6	116.5	F
Ramps												
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.5	18.4	B	34.0	15.4	B	33.4	20.8	C	33.9	15.7	B
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	26.8	30.2	D	25.6	28.1	D	25.5	28.6	D	24.8	34.5	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	23.3	35.7	E	3.9	111.8	F	13.2	48.7	F	17.5	35.6	E
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.4	12.2	B	44.7	11.7	B	47.0	69.4	F	42.2	12.6	B
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.3	24.7	C	28.0	26.9	C	26.3	30.5	D	25.9	34.7	D
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	41.5	6.2	A	41.5	7.7	A	3.1	58.9	F	39.8	8.1	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.7	25.6	C	33.7	26.1	C	33.0	35.0	E	33.6	26.2	C
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	29.1	15.3	B	28.8	11.7	B	31.7	16.8	B	5.7	23.7	C
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	29.9	23.3	C	31.2	8.1	A	32.0	10.5	B	39.3	7.6	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	4.1	124.7	F	3.0	134.2	F	1.9	137.9	F	2.9	126.6	F
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	1.1	193.6	F	0.1	247.0	F	0.1	224.7	F	0.2	235.2	F
Ramp from Whitestone Expressway SB to Northern Boulevard WB	4.0	195.4	F	1.6	208.0	F	3.9	195.3	F	3.5	200.2	F
Note: Highlight indicates a significant impact												

Ramps

The ramp from the northbound Van Wyck Expressway to eastbound Northern Boulevard would deteriorate from marginally acceptable LOS D to unacceptable LOS D during the Saturday midday peak hour and would be significantly impacted (density increase of 11 pc/ln/mi). The ramp from the northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from LOS B, C, and D to LOS E and F during weekday AM, midday, and PM, and Saturday midday peak hours, and would be significantly impacted (density increases of 3 to 91 pc/ln/mi). Average travel speeds on this ramp would drop by 10 to 20 mph during these peak hours. The ramp from the northbound Whitestone Expressway to the southbound Van Wyck

Expressway would deteriorate from LOS C to LOS F during the weekday PM peak hour and would be significantly impacted (density increase of 49 pc/ln/mi), and would experience an 8 mph drop in average travel speed (from 55 mph to 47 mph). The ramp from westbound Northern Boulevard to the southbound Van Wyck Expressway would deteriorate from acceptable LOS D to unacceptable LOS D during the Saturday midday peak hour and would be significantly impacted (density increase of 6 pc/ln/mi). Three ramps, from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway and eastbound Northern Boulevard, from the westbound Grand Central Parkway toward Stadium Road and the northbound Whitestone Expressway, and from the southbound Whitestone Expressway to westbound Northern Boulevard, would all deteriorate from mostly LOS A, B and C to LOS F during all non-game peak hours and would be significantly impacted (density increases of 97 to 239 pc/ln/mi). Average travel speeds along these ramps would drop by 6 to 44 mph, and all ramps would experience average speeds of 4 mph or less.

GAME DAY

Table 14-74 shows the Phase 1B With Action levels of service, speeds and densities for the highway sections and ramps analyzed during the game day peak hours. A discussion of these conditions and identification of significant impacts is provided below.

Mainlines

Under Phase 1B With Action conditions on a day with a Mets game, most analyzed highway mainline locations would operate at LOS D, E or F during pre-game and post-game peak hours. The east side of the westbound Grand Central Parkway mainline split would continue to operate at LOS F during the Saturday pre-game peak hour and would deteriorate from LOS D to LOS F and during the Saturday post-game peak hour and would be significantly impacted (with density increases of 59 and 17 pc/mi/ln, respectively). Average speeds along the impacted segments would decrease by 11 to 14 mph. The west side of the westbound Grand Central Parkway mainline split would operate at LOS E during all game day peak hours and would be significantly impacted during the Saturday post-game peak hour (density increase of approximately 3 pc/mi/ln). The northbound Van Wyck Expressway would continue to operate at LOS E during all game day peak hours (density increases of 2 to 4 pc/mi/ln) and would be significantly impacted. The northbound Whitestone Expressway would continue to operate at LOS E during the weekday pre-game peak hour (density increase of 2 pc/mi/ln) and would be significantly impacted. The southbound Whitestone Expressway would deteriorate from LOS D to LOS F during the Saturday pre-game peak hour and would be significantly impacted (density increases of 31 pc/mi/ln). The average travel speed along this segment would decrease by about 19 mph (from 34 mph to 15 mph).

Table 14-74
Phase 1B (2028) With Action Highway Level of Service Summary
Game Day

Mainlines	Weekday Pregame			Saturday Pregame			Saturday Postgame		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	38.2	37.1	E	35.9	34.1	D	29.2	56.7	F
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	38.8	30.9	D	4.1	122.7	F	21.4	46.9	F
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.1	36.4	E	40.5	36.4	E	42.2	38.6	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	38.2	38.6	E	35.2	42.4	E	34.5	40.0	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	32.8	43.7	E	46.7	27.3	C	47.1	24.3	C
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	39.9	43.7	E	39.0	19.8	B	38.8	29.9	D
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	9.8	116.4	F	14.8	61.2	F	29.3	30.9	D
Ramps									
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.3	17.9	B	34.6	12.6	B	33.5	24.5	C
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	23.0	26.1	C	32.5	34.1	D	22.8	29.6	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	25.3	14.2	B	28.9	12.0	B	30.5	19.5	B
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	36.6	26.5	C	2.3	60.0	F	26.4	27.2	C
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	27.1	23.0	C	25.4	34.8	D	27.8	23.3	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	38.3	26.8	C	10.7	27.5	C	39.7	8.0	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.5	25.3	C	33.2	17.9	B	32.8	28.7	D
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	18.5	17.2	B	27.1	17.7	B	25.3	23.0	C
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	30.9	10.0	B	38.8	8.4	A	38.2	6.5	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	6.9	114.1	F	3.5	128.2	F	6.9	114.7	F
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	15.7	49.8	F	1.5	205.7	F	1.3	189.3	F
Ramp from Whitestone Expressway SB to Northern Boulevard WB	8.7	159.1	F	6.5	136.7	F	22.1	31.6	D
Note: Highlight indicates a significant impact									

Ramps

The ramp from the northbound Van Wyck Expressway to eastbound Northern Boulevard would deteriorate from LOS C to unacceptable LOS D during the Saturday pre-game peak hour and would be significantly impacted (density increase of 5 pc/ln/mi). The ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway would deteriorate from LOS B to LOS F during the Saturday pre-game peak hour and would be significantly impacted (density increase of 49 pc/ln/mi). The average travel speed at this ramp would decrease by 33 mph (to 2 mph) during the impacted peak hour. The ramp from westbound Northern Boulevard to the southbound Van Wyck Expressway would deteriorate from marginally acceptable LOS D to unacceptable LOS D during the Saturday pre-game peak hour and would be significantly impacted (density increase of 7 pc/ln/mi).

Three ramps providing direct access to the District would be significantly impacted during all game day peak hours; however, they would generally be impacted to a lesser degree as compared to Phase 1A. This is because the Mets game-generated traffic that would use these ramps to access interim parking within the district would be diverted to the replacement parking facilities south of Roosevelt Avenue under Phases 1B and 2, and thus would no longer use these ramps. The ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway and eastbound Northern Boulevard would continue to operate at LOS F during the Saturday pregame peak hour and would deteriorate from marginally acceptable LOS D to unacceptable LOS F during the Saturday post-game peak hour and would be significantly impacted (density increases of approximately 7 to 9 pc/ln/mi during both pre-game peak hours and about 86 pc/ln/mi during the Saturday post-game peak hour). The average travel speed at this ramp would decrease by 29 mph during the Saturday post-game peak hour and would operate with average speeds of 4 to 7 mph during game day peak hours. The ramp from the westbound Grand Central Parkway toward Stadium Road and the northbound Whitestone Expressway would deteriorate from LOS A and B to LOS F during the weekday pre-game and Saturday post-game peak hours and would continue to operate at LOS F during the Saturday pre-game peak hour, and would be significantly impacted during all game day peak hours (density increases ranging from approximately 38-180 pc/ln/mi). Average travel speeds at this location would range from 1 to 16 mph (decreasing by 26 mph during weekday pre-game and 41 mph during Saturday post-game conditions). Also, the ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would continue to operate at LOS F during the Saturday pre-game peak hour and would deteriorate from LOS B to unacceptable LOS D during the Saturday post-game peak hour, and would be significantly impacted during Saturday pre-game and post-game peak hours (density increases of 7 to 55 pc/ln/mi).

Mitigation measures to improve overall highway network conditions are discussed in Chapter 21, "Mitigation."

PHASE 2 (2032) WITH ACTION CONDITIONS

The Phase 2 With Action condition encompasses the entire proposed development program and Lot B development trips. As a result, volumes on the eastbound mainline of the Grand Central Parkway north of Roosevelt Avenue would increase by approximately 950 to 2,100 vehicles during all seven peak hours, a roughly 17 to 52 percent increase compared to 2032 No Action conditions; the east side of the westbound Grand Central Parkway split would increase by 500 to 950 vph, a 19 to 40 percent increase. The Whitestone Expressway would experience volume increases of approximately 175 to 600 vph in the northbound and southbound directions, an approximate 3 to 11 percent increase per direction compared with the No Action volumes. The Van Wyck Expressway volumes would increase by about 700 to 1,100 vph in the northbound direction during non-game and post-game peak hours and by 500 to 750 vph during game day peak hours, which are slightly lower due to the game day diversions of CitiField trips to the relocated parking lots. These increments represent an 11 to 27 percent increase compared to the No Action volume during all peak hours. Volumes along the southbound Van Wyck Expressway would increase by 650 to 1,600 vph during all peak hours, which is an increase of about 21 to 41 percent over the No Action volumes. The substantial increases on the Van Wyck Expressway in both directions would be due to traffic entering from and exiting to the new access ramps connecting the highway to the District.

NON-GAME DAY

Table 14-75 shows the Phase 2 With Action levels of service, speeds and densities for the highway sections and ramps analyzed during the non-game-day peak hours. A discussion of these conditions and identification of significant impacts is provided below.

Mainlines

Because of the increase in volume on the highway network under the Phase 2 With Action, most analyzed highway mainline locations would operate at LOS D, E or F during most of the non-game day peak hours, with the exception of the northbound Whitestone Expressway which would operate at LOS B during the weekday AM, weekday midday, and Saturday midday peak hours, and the eastbound Grand Central Parkway split which would operate at LOS C during the weekday and Saturday midday peak hours, and the southbound Van Wyck Expressway mainline which would operate at LOS C during the weekday midday peak hour.

The east side of the westbound Grand Central Parkway mainline split would deteriorate from LOS B, C, or D to LOS F during all non-game peak hours (density increases of approximately 49 to 172 pc/mi/ln) compared to the Phase 2 No Action condition and would be significantly impacted. Average travel speeds along this segment would decrease from the 40-50 mph range to 6 mph or less during peak hours. The west side of the westbound Grand Central Parkway mainline split would deteriorate from LOS D and E to LOS F during the weekday midday, weekday PM and Saturday midday peak hour and would be significantly impacted (density increases of about 10 to 20 pc/mi/ln). Average travel speeds along this segment would drop approximately 9 to 12 mph (to the 30-35 mph range) during these peak hours. The northbound Van Wyck Expressway would deteriorate to LOS F during all non-game peak hours and would be significantly impacted. Density increases along this segment would range from approximately 28 to 80 pc/mi/ln and average travel speeds would drop by 11 to 30 mph and would operate with speeds of 10 to 22 mph, the most significant of which would occur during the weekday midday peak hour. The southbound Van Wyck Expressway mainline would deteriorate from marginally acceptable LOS D to unacceptable LOS D in the weekday AM peak hour and would be significantly impacted (density increase of about 5 pc/mi/ln). The southbound Whitestone Expressway would operate at LOS F during all non-game day peak hours and would be significantly impacted (density increases of 10 to 116 pc/mi/ln). Average speeds along this segment would decrease by 6 to 29 mph.

Ramps

The ramp from the northbound Van Wyck Expressway to eastbound Northern Boulevard would deteriorate from LOS B, C or marginally acceptable LOS D during the non-game weekday midday, weekday PM and Saturday midday peak hours and would be significantly impacted (density increases of 25 to 35 pc/ln/mi) with average travel speeds decreasing (by about 15 mph) to the 7-10 mph range. The ramp from the northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from LOS B and D to LOS F during all peak hours, and would be significantly impacted (density increases of 23 to 73 pc/ln/mi). Average travel speeds on this ramp would drop by about 10 to 20 mph during these peak hours, and would experience travel speeds of about 3 to 12 mph. The ramp from westbound Northern Boulevard to the southbound Van Wyck Expressway would deteriorate from marginally acceptable LOS D to LOS E during the Saturday midday peak hour and would be significantly impacted (density increase of 11 pc/ln/mi). The ramp from the southbound Whitestone Expressway to the eastbound Grand Central Parkway would deteriorate from LOS B to LOS F and would be significantly impacted (density increase of 37 pc/ln/mi) with the average travel speed also decreasing to less than 1 mph.

Table 14-75
Phase 2 (2032) With Action Highway Levels of Service Summary
Non-Game Day

Mainlines	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	37.8	28.8	D	38.0	20.2	C	33.6	35.8	E	38.3	26.2	C
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	6.7	71.5	F	0.0	191.1	F	0.4	194.9	F	0.0	200.2	F
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	41.2	39.7	E	33.0	45.9	F	35.3	54.0	F	31.2	48.8	F
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	17.1	94.6	F	9.2	110.8	F	22.4	67.9	F	12.0	105.7	F
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	35.4	33.2	D	38.3	27.5	C	38.9	36.1	E	34.8	33.8	D
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	45.3	15.5	B	46.0	12.1	B	35.5	36.4	E	37.6	15.0	B
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	20.3	57.9	F	5.7	110.9	F	11.2	89.6	F	4.1	147.2	F
Ramps												
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.2	20.4	C	34.0	12.8	B	33.3	18.3	B	34.0	13.6	B
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	26.5	27.2	C	9.8	53.6	F	10.4	44.1	F	7.2	59.2	F
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	11.6	54.1	F	2.9	93.4	F	7.2	58.7	F	4.7	77.9	F
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.6	9.8	A	44.8	8.5	A	38.6	19.9	B	43.4	9.5	A
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	27.9	27.5	C	27.5	27.7	C	24.6	29.2	D	24.2	40.5	E
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	41.5	6.7	A	41.5	8.3	A	38.9	20.2	C	39.8	7.9	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.3	30.9	D	33.6	20.7	C	33.1	30.3	D	33.7	22.7	C
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	30.3	19.6	B	0.1	48.0	F	31.7	17.8	B	30.6	10.8	B
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	30.0	24.6	C	31.3	6.2	A	32.1	8.7	A	39.6	5.2	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	2.7	132.3	F	1.5	144.0	F	3.1	138.6	F	1.8	141.2	F
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	0.1	225.6	F	0.0	241.6	F	0.0	235.0	F	0.0	243.5	F
Ramp from Whitestone Expressway SB to Northern Boulevard WB	5.2	105.4	F	1.2	226.5	F	3.0	204.6	F	1.5	214.8	F

Note: Highlight indicates a significant impact

Three ramps leading into the District—the ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway and eastbound Northern Boulevard, the ramp from the westbound Grand Central Parkway toward Stadium Road and Northbound Whitestone Expressway, and the ramp from the southbound Whitestone Expressway to westbound Northern Boulevard - would deteriorate from LOS A, B and C to LOS F during all non-game peak hours and would be significantly impacted (density increases of 97 to 239 pc/ln/mi) except at the ramp from the southbound Whitestone Expressway to Northern Boulevard during the weekday AM peak hour (which would continue to operate at LOS F but

would not be impacted). Average travel speeds along these ramps would drop by 6 to 44 mph, and all ramps would experience average speeds of 4 mph or less.

GAME DAY

Table 14-76 shows the Phase 2 With Action levels of service, speeds and densities for the highway sections and ramps analyzed during the game day peak hours. A discussion of these conditions and identification of significant impacts is provided below.

Mainlines

Under the Phase 2 With Action condition on a day with a Mets game, most analyzed highway mainline locations would operate at LOS D, E or F during pre-game and post-game peak hours. The eastbound Grand Central Parkway mainline would deteriorate from LOS D to LOS E during the weekday pre-game peak hour and would be significantly impacted (density increase of about 2 pc/mi/ln). The east side of the westbound Grand Central Parkway mainline split would operate at LOS E or F during all game day peak hours (density increases of about 15 pc/mi/ln during the weekday and Saturday pre-game peak hours and of 150 pc/mi/ln during the Saturday post-game peak hour) and would be significantly impacted. Average travel speeds along this segment would decrease to less than 1 mph during Saturday pre-game and post-game peak hours. The west side of the westbound Grand Central Parkway mainline split would deteriorate from LOS D to LOS E during the weekday pre-game peak hour and from LOS E to LOS F during the Saturday post-game peak hour and would be significantly impacted (density increases of 3 to 16 pc/mi/ln).

The northbound Van Wyck Expressway would continue to operate at LOS E or F during all game day peak hours and would be significantly impacted during the Saturday pre-game and post-game peak hours (density increases of 9 to 52 pc/mi/ln). The northbound Whitestone Expressway would continue to operate at LOS E during the weekday pre-game peak hour (density increase of 3 pc/mi/ln) and would be significantly impacted. The southbound Whitestone Expressway would deteriorate to LOS F during all game day peak hours and would be significantly impacted (density increases of 19 to 23 pc/mi/ln). The average travel speed along this segment would decrease by about 0.5 mph during the weekday pre-game peak hour and 13-16 mph during the Saturday pre-game and post-game peak hours.

Ramps

The ramp from the northbound Van Wyck Expressway to eastbound Northern Boulevard would deteriorate from LOS C and marginally acceptable LOS D to unacceptable LOS D, E or F during the three game day peak hours and would be significantly impacted (density increases of 7 to 30 pc/ln/mi). The ramp from northbound Van Wyck Expressway to westbound Northern Boulevard would deteriorate from LOS B to LOS E during the Saturday post-game peak hour and would be significantly impacted (density increase of 33 pc/ln/mi), and would also decrease to an average travel speed of 11 mph. The ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway would deteriorate from LOS B to LOS F during the Saturday pre-game peak hour and would be significantly impacted (density increase of 56 pc/ln/mi). The ramp from westbound Northern Boulevard to the southbound Van Wyck Expressway would deteriorate from marginally acceptable LOS D to unacceptable LOS F during the Saturday pre-game peak hour and would be significantly impacted (density increase of 42 pc/ln/mi). The average travel speed along this ramp would also decrease to 11 mph during this peak hour. The ramp from eastbound Astoria Boulevard and eastbound Northern Boulevard to

Table 14-76
Phase 2 (2032) With Action Highway Level of Service Summary
Game Day

Mainlines	Weekday Pregame			Saturday Pregame			Saturday Postgame		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	38.3	35.4	E	36.2	29.3	D	29.9	42.6	E
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	26.2	42.5	E	0.7	157.7	F	0.1	179.1	F
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	44.1	37.7	E	42.2	28.6	D	39.2	52.7	F
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	37.7	41.6	E	12.3	92.8	F	33.6	45.0	E
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	41.5	29.9	D	46.7	28.1	D	47.2	24.4	C
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	40.0	42.6	E	38.9	16.8	B	39.3	21.4	C
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	5.3	130.7	F	18.4	50.1	F	16.8	52.7	F
Ramps									
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	34.3	17.7	B	34.5	11.5	B	33.4	18.6	B
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	22.8	33.6	D	7.4	60.2	F	19.7	35.3	E
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	22.1	16.6	B	28.5	10.0	A	11.1	44.7	E
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	37.1	25.2	C	39.8	67.0	F	27.2	16.1	B
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	27.2	25.2	C	11.8	70.3	F	27.3	26.6	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	38.2	27.4	C	2.7	46.0	F	39.6	9.0	A
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	33.7	20.9	C	33.2	17.7	B	32.9	29.0	D
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	31.6	11.8	B	14.1	28.4	D	25.3	23.5	C
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	31.0	7.0	A	38.9	8.2	A	38.2	5.1	A
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	6.1	119.6	F	1.2	133.1	F	3.2	129.3	F
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	7.6	89.2	F	0.2	235.7	F	0.0	227.9	F
Ramp from Whitestone Expressway SB to Northern Boulevard WB	2.9	205.3	F	8.1	98.0	F	3.7	132.4	F
Note: Highlight indicates a significant impact									

the northbound Whitestone Expressway would deteriorate from LOS A to LOS F during the Saturday pre-game peak hour (density increase of 37 pc/ln/mi and would be significantly impacted). This ramp would experience a reduction in travel speed from 40 mph to 3 mph. The ramp from eastbound Astoria Boulevard and the Grand Central Parkway to the northbound Whitestone Expressway and eastbound Northern Boulevard would continue to operate at LOS F during the Saturday pre-game peak hour and would deteriorate from marginally acceptable LOS D to unacceptable LOS F during the Saturday post-game peak hour and would be significantly impacted (density increases of 10 pc/ln/mi during the Saturday pre-game peak hour and 101 pc/ln/mi during the Saturday post-game peak hour). The average travel speed at this ramp would decrease to 1 to 6 mph during all game day peak hours. The ramp from the westbound Grand Central Parkway toward Stadium Road and the northbound Whitestone Expressway would deteriorate from LOS A to LOS F during the Saturday post-game peak hour and would continue

to operate at LOS F during the weekday and Saturday pre-game peak hours, and would be significantly impacted during all game day peak hours (density increases ranging approximately 37 to 218 pc/ln/mi). Average travel speeds at this location would be 7 mph or less during all time periods. Also, the ramp from the southbound Whitestone Expressway to westbound Northern Boulevard would continue to operate at LOS F during the weekday and Saturday pre-game peak hours and would deteriorate from LOS B to LOS F during the Saturday post-game peak hour, and would be significantly impacted (density increases of 14 to 117 pc/ln/mi). The average travel speed at this location would decrease to 8 mph or less during game day peak hours.

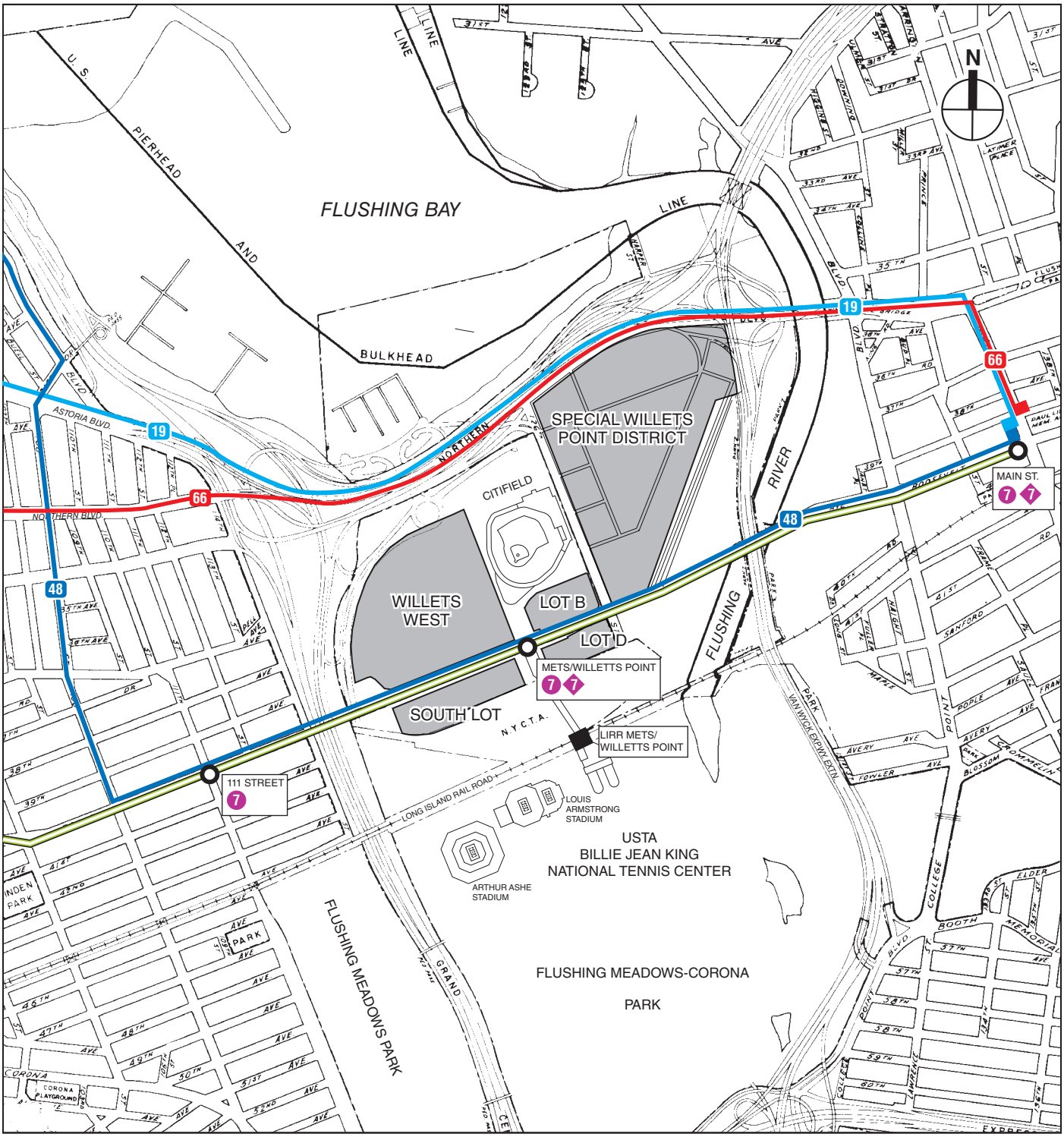
Mitigation measures to improve overall highway network conditions are discussed in Chapter 21, "Mitigation."

I. SCOPE OF ANALYSIS (TRANSIT AND PEDESTRIANS)

As described in the "Traffic and Parking" section, a travel demand projection was developed to identify the transportation elements likely to be affected by the proposed project. Because the number of peak hour transit and pedestrian trips generated by the proposed project would exceed the 200 trip per hour threshold specified in the 2012 *City Environmental Quality Review (CEQR) Technical Manual*, quantified transit and pedestrian analyses are required.

TRANSIT AND PEDESTRIAN STUDY AREAS

Mass transit options serving the project site include the Metropolitan Transportation Authority (MTA) New York City Transit (NYCT) No. 7 subway line, which operates above Roosevelt Avenue with a stop at the Mets-Willets Point subway station; the MTA Bus Company Q19 and Q66, and NYCT Q48 bus routes, which travel along the northern and southern boundaries of CitiField and the District; and the MTA Long Island Rail Road (LIRR) at the Mets-Willets Point LIRR station (game-day service only), which is accessible just south of the project site (see **Figure 14-4**). The transit analyses include a quantified assessment of control areas and circulation elements at the No. 7 Mets-Willets Point subway station, a ridership and peak period train loading analysis for the No. 7 subway line, and a line-haul analysis for the Q19, Q48, and Q66 bus routes, which includes assessments of conditions at peak load points and at nearby bus stops. In addition, because NYCT expects that there would be notable transfer activities between the No. 7 line and the N/Q lines at the Queensboro Plaza subway station (across the platform transfers), a detailed examination of line-haul conditions on the N/Q lines will be prepared, in coordination with NYCT, for the Final EIS. During the preparation of the 2008 FGEIS, the City had consulted with the MTA on extending regular LIRR service to the Mets-Willets Point station when the actual demand shows that such service improvement is warranted; however, because LIRR service is currently available only on game days at CitiField and at the United States Tennis Association (USTA) National Tennis Center (NTC) during the US Open, no quantified impact analysis was conducted for this transportation mode. The evaluation of pedestrian flow includes an analysis of the sidewalks, corner reservoirs, and crosswalks adjacent to CitiField and the District, along 114th Street, 126th Street, Northern Boulevard, and Roosevelt Avenue (see **Figure 14-5**). In addition, related pedestrian analyses will be prepared for the three intersections (126th Street at 36th Avenue, 126th Street at 37th Avenue, and Northern Boulevard at 126th Place) where additional traffic analyses will also be conducted and presented in the Final EIS.



Project Site

Local Bus Route

66 *Local Bus Route Number*

Subway Route and Station

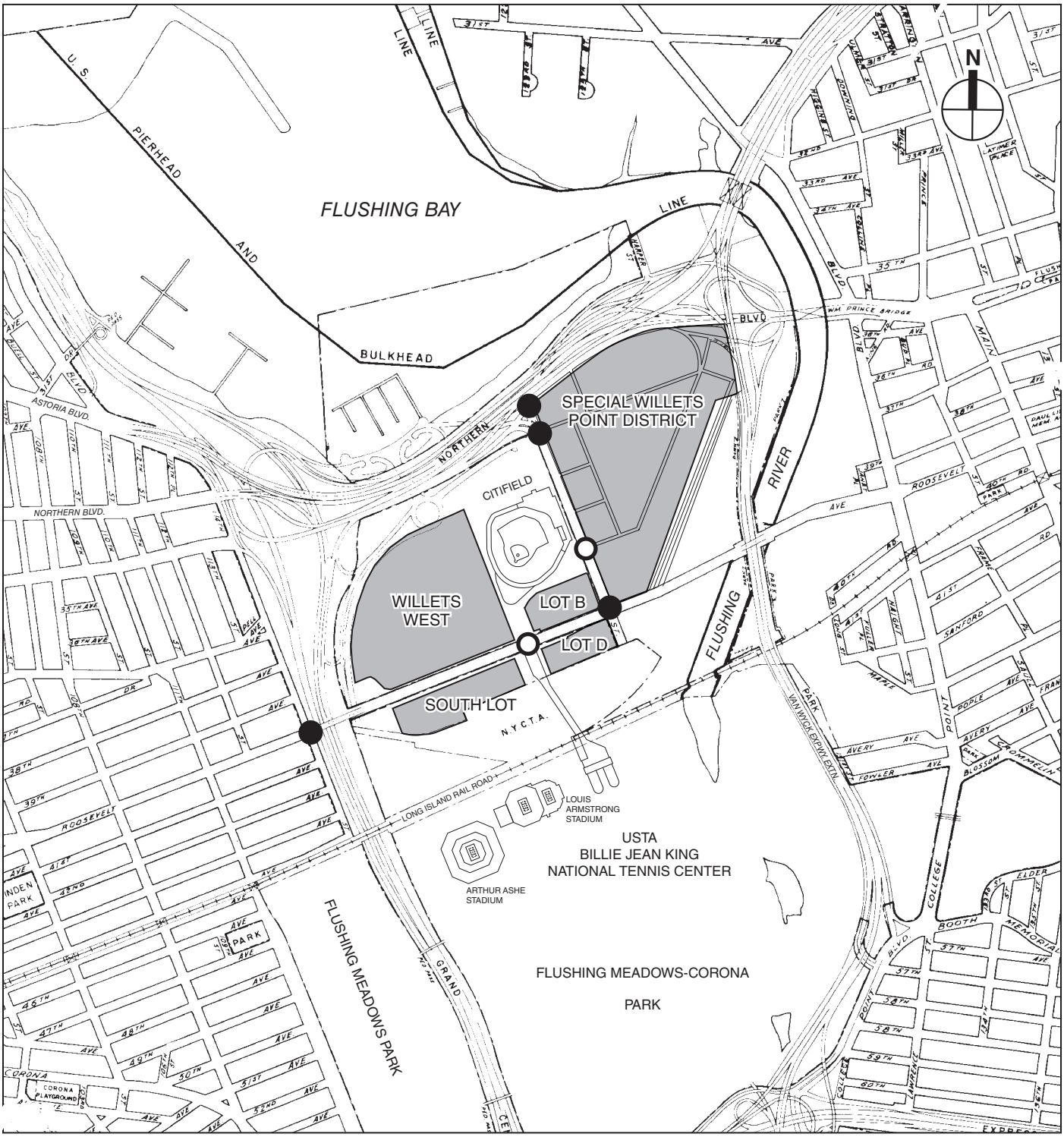
0 1000 2000 FEET

SCALE

Public Transit Options

Figure 14-4

3.5.13



Project Site

Study Area Intersections Analyzed

Intersections Added as Part of Proposed Plan

Pedestrian Study Area

Figure 14-5

SUBWAY SERVICE

The No. 7 train operates primarily along Roosevelt Avenue between Flushing, Queens, and midtown Manhattan. Local service is available 24 hours a day, and express service is available during the weekday AM peak period for travel to Manhattan and during the weekday PM peak period for travel to Flushing. Unscheduled express service is also supplemented during game days at CitiField and during the US Open. From 6:21 AM to 9:55 AM, the No. 7 train operates express service every 2 to 5 minutes and local service every 4 to 6 minutes to Manhattan. Flushing-bound, the No. 7 operates local every 3 to 6 minutes from 6:30 AM to 2:50 PM. The Flushing-bound express service begins at 2:55 PM and ends at 9:38 PM. Between 4:03 PM and 8:45 PM, the Flushing-bound No. 7 train operates express service every 2 to 5 minutes and local service every 5 to 8 minutes. When games occur on weekday evenings, there is express service to Manhattan for an hour after the end of the game. On Saturdays, there is local service every 4 to 6 minutes in both directions. On Sundays, the No. 7 train operates every 8 minutes during the morning and every 6 minutes during the afternoon in both directions.

BUS SERVICE

There are three study area bus routes, Q48 operated by NYCT, and Q19 and Q66 operated by the MTA Bus Company. The Q48 operates between Flushing and LaGuardia Airport and makes stops in both eastbound and westbound directions within the study area along Roosevelt Avenue. The Q19 operates between Flushing and Astoria and the Q66 operates between Flushing and Long Island City and stops within the study area along Northern Boulevard. While the Q66 makes stops in both eastbound and westbound directions, the Q19 makes stops in the eastbound direction only within the study area. All of these routes use standard buses with a guideline capacity of 54 passengers per bus. **Table 14-77** provides a summary of the weekday and weekend service headways of these bus routes.

Table 14-77
Local Bus Routes Serving the Study Area

Bus Route	Start Point	End Point	Routing	Frequency of Bus Service (Headway in Minutes)				
				AM	Midday	PM	Pre-game Weekend	Post-game Weekend
Q19 (EB/WB)	Flushing	Astoria	via Northern Boulevard/ Astoria Boulevard	(20/20)	(20/20)	(20/20)	(30/30)	(30/30)
Q48 (EB/WB)	Flushing	LaGuardia Airport	via Roosevelt Avenue/ Ditmars Boulevard	(15-20/15)	(20/20)	(15/20)	(20/20)	(20/20)
Q66 (EB/WB)	Flushing	Long Island City	via Northern Boulevard	(12/6)	(12/10)	(15/7-8)	(12/12)	(10/10)
Q66 (EB/WB)	Flushing	Woodside	via Northern Boulevard	(4-6/6)	(12/10)	(6/7-8)	(12/12)	(10/10)

Source: New York City Transit Bus Schedule(2011/2012)

LIRR SERVICE

The Port Washington Branch of the LIRR operates regular weekday local and express service, and weekend local only service between Port Washington and Penn Station. On game days at CitiField and during the US Open, it makes stops at the Mets-Willets Point LIRR station to accommodate event patrons.

PEDESTRIAN ELEMENTS

Numerous sidewalks, corner reservoirs, and crosswalks surrounding the project site were identified for analysis. These pedestrian elements, representing locations where most of the project-generated trips would be anticipated, are situated primarily along 126th Street between Roosevelt Avenue and Northern Boulevard and along Roosevelt Avenue between 114th and 126th Streets. Where appropriate, new pedestrian elements contemplated as part of the proposed project were incorporated into the analysis of probable impacts of the proposed project.

OPERATIONAL ANALYSIS METHODOLOGY

SUBWAY STATION ELEMENTS

The methodology for assessing station circulation (stairs, escalators, and passageways) and fare control (regular turnstiles, high entry/exit turnstiles, and high exit turnstiles) elements compares the user volume with the analyzed element's design capacity, resulting in a volume-to-capacity (v/c) ratio.

For stairs, the design capacity considers the effective width of a tread, which accounts for railings or other obstructions, the friction or counter-flow between upward and downward pedestrians (up to 10 percent capacity reduction is applied to account for counter-flow friction), surging of exiting pedestrians (up to 25 percent capacity reduction is applied to account for detraining surges near platforms), and the average area required for circulation. For passageways, similar considerations are made. For escalators and turnstiles, capacities are measured by the number and width of an element and the NYCT optimum capacity per element, also account for the potential for surging of exiting pedestrians. In the analysis for each of these elements, volumes and capacities are presented for 15-minute intervals.

The estimated v/c ratio is compared with NYCT criteria to determine a level of service (LOS) for the operation of an element, as summarized in **Table 14-78**.

Table 14-78
Level of Service Criteria for Subway Station Elements

LOS	V/C Ratio
A	0.00 to 0.45
B	0.45 to 0.70
C	0.70 to 1.00
D	1.00 to 1.33
E	1.33 to 1.67
F	Above 1.67

Source: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (January 2012 edition).

At LOS A ("free flow") and B ("fluid flow"), there is sufficient area to allow pedestrians to freely select their walking speed and bypass slower pedestrians. When cross and reverse flow movement exists, only minor conflicts may occur. At LOS C ("fluid, somewhat restricted"), movement is fluid although somewhat restricted. While there is sufficient room for standing without personal contact, circulation through queuing areas may require adjustments to walking speed. At LOS D ("crowded, walking speed restricted"), walking speed is restricted and reduced. Reverse and cross flow movement is severely restricted because of congestion and the difficult passage of slower moving pedestrians. At LOS E ("congested, some shuffling and queuing") and F ("severely congested, queued"), walking speed is restricted. There is also insufficient area to

bypass others, and opposing movement is difficult. Often, forward progress is achievable only through shuffling, with queues forming.

Significant Impact Criteria

The determination of significant impacts for station elements varies based on their type and use. For stairs and passageways, significant impacts are defined in term of width increment threshold (WIT) based on the minimum amount of additional capacity that would be required either to mitigate the location to its service conditions (LOS) under the No Action levels, or to bring it to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Significant impacts are typically considered to occur once the WITs in **Table 14-79** are reached or exceeded.

Table 14-79
Significant Impact Guidance for Stairs and Passageways

With Action V/C Ratio	WIT for Significant Impact (inches)	
	Stairway	Passageway
1.00 to 1.09	8.0	13.0
1.10 to 1.19	7.0	11.5
1.20 to 1.29	6.0	10.0
1.30 to 1.39	5.0	8.5
1.40 to 1.49	4.0	6.0
1.50 to 1.59	3.0	4.5
1.60 and up	2.0	3.0

Notes: WIT = Width Increment Threshold

Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (January 2012 edition).

For escalators and control area elements, impacts are significant if the proposed action causes a v/c ratio to increase from below 1.00 to 1.00 or greater. Where a facility is already at or above its capacity (a v/c of 1.00 or greater) in the No Action condition, a 0.01 increase in v/c ratio is also significant.

SUBWAY AND BUS LINE HAUL CAPACITIES

As per the *CEQR Technical Manual*, line-haul capacities are evaluated when a proposed action is anticipated to generate a perceptible number of passengers on particular subway and bus routes. For subways, if a subway line is expected to incur 200 or more passengers in one direction of travel during the commuter peak hours, a detailed review of ridership level at its maximum load point and/or other project-specific load points would be required to determine if the route's guideline (or practical) capacity would be exceeded. NYCT operates six different types of subway cars with different seating and guideline capacities. The peak period guideline capacity of a subway car, which ranges from 110 to 175 passengers, is compared with ridership levels to determine the acceptability of conditions.

Bus line-haul capacities are evaluated when a proposed action is anticipated to generate 50 or more bus passengers to a single bus line in one direction. The assessment of bus line-haul conditions involves analyzing bus routes at their peak load points and, if necessary, also their bus stops closest to the project site to identify the potential for the analyzed routes to exceed their guideline (or practical) capacities. NYCT and the MTA Bus Company operate three types of buses: standard and articulated buses, and over-the-road coaches. During peak hours, standard

buses operate with up to 54 passengers per bus, articulated buses operate with up to 85 passengers per bus, and over-the-road coaches operate with up to 55 passengers per bus.

Significant Impact Criteria

For subways, projected increases from the No Action condition within guideline capacity to a With Action condition that exceeds guideline capacity may be a significant impact if the proposed project is generating five more transit riders per car. Since there are constraints on what service improvements are available to NYCT, significant line-haul capacity impacts on subway routes are generally disclosed but would usually remain unmitigated. For buses, an increase in bus load levels greater than the maximum capacity at any load point is defined as a potential significant adverse impact. While subject to operational and fiscal constraints, bus impacts can typically be mitigated by increasing service frequency. Therefore, mitigation of bus line-haul capacity impacts, where appropriate, would be recommended for NYCT's approval.

PEDESTRIAN OPERATIONS

The adequacy of the study area's sidewalks, crosswalks, and corner reservoir capacities in relation to the demand imposed on them is evaluated based on the methodologies presented in the 2010 HCM, pursuant to procedures detailed in the *CEQR Technical Manual*.

Sidewalks are analyzed in terms of pedestrian flow. The calculation of the average pedestrians per minute per foot (PMF) of effective walkway width is the basis for a sidewalk level of service (LOS) analysis. The determination of walkway LOS is also dependent on whether the pedestrian flow being analyzed is best described as "non-platoon" or "platoon." Non-platoon flow occurs when pedestrian volume within the peak 15-minute period is relatively uniform, whereas, platoon flow occurs when pedestrian volumes vary significantly with the peak 15-minute period. Such variation typically occurs near bus stops, subway stations, and/or where adjacent crosswalks account for much of the walkway's pedestrian volume. In addition to the pedestrian flow, effective sidewalk width (i.e., part of the sidewalk that could be effectively used by pedestrians free of any obstructions) is another important parameter used in the analysis. In calculating the effective sidewalk width, the "shy distances" (i.e., the space left between pedestrians and building façades/curbs) are also taken into account.

Crosswalks and street corners are not easily measured in terms of free pedestrian flow, as they are influenced by the effects of traffic signals. Street corners must be able to provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the street or moving around the corner). The HCM methodologies apply a measure of time and space availability based on the area of the corner, the timing of the intersection signal, and the estimated space used by circulating pedestrians.

The total "time-space" available for these activities, expressed in square feet-second, is calculated by multiplying the net area of the corner (in square feet) by the signal's cycle length. The analysis then determines the total circulation time for all pedestrian movements at the corner per signal cycle (expressed as pedestrians per second). The ratio of net time-space divided by the total pedestrian circulation volume per signal cycle provides the LOS measurement of square feet per pedestrian (SFP).

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet-second. The average time required for a pedestrian to cross the street is calculated based

on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the total crosswalk pedestrian occupancy time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk. The LOS standards for sidewalks, corner reservoirs, and crosswalks are summarized in **Table 14-80**. The *CEQR Technical Manual* specifies acceptable LOS in Central Business District (CBD) areas is mid-LOS D or better, while acceptable LOS in non-CBD areas is within LOS C. Consistent with the traffic analysis, the CBD criteria were used in the pedestrian analyses.

Table 14-80
Level of Service Criteria for Pedestrian Elements

LOS	Sidewalks		Corner Reservoirs and Crosswalks
	Non-Platoon Flow	Platoon Flow	
A	≤ 5 PMF	≤ 0.5 PMF	> 60 SFP
B	> 5 and ≤ 7 PMF	> 0.5 and ≤ 3 PMF	> 40 and ≤ 60 SFP
C	> 7 and ≤ 10 PMF	> 3 and ≤ 6 PMF	> 24 and ≤ 40 SFP
D	> 10 and ≤ 15 PMF	> 6 and ≤ 11 PMF	> 15 and ≤ 24 SFP
E	> 15 and ≤ 23 PMF	> 11 and ≤ 18 PMF	> 8 and ≤ 15 SFP
F	> 23 PMF	> 18 PMF	≤ 8 SFP

Notes: PMF = pedestrians per minute per foot; SFP = square feet per pedestrian.

Source: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (January 2012 edition).

SIGNIFICANT IMPACT CRITERIA

The determination of significant pedestrian impacts considers the level of predicted deterioration in pedestrian flow or decrease in pedestrian space between the No Action and Action conditions. For different pedestrian elements, flow conditions, and area types, the CEQR procedure for impact determination corresponds with various sliding-scale formulas, as further detailed below.

Sidewalks

There are two sliding-scale formulas for determining significant sidewalk impacts. For non-platoon flow, the increase in average pedestrian flow rate (Y) in PMF needs to be greater or equal to 3.5 minus X divided by 8.0 (where X is the No Action pedestrian flow rate in PMF [$Y \geq 3.5 - X/8.0$]) for it to be a significant impact. For platoon flow, the sliding-scale formula is $Y \geq 3.03 - X/8.0$. Since deterioration in pedestrian flow within acceptable levels would not constitute a significant impact, these formulas would apply only if the With Action pedestrian flow exceeds LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table 14-81** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant sidewalk impacts.

Corner Reservoirs and Crosswalks

The determination of significant corner and crosswalk impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.31$, where Y is the decrease in pedestrian space in SFP and X is the No Action pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, this formula would apply only if the Action pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas.

Table 14-81
Significant Impact Guidance for Sidewalks

Non-Platoon Flow				Platoon Flow			
Sliding Scale Formula: ***Y ≥ 3.5 – X/8.0***				**Sliding Scale Formula:** ***Y ≥ 3.03 – X/8.0***			
Non-CBD Areas		**CBD Areas**		**Non-CBD Areas**		**CBD Areas**	
No Action Ped. Flow (X, PMF)	**Action Ped. Flow Incr. (Y, PMF)**	**No Action Ped. Flow (X, PMF)**	**Action Ped. Flow Incr. (Y, PMF)**	**No Action Ped. Flow (X, PMF)**	**Action Ped. Flow Incr. (Y, PMF)**	**No Action Ped. Flow (X, PMF)**	**Action Ped. Flow Incr. (Y, PMF)**
7.5 to 7.8	≥ 2.6	–	–	3.5 to 3.8	≥ 2.6	–	–
7.9 to 8.6	≥ 2.5	–	–	3.9 to 4.6	≥ 2.5	–	–
8.7 to 9.4	≥ 2.4	–	–	4.7 to 5.4	≥ 2.4	–	–
9.5 to 10.2	≥ 2.3	–	–	5.5 to 6.2	≥ 2.3	–	–
10.3 to 11.0	≥ 2.2	10.4 to 11.0	≥ 2.2	6.3 to 7.0	≥ 2.2	6.4 to 7.0	≥ 2.2
11.1 to 11.8	≥ 2.1	11.1 to 11.8	≥ 2.1	7.1 to 7.8	≥ 2.1	7.1 to 7.8	≥ 2.1
11.9 to 12.6	≥ 2.0	11.9 to 12.6	≥ 2.0	7.9 to 8.6	≥ 2.0	7.9 to 8.6	≥ 2.0
12.7 to 13.4	≥ 1.9	12.7 to 13.4	≥ 1.9	8.7 to 9.4	≥ 1.9	8.7 to 9.4	≥ 1.9
13.5 to 14.2	≥ 1.8	13.5 to 14.2	≥ 1.8	9.5 to 10.2	≥ 1.8	9.5 to 10.2	≥ 1.8
14.3 to 15.0	≥ 1.7	14.3 to 15.0	≥ 1.7	10. to 11.0	≥ 1.7	10. to 11.0	≥ 1.7
15.1 to 15.8	≥ 1.6	15.1 to 15.8	≥ 1.6	11.1 to 11.8	≥ 1.6	11.1 to 11.8	≥ 1.6
15.9 to 16.6	≥ 1.5	15.9 to 16.6	≥ 1.5	11.9 to 12.6	≥ 1.5	11.9 to 12.6	≥ 1.5
16.7 to 17.4	≥ 1.4	16.7 to 17.4	≥ 1.4	12.7 to 13.4	≥ 1.4	12.7 to 13.4	≥ 1.4
17.5 to 18.2	≥ 1.3	17.5 to 18.2	≥ 1.3	13.5 to 14.2	≥ 1.3	13.5 to 14.2	≥ 1.3
18.3 to 19.0	≥ 1.2	18.3 to 19.0	≥ 1.2	14.3 to 15.0	≥ 1.2	14.3 to 15.0	≥ 1.2
19.1 to 19.8	≥ 1.1	19.1 to 19.8	≥ 1.1	15.1 to 15.8	≥ 1.1	15.1 to 15.8	≥ 1.1
19.9 to 20.6	≥ 1.0	19.9 to 20.6	≥ 1.0	15.9 to 16.6	≥ 1.0	15.9 to 16.6	≥ 1.0
20.7 to 21.4	≥ 0.9	20.7 to 21.4	≥ 0.9	16.7 to 17.4	≥ 0.9	16.7 to 17.4	≥ 0.9
21.5 to 22.2	≥ 0.8	21.5 to 22.2	≥ 0.8	17.5 to 18.2	≥ 0.8	17.5 to 18.2	≥ 0.8
22.3 to 23.0	≥ 0.7	22.3 to 23.0	≥ 0.7	18.3 to 19.0	≥ 0.7	18.3 to 19.0	≥ 0.7
> 23.0	≥ 0.6	> 23.0	≥ 0.6	> 19.0	≥ 0.6	> 19.0	≥ 0.6

Notes: PMF = pedestrians per minute per foot; Y = increase in average pedestrian flow rate in PMF; X = No Action pedestrian flow rate in PMF.
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (January 2012 edition).

Table 14-82 summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant corner reservoir and crosswalk impacts.

J. EXISTING CONDITIONS (TRANSIT AND PEDESTRIANS)

Existing conditions for the analysis of subway station elements are based upon field surveys conducted on May 5, May 16, June 5, and June 9, 2012. Bus ridership data for the Q19, Q48, and Q66 bus routes were obtained from NYCT and the MTA Bus Company, as well as field surveys conducted on May 8, 2012. Subway ridership data were obtained from NYCT. Existing pedestrian levels are based on field surveys conducted in May and June 2012. As per the 2012 *CEQR Technical Manual*, crosswalk counts at all study area intersections were collected for one additional weekday and one additional weekend day during the representative peak periods to validate the pedestrian count data.

To determine peak conditions for transit elements and pedestrian facilities, weekday counts were conducted during the 7:00 to 9:30 AM, 11:00 AM to 1:00 PM, and 4:00 to 7:00 PM time periods for the non-game condition and 4:30 to 7:30 PM for the weekday pre-game condition. Weekend non-game counts were conducted during the 12:00 to 6:00 PM time period and weekend pre-game and post-game counts were conducted during the 2:00 to 5:00 PM and 6:00 to 8:30 PM time periods, respectively. Peak hours were determined by comparing rolling hourly averages and the highest 15-minute volumes within the selected peak hours were selected for analysis.

Table 14-82
Significant Impact Guidance for Corners and Crosswalks

Sliding Scale Formula: *Y ≥ X/9.0 – 0.31*			
Non-CBD Areas		CBD Areas	
No Action Pedestrian Space (X, SFP)	Action Pedestrian Space Reduction (Y, SFP)	No Action Pedestrian Space (X, SFP)	Action Pedestrian Space Reduction (Y, SFP)
25.8 to 26.6	≥ 2.6	–	–
24.9 to 25.7	≥ 2.5	–	–
24.0 to 24.8	≥ 2.4	–	–
23.1 to 23.9	≥ 2.3	–	–
22.2 to 23.0	≥ 2.2	–	–
21.3 to 22.1	≥ 2.1	21.3 to 21.5	≥ 2.1
20.4 to 21.2	≥ 2.0	20.4 to 21.2	≥ 2.0
19.5 to 20.3	≥ 1.9	19.5 to 20.3	≥ 1.9
18.6 to 19.4	≥ 1.8	18.6 to 19.4	≥ 1.8
17.7 to 18.5	≥ 1.7	17.7 to 18.5	≥ 1.7
16.8 to 17.6	≥ 1.6	16.8 to 17.6	≥ 1.6
15.9 to 16.7	≥ 1.5	15.9 to 16.7	≥ 1.5
15.0 to 15.8	≥ 1.4	15.0 to 15.8	≥ 1.4
14.1 to 14.9	≥ 1.3	14.1 to 14.9	≥ 1.3
13.2 to 14.0	≥ 1.2	13.2 to 14.0	≥ 1.2
12.3 to 13.1	≥ 1.1	12.3 to 13.1	≥ 1.1
11.4 to 12.2	≥ 1.0	11.4 to 12.2	≥ 1.0
10.5 to 11.3	≥ 0.9	10.5 to 11.3	≥ 0.9
9.6 to 10.4	≥ 0.8	9.6 to 10.4	≥ 0.8
8.7 to 9.5	≥ 0.7	8.7 to 9.5	≥ 0.7
7.8 to 8.6	≥ 0.6	7.8 to 8.6	≥ 0.6
6.9 to 7.7	≥ 0.5	6.9 to 7.7	≥ 0.5
6.0 to 6.8	≥ 0.4	6.0 to 6.8	≥ 0.4
5.1 to 5.9	≥ 0.3	5.1 to 5.9	≥ 0.3
< 5.1	≥ 0.2	< 5.1	≥ 0.2

Notes: SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No Action pedestrian space in SFP.
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (January 2012 edition).

To determine peak conditions for bus line-haul, the most recent line-haul data were acquired for the Q48 (from NYCT), Q19 (from MTA Bus Company), and the Q66 (from MTA Bus Company) bus routes for 2009, 2011, and 2010, respectively. A 0.5-percent annual growth rate was applied to generate the existing 2012 peak load point volumes. A ridership field survey was also conducted at the Northern Boulevard and 126th Street stop (Q19 Eastbound and Q66 Eastbound) and at the Roosevelt Avenue and 126th Street stop (Q48 Eastbound and Westbound) in May 2012. The highest hourly volumes for each route were selected for analysis.

To determine peak conditions for the subway line-haul, the 2011 subway line-haul data for the No. 7 train at the peak load points were obtained from NYCT for Manhattan-bound (40th Street-local service and Woodside and 61st Street–express service) during the AM peak hour and Flushing-bound (Queens borough Plaza–local and express service) during the PM peak hour. A 0.5-percent annual growth rate was applied to generate the existing 2012 peak load point volumes for analysis. As discussed above, a detailed examination of line-haul conditions on the N/Q lines will be prepared, in coordination with NYCT, for the Final EIS.

The Mets attendances on the days that the transit and pedestrian counts were performed varied; hence, adjustments of the collected data were adjusted to arrive at representative game day baseline levels for both the weekday and weekend day. On the weeknight that the transit data and the first day of pedestrian data were collected (Wednesday May 16th), Mets game attendance was 22,659, as compared to 32,587 on the second day that pedestrian crosswalk data were collected (Tuesday June 19th). The weekend game day transit data and the majority of the day one pedestrian data were collected on Saturday May 5th with the remaining day one pedestrian data collected on Saturday June 2nd. The Mets attendances on May 5th and June 2nd were 30,253 and 27,914, respectively.

The second day of pedestrian crosswalk data was collected on Sunday June 17th and had a game attendance of 40,134. The second day of pedestrian crosswalk data was counted on a Sunday because there were no other Saturday 4 PM home games prior to the summer data collection moratorium and this was the only remaining applicable weekend home game. The Sunday game was a 1 PM start time and the data collection peak periods were shifted three hours earlier than the 4 PM game in order to collect comparable data with similar travel patterns.

In order to adjust existing transit and pedestrian volumes to account for conservatively representative game days, attendance data were compiled for all games from the previous two seasons (2010 and 2011). The 85th percentile attendance for weekday games for the 2010 and 2011 seasons combined was approximately 35,914 attendees and the 85th percentile attendance for weekend games for the 2010 and 2011 seasons combined was 37,577 attendees. Consistent with the traffic analysis, the first day of pedestrian and transit data were used as the baseline existing volumes prior to the 85th percentile adjustments. To adjust the existing transit and pedestrian volumes upward to the 85th percentile attendance levels, the two days of pedestrian data were compared to one another as well as the 85th percentile game day attendance numbers to determine the correlation between the increase in attendance and the increase in pedestrian volumes. As a result, a uniform growth percentage was determined per game day time period, and applied for all transit and pedestrian elements included as part of the analysis to reflect a conservatively representative 85th percentile attendance in the existing conditions. Correspondingly, the collected transit and pedestrian volumes were grown by 33, 18, and 45 percent during the weekday pre-game, weekend pre-game, and weekend post-game peak hours, respectively.

SUBWAY STATION OPERATIONS

Since the Mets-Willets Point subway station has multiple entrances, the quantified analysis was limited to the elements that would most likely be used by riders traveling to and from Willets West, the District, and Lot B. Based on the travel demand estimates detailed in the "Traffic and Parking" section, it was determined that quantified analyses would be required for the street-level and mezzanine stairways and mezzanine ramps serving trips generated by the proposed project, as well as control areas within the subway station.

Street-level stairways on the north and south sides of Roosevelt Avenue connect to the main control area across from the station agent's booth on the mezzanine level. Because all project-generated trips would be expected to use the street-level and street-mezzanine stairways on the north side of Roosevelt Avenue, those on the south side of Roosevelt Avenue were not analyzed. On the mezzanine level, the main control area, containing five turnstiles and one emergency exit gate, provides separation between the free and fare zones of the station. Within the fare zone, two ramps and four stairways provide access to the Manhattan-bound and Flushing-bound platforms, respectively.

On a typical day, access to and egress from the Mets-Willets Point subway station occur at the main control area. However, during several hours on game days, the main control area is disabled and the entire mezzanine level becomes a free zone to provide access to and from the passerelle, which connects the southern end of the station to the LIRR and parking south of Roosevelt Avenue, and on the north end of the station, a 42-foot wide stairway (replacing the Stadium rotunda when CitiField was completed in 2009) connects to a pedestrian plaza on the north side of Roosevelt Avenue. When this operation is in place, access to the No. 7 train is made through four individual control areas, with six to eight turnstiles each, connecting to the six platform ramps and stairways. Hence, game-day station analysis considers the condition at these four control areas instead of the main station control area.

As described in the previous section, surveys were conducted in May and June 2012 to determine peak hour pedestrian volumes at the street level stairway, mezzanine stairways and ramps, and control areas within the station and were adjusted to account for conservatively representative 85th percentile attendance. Typically, subway station elements would be evaluated for only the AM and PM commuter peak hours. However, to address worst-case game-day conditions at the Mets-Willets Point subway station, the weekday pre-game, and weekend pre-game and post-game conditions were also included for analysis.

As shown in **Tables 14-83** and **14-84**, all analyzed stairways and ramps and control areas currently operate at acceptable levels during all peak hours.

SUBWAY LINE HAUL LEVELS

A subway line-haul analysis typically considers the weekday commuter period leave load levels at the analysis routes' peak load points. Because peak travel to and from the project site is expected to be westbound in the morning and eastbound in the afternoon, a line-haul capacity analysis was conducted for the Manhattan-bound express trains at the Woodside-61st Street subway station and for the Manhattan-bound local trains at the 40th Street station for the AM peak period and for the Flushing-bound trains at the Queensboro Plaza subway station for the PM peak period. The No. 7 subway line operates 11-car trains. The guideline capacity of these cars is 110 passengers each. However, crush loads could reach as many as 165 passengers per car. The 2011 Manhattan-bound and Flushing-bound peak load point passenger volumes and the number of peak period trains were obtained from NYCT. A 0.5-percent annual growth rate was applied to generate the existing 2012 peak load point volumes. As shown in **Table 14-85**, the No. 7 train currently operates below guideline capacity during the weekday AM commuter peak period for the Manhattan-bound local service and during the weekday PM commuter peak period for the Flushing-bound service. However, the Manhattan-bound express service exceeds the guideline capacity during the weekday AM peak period. Between the Draft SEIS and Final SEIS, a detailed examination of line-haul conditions on the N/Q lines will also prepared, in coordination with NYCT.

Table 14-83

2012 Existing Conditions: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekday AM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	12	25	0.90	0.90	0.05	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	7	15	0.90	0.90	0.03	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	19	40	0.90	0.90	0.04	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	1	34	0.75	1.00	0.04	A
Flushing-bound West P10 Stair	9.6	8.3	1	31	0.75	1.00	0.03	A
Flushing-bound East P4 Stair	9.9	8.7	1	37	0.75	1.00	0.04	A
Flushing-bound East P2 Stair	10.1	8.8	3	32	0.75	0.90	0.04	A
Manhattan-bound West Ramp Passageway	17.6	15.6	63	6	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	31	10	0.75	0.90	0.01	A
Weekday PM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	23	20	0.90	0.90	0.05	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	21	14	0.90	0.90	0.04	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	44	34	0.90	0.90	0.05	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	2	43	0.75	1.00	0.05	A
Flushing-bound West P10 Stair	9.6	8.3	1	40	0.75	1.00	0.04	A
Flushing-bound East P4 Stair	9.9	8.7	3	52	0.75	0.90	0.06	A
Flushing-bound East P2 Stair	10.1	8.8	8	44	0.75	0.90	0.06	A
Manhattan-bound West Ramp Passageway	17.6	15.6	68	4	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	21	6	0.75	0.90	0.01	A
Weekday Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	9	204	0.90	1.00	0.24	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	9	9	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	18	213	0.90	0.90	0.16	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	4	408	0.75	1.00	0.43	A
Flushing-bound West P10 Stair	9.6	8.3	3	435	0.75	1.00	0.47	B
Flushing-bound East P4 Stair	9.9	8.7	4	379	0.75	1.00	0.39	A
Flushing-bound East P2 Stair	10.1	8.8	6	247	0.75	1.00	0.25	A
Manhattan-bound West Ramp Passageway	17.6	15.6	59	19	0.75	0.90	0.03	A
Manhattan-bound East Ramp Passageway	19.6	17.6	24	22	0.75	0.90	0.01	A
Weekend Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	9	302	0.90	1.00	0.35	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	2	6	0.90	0.90	0.01	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	11	308	0.90	1.00	0.20	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	2	274	0.75	1.00	0.29	A
Flushing-bound West P10 Stair	9.6	8.3	0	267	0.75	1.00	0.28	A
Flushing-bound East P4 Stair	9.9	8.7	2	421	0.75	1.00	0.43	A
Flushing-bound East P2 Stair	10.1	8.8	6	260	0.75	1.00	0.27	A
Manhattan-bound West Ramp Passageway	17.6	15.6	49	19	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	18	49	0.75	0.90	0.02	A

Table 14-83 (cont'd)
2012 Existing Conditions: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes Up	15-Minute Pedestrian Volumes Down	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekend Post-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	128	14	0.90	0.90	0.16	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	14	3	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	142	17	0.90	0.90	0.10	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	372	12	0.75	1.00	0.30	A
Flushing-bound West P10 Stair	9.6	8.3	298	20	0.75	0.90	0.29	A
Flushing-bound East P4 Stair	9.9	8.7	342	14	0.75	1.00	0.28	A
Flushing-bound East P2 Stair	10.1	8.8	558	9	0.75	1.00	0.43	A
Manhattan-bound West Ramp Passageway	17.6	15.6	682	4	0.75	1.00	0.20	A
Manhattan-bound East Ramp Passageway	19.6	17.6	374	8	0.75	1.00	0.10	A

Notes:
Capacities were calculated based on rates presented in the *CEQR Technical Manual* (January 2012 edition).
Surging factors are only applied to the exiting pedestrian volume (*CEQR Technical Manual*).
V/C Stairway = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
V/C Passageway = [Vin / (225 * We * Sf * Ff)]+ [Vx/ (225 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs/passageways
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 14-84
2012 Existing Conditions: Subway Station Control Area Analysis

Mets-Willets Point No. 7 Train Station Control Area Elements	Quantity	15-Minute Pedestrian Volumes Into Control Area	15-Minute Pedestrian Volumes Out from Control Area	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekday AM Non-Game							
Main Control Area Turnstiles (R532)	5	85	117	0.80	0.90	0.10	A
Weekday PM Non-Game							
Main Control Area Turnstiles (R532)	5	84	159	0.80	0.90	0.11	A
Weekday Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	24	22	0.75	0.90	0.02	A
Manhattan-bound West Ramp Turnstiles	6	59	19	0.75	0.90	0.03	A
Flushing-bound East Stair Turnstiles	8	10	626	0.80	1.00	0.15	A
Flushing-bound West Stair Turnstiles	6	7	843	0.80	1.00	0.28	A
Weekend Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	18	49	0.75	0.90	0.02	A
Manhattan-bound West Ramp Turnstiles	6	49	19	0.75	0.90	0.03	A
Flushing-bound East Stair Turnstiles	8	8	681	0.80	1.00	0.17	A
Flushing-bound West Stair Turnstiles	6	2	541	0.80	1.00	0.18	A
Weekend Post-Game							
Manhattan-bound East Ramp Turnstiles	7	374	8	0.75	1.00	0.13	A
Manhattan-bound West Ramp Turnstiles	6	682	4	0.75	1.00	0.27	A
Flushing-bound East Stair Turnstiles	8	900	23	0.80	1.00	0.27	A
Flushing-bound West Stair Turnstiles	6	670	32	0.80	1.00	0.28	A

Notes: Capacities were calculated based on rates presented in the *CEQR Technical Manual* (January 2012 edition).
V/C =Vin / (Cin x Ff)+ Vx / (Cx x Sf x Ff)
Vin = Peak 15 Min Entering Passenger Volume
Cin= Total 15-Minute Capacity of all turnstiles for entering Passengers
Vx = Peak 15- Minute Exiting Passenger
Cx = Total 15-minute Capacity of all turnstile for exiting Passengers
Sf = Surging Factor
Ff = Friction Factor

Table 14-85
2012 Existing Conditions: Peak Hour Subway Line Haul

No. 7 Train Direction of Travel	Station	Trains/ Hour	Volume	Leave Load		Available Capacity
				Guideline Capacity	V/C Ratio	
AM Peak Period						
Manhattan-bound Express	Woodside–61st Street	14	18,172	16,940	1.07	-1,232
Manhattan-bound Local	40th Street	13	14,683	15,730	0.93	1,047
PM Peak Period						
Flushing-bound Express + Local	Queensboro Plaza	21	20,499	25,410	0.81	4,911

Sources: New York City Transit
Notes: For the AM peak hour, although transit data show that a total of 27 trains traverse the respective express and local peak load points, the total number of scheduled trains during this hour is 26 trains.

BUS LINE HAUL LEVELS

To assess the potential impacts on the study area bus routes, the most recent ridership data were acquired from NYCT and the MTA Bus Company. As shown in **Table 14-86**, all three routes presently operate within guideline capacities (54 passengers per bus) at their respective maximum load points. In addition, existing load levels at bus stops serving CitiField and the Willets Point area were surveyed. The Q48 makes stops along Roosevelt Avenue at 114th Street, the Mets-Willets Point subway station, and 126th Street both eastbound and westbound. The Q19 and Q66 have a stop along eastbound Northern Boulevard between 126th Street and 126th Place but no Q66 buses made stops during the field surveys. In the westbound direction, there is not a marked bus stop. However, according to the MTA Bus Company, the Q66 currently makes stops westbound at the Northern Boulevard intersection with 126th Street while the Q19 bypasses the area. The survey data summarized in **Table 14-87** show that the eastbound Q19 and Q66 passenger loads at the Northern Boulevard and 126th Street stop are lower than those at the two routes' respective maximum load points. Therefore, load levels at the areawide maximum load points shown in **Table 14-86** were conservatively used for the analysis of the Q19 and Q66 routes. For the Q48, because the incremental bus passenger volumes generated by the proposed project are expected to shift the route's maximum load points to the Mets-Willets Point subway station bus stops even though the existing passenger loads at the Roosevelt Avenue and 126th Street stops are lower than those at the route's maximum load points during peak hours, the future conditions analyses for this route would consider changes only at the bus stops serving the project site.

Table 14-86
2012 Existing Conditions: Bus Line Haul at NYCT Maximum Load Points

Route	Peak Period	Buses Per Hour	Eastbound		Buses Per Hour	Westbound	
			Max Load Point	AP		Max Load Point	AP
Q19	AM	3	Astoria Blvd/ 102nd St	41	3	Astoria Blvd/ 77th St	42
	PM	3	Astoria Blvd/ 94th St	27	3	Astoria Blvd/Humphrey St	31
Q48	AM	4	Roosevelt Ave/108th St & Roosevelt Ave/ Main Street	53	3	Roosevelt Ave/108th St & Roosevelt Ave/ Main Street	22
	PM	4	Roosevelt Ave/108th St & Roosevelt Ave/ Main Street	22	4	Roosevelt Ave/108th St & Roosevelt Ave/ Main Street	23
Q66	AM	15	Northern Blvd/ 110th St	45	14	Northern Blvd/ 72nd St	45
	PM	10	Northern Blvd/ 110th St	20	10	Northern Blvd/ 106th St	20

Note: AP = average passengers per bus; **(#)** = exceeds NYCT guideline capacity
Source: Q48 ridership data provided by NYCT; Q19 and Q66 ridership data provided by the MTA Bus Company; Q19 and Q66 number of buses/hour is based on NYCT bus schedule (2011/2012)

Table 14-87
2012 Existing Conditions: Bus Line Haul at District Load Points

Route	Peak Period	Buses Per Hour	Eastbound		Buses Per Hour	Westbound	
			Load Point	AP		Load Point	AP
Q19	AM	4	Northern Blvd/ 126th St	16	N/A	N/A	N/A
	PM	4	Northern Blvd/ 126th St	13	N/A	N/A	N/A
Q48	AM	5	Roosevelt Avenue/ 126th St	32	5	Roosevelt Avenue/ 126th St	9
	PM	3	Roosevelt Avenue/ 126th St	20	5	Roosevelt Avenue/ 126th St	22
Q66	AM	13	Northern Blvd/ 126th St	20*	N/A	N/A	N/A
	PM	9	Northern Blvd/ 126th St	16*	N/A	N/A	N/A

Note:
* Buses do not make a stop. Passenger volumes were approximated based on observations of passing buses.
AP = average passengers per bus; **(#)** = exceeds NYCT guideline capacity
Source: AKRF survey, May 2012

STREET-LEVEL PEDESTRIAN OPERATIONS

The study area sidewalks, corner reservoirs, and crosswalks were assessed for the weekday AM, midday, PM, and pre-game peak periods, as well as, the weekend midday non-game, pre-game, and post-game peak periods. As discussed earlier, in accordance with the 2012 *CEQR Technical Manual*, a second day of count data was collected for all the crosswalks included in the pedestrian analysis for all time periods to develop the existing peak hour pedestrian volumes. The existing peak hour pedestrian volumes are shown in **Appendix D**.

As shown in **Tables 14-88** through **14-92**, all sidewalk, corner reservoir, and crosswalk analysis locations operate at acceptable levels (maximum of 8.5 PMF platoon flows for sidewalks; minimum of 19.5 SFP for corners and crosswalks), except at the following locations:

- The north crosswalk of 34th Avenue and 126th Street, which operates at LOS F with 5.3 SFP during the weekend post-game peak 15-minute period.
- The south crosswalk of 34th Avenue and 126th Street, which operates at LOS E with 11.4 SFP during the weekend post-game peak 15-minute period.

Table 14-88

2012 Existing Conditions: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday AM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	42	0.81	0.09	A
	West	6.0	0	0.80	0.00	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	40	0.91	0.05	A
	South	12.5	30	0.80	0.05	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	82	0.80	0.14	A
	South	11.5	41	0.80	0.07	A
34th Avenue between 126th Street and 126th Place	North	11.5	3	0.80	0.01	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	38	0.80	0.32	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	19	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	63	0.80	0.19	A
	South	8.5	88	0.80	0.22	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	81	0.80	0.14	A
	South	13.0	80	0.83	0.12	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	58	0.80	0.24	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	14	0.80	0.05	A
Weekday Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	29	0.80	0.06	A
	West	6.0	3	0.80	0.01	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	34	0.80	0.05	A
	South	12.5	44	0.80	0.07	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	52	0.80	0.09	A
	South	11.5	33	0.80	0.06	A
34th Avenue between 126th Street and 126th Place	North	11.5	2	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	29	0.80	0.24	A
	West	8.0	1	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	19	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	55	0.80	0.16	A
	South	8.5	34	0.80	0.08	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	63	0.80	0.11	A
	South	13.0	37	0.80	0.06	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	75	0.80	0.31	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	11	0.80	0.04	A

Table 14-88 (cont'd)
2012 Existing Conditions: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday PM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	15	0.80	0.03	A
	West	6.0	8	0.80	0.03	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	21	0.80	0.03	A
	South	12.5	43	0.80	0.07	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	54	0.80	0.09	A
	South	11.5	40	0.80	0.07	A
34th Avenue between 126th Street and 126th Place	North	11.5	0	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	57	0.80	0.48	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	19	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	41	0.80	0.12	A
	South	8.5	46	0.80	0.11	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	78	0.80	0.13	A
	South	13.0	48	0.80	0.08	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	50	0.80	0.21	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	26	0.80	0.09	A
Weekday Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	141	0.80	0.31	A
	West	6.0	185	0.83	0.62	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	93	0.88	0.11	A
	South	12.5	82	0.80	0.14	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	123	0.80	0.21	A
	South	11.5	65	0.82	0.12	A
34th Avenue between 126th Street and 126th Place	North	11.5	82	0.80	0.15	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	134	0.80	1.12	B
	West	8.0	28	0.80	0.07	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	194	0.80	0.43	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	335	0.80	1.00	B
	South	8.5	189	0.80	0.46	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	236	0.82	0.38	A
	South	13.0	76	0.80	0.12	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	201	0.86	0.78	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	139	0.80	0.48	A

Note: PMF = pedestrians per minute per foot.

Table 14-89
2012 Existing Conditions: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	33	0.80	0.07	A
	West	6.0	7	0.80	0.02	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	70	0.80	0.09	A
	South	12.5	60	0.80	0.10	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	122	0.82	0.20	A
	South	11.5	42	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	19	0.80	0.03	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	41	0.80	0.34	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	27	0.80	0.06	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	119	0.85	0.33	A
	South	8.5	156	0.80	0.38	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	110	0.89	0.17	A
	South	13.0	104	0.80	0.17	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	77	0.80	0.32	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	34	0.80	0.12	A
Weekend Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	93	0.80	0.20	A
	West	6.0	266	0.80	0.84	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	95	0.80	0.13	A
	South	12.5	157	0.80	0.26	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	125	0.85	0.19	A
	South	11.5	105	0.80	0.19	A
34th Avenue between 126th Street and 126th Place	North	11.5	24	0.80	0.04	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	256	0.80	2.13	B
	West	8.0	24	0.80	0.06	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	162	0.93	0.31	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	307	0.87	0.84	B
	South	8.5	246	0.80	0.60	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	146	0.86	0.23	A
	South	13.0	83	0.80	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	229	0.80	0.95	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	59	0.80	0.20	A
Weekend Post-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	431	0.80	0.95	B
	West	6.0	824	0.80	2.86	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	133	0.80	0.18	A
	South	12.5	153	0.80	0.26	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	157	0.80	0.26	A
	South	11.5	148	0.80	0.27	A
34th Avenue between 126th Street and 126th Place	North	11.5	0	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	556	0.80	4.63	C
	West	8.0	33	0.80	0.09	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	488	0.80	1.07	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	628	0.80	1.87	B
	South	8.5	245	0.80	0.60	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	244	0.80	0.41	A
	South	13.0	61	0.80	0.10	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	390	0.80	1.63	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	119	0.80	0.41	A

Note: PMF = pedestrians per minute per foot.

Table 14-90
2012 Existing Conditions: Pedestrian LOS Analysis for Corners

Location	Corner	Weekday								Weekend					
		AM		Midday		PM		Pre-Game		Midday Non-Game		Pre-Game		Post-Game	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Roosevelt Avenue and 126th Street	Northwest	1698.3	A	2398.1	A	3000.8	A	890.6	A	1538.9	A	945.8	A	598.0	A
	Northeast	1315.7	A	1383.3	A	2714.8	A	534.0	A	1128.7	A	609.9	A	354.0	A
Roosevelt Avenue and 114th Street	Northwest	1740.2	A	1533.1	A	1785.4	A	376.5	A	1031.4	A	458.3	A	230.4	A
	Southwest	1271.5	A	1612.2	A	1170.0	A	368.7	A	544.9	A	451.0	A	375.2	A

Note: SFP = square feet per pedestrian.

Table 14-91
2012 Existing Conditions: Weekday Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with Conflicting Vehicles											
				Weekday AM			Weekday Midday			Weekday PM			Weekday Pre-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	45	1748.4	A	40	1798.8	A	23	3044.6	A	112	706.4	A
	East	43.0	14.0	4	4406.3	A	7	2437.2	A	2	8064.4	A	6	2642.6	A
	South	50.0	13.0	22	2811.0	A	37	1653.1	A	27	2292.0	A	82	757.5	A
	West	43.0	13.5	6	2844.8	A	10	1591.0	A	8	2066.6	A	42	179.9	A
34th Avenue and 126th Street	North	81.0	12.5	3	3152.9	A	0	N/A	A	4	2158.2	A	15	516.9	A
	East	30.0	7.0	10	2041.8	A	13	1507.1	A	20	986.6	A	218	82.5	A
	South	61.0	10.5	2	3020.6	A	1	5913.9	A	2	3207.8	A	134	46.8	B
	West	47.5	12.5	0	N/A	A	0	N/A	A	2	19187.0	A	40	955.4	A
Northern Boulevard and 126th Street	East	43.5	14.0	2	6504.2	A	2	5828.2	A	2	5685.0	A	17	637.7	A
	South	51.0	15.0	7	11652.5	A	1	81604.6	A	3	27198.9	A	27	3011.1	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	56	1183.6	A	58	1022.8	A	48	1317.8	A	312	167.6	A
	East	44.0	11.0	8	1302.2	A	4	3015.5	A	7	1211.4	A	26	356.3	A
	South	32.5	12.0	66	849.1	A	40	1299.4	A	55	871.9	A	189	245.1	A
	West	43.0	13.0	13	1466.4	A	18	1178.9	A	20	970.6	A	52	353.2	A

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.

Table 14-92
2012 Existing Conditions: Weekend Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with Conflicting Vehicles								
				Weekend Midday Non-Game			Weekend Pre-Game			Weekend Post-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	55	1280.5	A	86	776.3	A	129	588.3	A
	East	43.0	14.0	5	3274.5	A	11	1602.5	A	22	506.3	A
	South	50.0	13.0	63	983.3	A	160	383.8	A	154	403.3	A
	West	43.0	13.5	14	1168.9	A	64	119.8	A	70	202.6	A
34th Avenue and 126th Street	North	81.0	12.5	4	2728.3	A	204	39.8	C	554	5.3	F
	East	30.0	7.0	24	821.2	A	2	9937.0	A	0	N/A	A
	South	61.0	10.5	5	1230.7	A	181	24.2	C	326	11.4	E
	West	47.5	12.5	4	9830.2	A	28	1255.1	A	170	203.2	A
Northern Boulevard and 126th Street	East	43.5	14.0	8	1739.8	A	10	1123.9	A	66	144.8	A
	South	51.0	15.0	3	27198.9	A	10	8152.0	A	7	11647.7	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	105	508.6	A	225	223.4	A	557	75.7	A
	East	44.0	11.0	13	633.3	A	35	181.9	A	41	230.7	A
	South	32.5	12.0	134	355.0	A	137	340.4	A	141	335.1	A
	West	43.0	13.0	32	596.5	A	63	275.9	A	89	196.7	A

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.

K. THE FUTURE WITHOUT THE PROPOSED PROJECT (TRANSIT AND PEDESTRIANS)

Transit and pedestrian conditions in the future without the proposed project were assessed to establish future baseline conditions or the "No Action" condition against which to evaluate the potential project impacts. The No Action analyses, prepared for the 2018, 2028, and 2032 analysis years, incorporate background growth, new trips associated with nearby developments, and changes in the transportation environment that would affect transit service and pedestrian movements in the study area.

2018 NO ACTION CONDITION

TRANSIT AND PEDESTRIAN VOLUME PROJECTIONS

Estimates of peak hour transit and pedestrian volumes in the No Action condition were developed by applying the CEQR-recommended 0.50 percent annual background growth rate for the first five years (year 2012 to year 2017) and then 0.25 percent for the remaining year (year 2017 to year 2018) onto existing transit and pedestrian volumes and by adding the estimated transit and pedestrian volumes generated by projects within and near the study area that would be completed independent of the proposed project.

As discussed in Chapter 2, "Land Use, Zoning, and Public Policy," numerous projects located near the project site are expected to be completed by 2018 independent of the proposed project. The transit and pedestrian analysis considers projects expected to be developed in the future without the proposed project, as shown in **Figure 14-3**. However, because the project site is geographically separated from these No Action projects by the adjacent highway network, new trips associated with these projects would have limited effects on most of the study area transit and pedestrian elements. Therefore, as detailed further below, these trips are accounted for differently in each of the specific analyses.

SUBWAY STATION OPERATIONS

The same station elements previously analyzed for existing conditions were analyzed under the 2018 No Action condition. Pedestrian volumes were adjusted to 2018 levels using an annual background growth rate of 0.50 percent for the first five years and then 0.25 for the remaining year for an overall compounded growth rate of approximately 2.8 percent by 2018. Because all No Action projects are not in the immediate vicinity of the project site, they are not expected to generate trips within the project site or using the Mets-Willets Point subway station. **Table 14-93** details the operating conditions for stairways and ramps while **Table 14-94** details operating conditions at control areas within the station in the future 2028 No Action condition. As shown, all analyzed stairways and ramps and control areas would continue to operate at acceptable levels during all peak hours.

Table 14-93
2018 No Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekday AM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	12	26	0.90	0.90	0.05	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	7	15	0.90	0.90	0.03	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	19	41	0.90	0.90	0.04	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	1	35	0.75	1.00	0.04	A
Flushing-bound West P10 Stair	9.6	8.3	1	32	0.75	1.00	0.03	A
Flushing-bound East P4 Stair	9.9	8.7	1	38	0.75	1.00	0.04	A
Flushing-bound East P2 Stair	10.1	8.8	3	33	0.75	0.90	0.04	A
Manhattan-bound West Ramp Passageway	17.6	15.6	65	6	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	32	10	0.75	0.90	0.01	A
Weekday PM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	24	21	0.90	0.90	0.05	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	22	14	0.90	0.90	0.04	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	46	35	0.90	0.90	0.05	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	2	44	0.75	1.00	0.05	A
Flushing-bound West P10 Stair	9.6	8.3	1	41	0.75	1.00	0.04	A
Flushing-bound East P4 Stair	9.9	8.7	3	53	0.75	0.90	0.06	A
Flushing-bound East P2 Stair	10.1	8.8	8	45	0.75	0.90	0.06	A
Manhattan-bound West Ramp Passageway	17.6	15.6	70	4	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	22	6	0.75	0.90	0.01	A
Weekday Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	9	210	0.90	1.00	0.25	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	9	9	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	18	219	0.90	0.90	0.17	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	4	419	0.75	1.00	0.44	A
Flushing-bound West P10 Stair	9.6	8.3	3	447	0.75	1.00	0.48	B
Flushing-bound East P4 Stair	9.9	8.7	4	390	0.75	1.00	0.40	A
Flushing-bound East P2 Stair	10.1	8.8	6	254	0.75	1.00	0.26	A
Manhattan-bound West Ramp Passageway	17.6	15.6	61	20	0.75	0.90	0.03	A
Manhattan-bound East Ramp Passageway	19.6	17.6	25	23	0.75	0.90	0.02	A
Weekend Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	9	310	0.90	1.00	0.36	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	2	6	0.90	0.90	0.01	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	11	316	0.90	1.00	0.21	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	2	282	0.75	1.00	0.29	A
Flushing-bound West P10 Stair	9.6	8.3	0	274	0.75	1.00	0.29	A
Flushing-bound East P4 Stair	9.9	8.7	2	433	0.75	1.00	0.45	A
Flushing-bound East P2 Stair	10.1	8.8	6	267	0.75	1.00	0.27	A
Manhattan-bound West Ramp Passageway	17.6	15.6	50	20	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	19	50	0.75	0.90	0.02	A

Table 14-93 (cont'd)
2018 No Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes Up	15-Minute Pedestrian Volumes Down	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekend Post-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	132	14	0.90	0.90	0.17	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	14	3	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	146	17	0.90	0.90	0.11	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	382	12	0.75	1.00	0.31	A
Flushing-bound West P10 Stair	9.6	8.3	306	21	0.75	0.90	0.30	A
Flushing-bound East P4 Stair	9.9	8.7	352	14	0.75	1.00	0.29	A
Flushing-bound East P2 Stair	10.1	8.8	574	9	0.75	1.00	0.44	A
Manhattan-bound West Ramp Passageway	17.6	15.6	701	4	0.75	1.00	0.20	A
Manhattan-bound East Ramp Passageway	19.6	17.6	384	8	0.75	1.00	0.10	A

Notes:
Capacities were calculated based on rates presented in the *CEQR Technical Manual* (January 2012 edition).
Surging factors are only applied to the exiting pedestrian volume (*CEQR Technical Manual*).
V/C Stairway = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
V/C Passageway = [Vin / (225 * We * Sf * Ff)]+ [Vx/ (225 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs/passageways
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 14-94
2018 No Action Condition: Subway Station Control Area Analysis

Mets-Willets Point No. 7 Train Station Control Area Elements	Quantity	15-Minute Pedestrian Volumes Into Control Area	15-Minute Pedestrian Volumes Out from Control Area	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekday AM Non-Game							
Main Control Area Turnstiles (R532)	5	87	120	0.80	0.90	0.10	A
Weekday PM Non-Game							
Main Control Area Turnstiles (R532)	5	86	163	0.80	0.90	0.12	A
Weekday Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	25	23	0.75	0.90	0.02	A
Manhattan-bound West Ramp Turnstiles	6	61	20	0.75	0.90	0.03	A
Flushing-bound East Stair Turnstiles	8	10	643	0.80	1.00	0.16	A
Flushing-bound West Stair Turnstiles	6	7	867	0.80	1.00	0.28	A
Weekend Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	19	50	0.75	0.90	0.02	A
Manhattan-bound West Ramp Turnstiles	6	50	20	0.75	0.90	0.03	A
Flushing-bound East Stair Turnstiles	8	8	700	0.80	1.00	0.17	A
Flushing-bound West Stair Turnstiles	6	2	556	0.80	1.00	0.18	A
Weekend Post-Game							
Manhattan-bound East Ramp Turnstiles	7	384	8	0.75	1.00	0.13	A
Manhattan-bound West Ramp Turnstiles	6	701	4	0.75	1.00	0.28	A
Flushing-bound East Stair Turnstiles	8	925	24	0.80	1.00	0.28	A
Flushing-bound West Stair Turnstiles	6	689	33	0.80	1.00	0.28	A

Notes: Capacities were calculated based on rates presented in the CEQR Technical Manual (January 2012 edition).
V/C = Vin / (Cin x Ff)+ Vx / (Cx x Sf x Ff)
Vin = Peak 15 Min Entering Passenger Volume
Cin= Total 15-Minute Capacity of all turnstiles for entering Passengers
Vx = Peak 15- Minute Exiting Passenger
Cx = Total 15-minute Capacity of all turnstile for exiting Passengers
Sf = Surging Factor
Ff = Friction Factor

SUBWAY LINE HAUL LEVELS

Subway ridership numbers were also adjusted to 2018 levels using an annual background growth rate of 0.50 percent for the first five years and then 0.25 percent for the remaining year. Furthermore, trips associated with major new developments along the No. 7 subway line were superimposed onto the 2018 background line-haul volumes to generate No Action peak period volumes for the subway line-haul analysis. Subway trips generated by No Action projects in Corona and Flushing were distributed directionally in a similar manner as subway trips generated by the proposed project due to the proximity of these neighborhoods to the project site. Because the Flushing-Main Street subway station is the No. 7 subway line's eastern terminus, all trips generated by No Action projects in that area were assigned to the Manhattan-bound direction in the AM peak period and the Flushing-bound direction in the PM peak period. These trips include several large and small projects planned for the Flushing area. Although a small number of trips from the No Action projects in Corona could travel in the off-peak direction, to/from Flushing, it was conservatively assumed that all of these trips would also travel in the peak direction during both the AM and PM peak periods.

In addition, NYCT plans to add two trains to the peak direction for both the AM and PM peak periods. Compared with the 2012 existing conditions, the 2018 No Action subway line-haul volumes are expected to increase by approximately 5 percent in the Manhattan-bound direction during the AM peak hour and 6 percent in the Flushing-bound direction during the PM peak hour. As shown in **Table 14-95**, assuming that planned service improvements are implemented, the No. 7 train would operate within guideline capacity during the weekday AM peak period for the Manhattan-bound local service and during the weekday PM peak period for the Flushing-bound service. However, the Manhattan-bound express service would continue to exceed the guideline capacity during the weekday AM peak period under the 2018 No Action condition. Between the Draft SEIS and Final SEIS, a detailed examination of line-haul conditions on the N/Q lines will also prepared, in coordination with NYCT.

Table 14-95
2018 No Action Condition: Peak Hour Subway Line Haul

No. 7 Train Direction of Travel	Station	Trains/ Hour	Volume	Leave Load		Available Capacity
				Guideline Capacity	V/C Ratio	
AM Peak Period						
Manhattan-bound Express	Woodside–61st Street	15	19,428	18,150	1.07	-1,278
Manhattan-bound Local	40th Street	14	15,216	16,940	0.90	1,724
PM Peak Period						
Flushing-bound Express + Local	Queensboro Plaza	23	22,017	27,830	0.79	5,813

Sources: New York City Transit
Notes: For the AM peak hour, while a total of 29 trains would be expected to traverse the respective express and local peak load points, the total number of scheduled trains during this hour would be 28 trains.

BUS LINE HAUL LEVELS

The 2018 No Action condition analysis of bus line-haul levels incorporates annual growth rates on the three study area bus routes as mentioned above by applying a 0.50 percent for the first 5 years and a 0.25 percent for the remaining year. Since there is an abundance of bus routes serving the many development projects planned for the Flushing area, the incorporation of only the background growth is expected to be adequate in accounting for potential increases in

ridership on the three study area bus routes absent the proposed project. The No Action analysis results are presented in **Table 14-96**. As shown, all three bus routes would continue to operate within the guideline capacity during the AM and PM peak periods.

Table 14-96
2018 No Action Condition: Bus Line Haul at NYCT Maximum and District Load Points

Route	Peak Period	Buses Per Hour	Eastbound		Buses Per Hour	Westbound	
			Load Point	AP		Load Point	AP
Q19	AM	3	Astoria Blvd/ 102nd St	42	3	Astoria Blvd/ 77th St	44
	PM	3	Astoria Blvd/ 94th St	28	3	Astoria Blvd/Humphrey St	32
Q48	AM	5	Roosevelt at 126th	33	3	Roosevelt at 126th	9
	PM	5	Roosevelt at 126th	21	5	Roosevelt at 126th	22
Q66 (to Woodside and LIC)	AM	15	Northern Blvd/ 110th St	46	14	Northern Blvd/ 72nd St	46
	PM	10	Northern Blvd/ 110th St	20	10	Northern Blvd/ 106th St	21

Note: AP = average passengers per bus; **(#)** = exceeds NYCT guideline capacity
Source: Q48 ridership data provided by NYCT; Q19 and Q66 ridership data provided by the MTA Bus Company

STREET-LEVEL PEDESTRIAN OPERATIONS

Since new trips associated with the No Action projects are not expected to traverse the study area analysis locations, the 2018 No Action pedestrian volumes incorporate only an annual background growth rate of 0.50 percent for the first five years and 0.25 for the remaining year for an overall compounded growth rate of approximately 2.8 percent. The 2018 No Action peak hour pedestrian volumes are shown in **Appendix D**. As shown in **Tables 14-97** through **14-101**, all sidewalk, corner reservoir, and crosswalk analysis locations would continue to operate at acceptable levels (maximum of 8.5 PMF platoon flows for sidewalks; minimum of 19.5 SFP for corners and crosswalks), except at the following locations:

- The north crosswalk of 34th Avenue and 126th Street, which would operate at LOS F with 4.9 SFP during the weekend post-game peak 15-minute period.
- The south crosswalk of 34th Avenue and 126th Street, which would operate at LOS E with 10.8 SFP during the weekend post-game peak 15-minute period.

Table 14-97
2018 No Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday AM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	43	0.81	0.09	A
	West	6.0	0	0.80	0.00	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	41	0.91	0.05	A
	South	12.5	31	0.80	0.05	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	84	0.80	0.14	A
	South	11.5	42	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	3	0.80	0.01	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	39	0.80	0.33	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	19	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	64	0.80	0.19	A
	South	8.5	90	0.80	0.22	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	84	0.80	0.14	A
	South	13.0	82	0.83	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	59	0.80	0.25	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	14	0.80	0.05	A

Table 14-97 (cont'd)
2018 No Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	29	0.80	0.06	A
	West	6.0	3	0.80	0.01	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	35	0.80	0.05	A
	South	12.5	46	0.80	0.08	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	54	0.80	0.09	A
	South	11.5	34	0.80	0.06	A
34th Avenue between 126th Street and 126th Place	North	11.5	2	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	29	0.80	0.24	A
	West	8.0	1	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	19	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	56	0.80	0.17	A
	South	8.5	35	0.80	0.09	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	65	0.80	0.11	A
	South	13.0	38	0.80	0.06	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	77	0.80	0.32	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	11	0.80	0.04	A
Weekday PM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	15	0.80	0.03	A
	West	6.0	8	0.80	0.03	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	21	0.80	0.03	A
	South	12.5	44	0.80	0.07	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	55	0.80	0.09	A
	South	11.5	41	0.80	0.07	A
34th Avenue between 126th Street and 126th Place	North	11.5	0	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	59	0.80	0.49	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	19	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	42	0.80	0.13	A
	South	8.5	47	0.80	0.12	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	80	0.80	0.13	A
	South	13.0	49	0.80	0.08	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	51	0.80	0.21	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	27	0.80	0.09	A
Weekday Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	145	0.80	0.32	A
	West	6.0	190	0.83	0.64	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	96	0.88	0.12	A
	South	12.5	84	0.80	0.14	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	126	0.80	0.21	A
	South	11.5	67	0.82	0.12	A
34th Avenue between 126th Street and 126th Place	North	11.5	84	0.80	0.15	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	137	0.80	1.14	B
	West	8.0	29	0.80	0.08	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	199	0.80	0.44	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	345	0.80	1.03	B
	South	8.5	195	0.80	0.48	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	242	0.82	0.39	A
	South	13.0	78	0.80	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	207	0.86	0.80	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	143	0.80	0.50	A

Note: PMF = pedestrians per minute per foot.

Table 14-98

2018 No Action Condition: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	34	0.80	0.07	A
	West	6.0	7	0.80	0.02	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	72	0.80	0.10	A
	South	12.5	62	0.80	0.10	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	125	0.82	0.20	A
	South	11.5	43	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	19	0.80	0.03	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	43	0.80	0.36	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	27	0.80	0.06	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	122	0.85	0.34	A
	South	8.5	161	0.80	0.39	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	113	0.89	0.17	A
	South	13.0	107	0.80	0.17	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	79	0.80	0.33	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	35	0.80	0.12	A
Weekend Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	96	0.80	0.21	A
	West	6.0	274	0.80	0.87	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	98	0.80	0.13	A
	South	12.5	162	0.80	0.27	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	128	0.85	0.20	A
	South	11.5	108	0.80	0.20	A
34th Avenue between 126th Street and 126th Place	North	11.5	24	0.80	0.04	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	263	0.80	2.19	B
	West	8.0	25	0.80	0.07	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	166	0.93	0.31	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	315	0.87	0.87	B
	South	8.5	253	0.80	0.62	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	150	0.86	0.23	A
	South	13.0	85	0.80	0.14	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	235	0.80	0.98	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	60	0.80	0.21	A
Weekend Post-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	443	0.80	0.97	B
	West	6.0	847	0.80	2.94	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	137	0.80	0.18	A
	South	12.5	157	0.80	0.26	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	161	0.80	0.27	A
	South	11.5	152	0.80	0.28	A
34th Avenue between 126th Street and 126th Place	North	11.5	0	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	571	0.80	4.76	C
	West	8.0	34	0.80	0.09	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	502	0.80	1.10	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	645	0.80	1.92	B
	South	8.5	252	0.80	0.62	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	250	0.80	0.42	A
	South	13.0	63	0.80	0.10	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	401	0.80	1.67	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	123	0.80	0.43	A

Note: PMF = pedestrians per minute per foot.

Table 14-99
2018 No Action Condition: Pedestrian LOS Analysis for Corners

Location	Corner	Weekday								Weekend					
		AM		Midday		PM		Pre-Game		Midday Non-Game		Pre-Game		Post-Game	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Roosevelt Avenue and 126th Street	Northwest	1666.3	A	2331.3	A	2948.1	A	869.3	A	1497.6	A	914.9	A	582.9	A
	Northeast	1292.5	A	1355.7	A	2714.8	A	518.7	A	1092.1	A	593.5	A	344.6	A
Roosevelt Avenue and 114th Street	Northwest	1705.3	A	1491.6	A	1748.7	A	365.6	A	1011.5	A	446.2	A	224.4	A
	Southwest	1242.2	A	1559.1	A	1141.8	A	357.0	A	532.5	A	439.9	A	364.7	A

Note: SFP = square feet per pedestrian.

Table 14-100
2018 No Action Condition: Weekday Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with Conflicting Vehicles											
				Weekday AM			Weekday Midday			Weekday PM			Weekday Pre-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	46	1672.3	A	41	1706.5	A	23	2927.1	A	115	676.5	A
	East	43.0	14.0	4	3755.9	A	7	2032.9	A	2	6821.0	A	6	2363.3	A
	South	50.0	13.0	23	2686.2	A	39	1566.2	A	27	2291.1	A	84	739.4	A
	West	43.0	13.5	6	2830.9	A	10	1577.1	A	8	2052.7	A	43	167.4	A
34th Avenue and 126th Street	North	81.0	12.5	3	3142.8	A	0	N/A	A	4	2146.9	A	15	512.9	A
	East	30.0	7.0	10	2039.8	A	13	1505.6	A	20	985.6	A	224	80.0	A
	South	61.0	10.5	2	2988.1	A	1	5848.7	A	2	3183.4	A	138	45.1	B
	West	47.5	12.5	0	N/A	A	0	N/A	A	2	19163.1	A	41	930.7	A
Northern Boulevard and 126th Street	East	43.5	14.0	2	6432.5	A	2	5699.3	A	2	5584.8	A	17	625.9	A
	South	51.0	15.0	7	11652.5	A	1	81604.6	A	3	27198.9	A	28	2903.2	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	57	1157.2	A	60	981.9	A	49	1280.6	A	321	161.8	A
	East	44.0	11.0	8	1274.4	A	4	2982.0	A	7	1179.6	A	26	348.7	A
	South	32.5	12.0	68	817.6	A	42	1235.0	A	57	837.3	A	195	236.3	A
	West	43.0	13.0	13	1464.4	A	18	1177.3	A	20	969.2	A	54	339.0	A

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.

Table 14-101
2018 No Action Condition: Weekend Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with Conflicting Vehicles								
				Weekend Midday Non-Game			Weekend Pre-Game			Weekend Post-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	57	1204.7	A	89	729.1	A	132	563.1	A
	East	43.0	14.0	5	2795.0	A	11	1437.2	A	23	394.2	A
	South	50.0	13.0	65	952.5	A	165	371.8	A	158	392.9	A
	West	43.0	13.5	14	1159.0	A	66	110.5	A	72	194.6	A
34th Avenue and 126th Street	North	81.0	12.5	4	2714.0	A	209	38.6	C	569	4.9	F
	East	30.0	7.0	24	820.4	A	2	9927.5	A	0	N/A	A
	South	61.0	10.5	5	1217.7	A	186	23.0	D	335	10.8	E
	West	47.5	12.5	4	9824.3	A	29	1206.5	A	175	196.5	A
Northern Boulevard and 126th Street	East	43.5	14.0	8	1695.1	A	10	1095.3	A	68	136.4	A
	South	51.0	15.0	3	27198.9	A	10	8152.0	A	7	11647.7	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	108	490.8	A	231	215.9	A	572	72.7	A
	East	44.0	11.0	13	614.2	A	36	168.9	A	42	220.5	A
	South	32.5	12.0	138	343.0	A	140	331.4	A	145	324.3	A
	West	43.0	13.0	32	596.5	A	65	266.5	A	91	191.7	A

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.

2028 NO ACTION CONDITION

TRANSIT AND PEDESTRIAN VOLUME PROJECTIONS

Estimates of peak hour transit and pedestrian volumes in the No Action condition were developed by applying the CEQR-recommended 0.50 percent annual background growth rate for the first five years (year 2012 to year 2017) and then 0.25 percent for the remaining eleven years (year 2017 to year 2028) onto existing transit and pedestrian volumes and by adding the estimated transit and pedestrian volumes generated by projects within and near the study area that would be completed independent of the proposed project, as described above under "2018 No Action Condition."

SUBWAY STATION OPERATIONS

The same station elements previously analyzed for existing conditions were analyzed under the 2028 No Action condition. Pedestrian volumes were adjusted to 2028 levels using an annual background growth rate of 0.50 percent for the first five years and then 0.25 for the remaining years for an overall compounded growth rate of approximately 5.4 percent by 2028. **Table 14-102** details the operating conditions for stairways and ramps while **Table 14-103** details operating conditions at control areas within the station in the future 2028 No Action condition. As shown, all analyzed stairways and ramps and control areas would continue to operate at acceptable levels during all peak hours.

Table 14-102
2028 No Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekday AM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	13	26	0.90	0.90	0.05	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	7	16	0.90	0.90	0.03	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	20	42	0.90	0.90	0.04	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	1	36	0.75	1.00	0.04	A
Flushing-bound West P10 Stair	9.6	8.3	1	33	0.75	1.00	0.04	A
Flushing-bound East P4 Stair	9.9	8.7	1	39	0.75	1.00	0.04	A
Flushing-bound East P2 Stair	10.1	8.8	3	34	0.75	0.90	0.04	A
Manhattan-bound West Ramp Passageway	17.6	15.6	66	6	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	33	11	0.75	0.90	0.01	A
Weekday PM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	24	21	0.90	0.90	0.05	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	22	15	0.90	0.90	0.04	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	46	36	0.90	0.90	0.06	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	2	45	0.75	1.00	0.05	A
Flushing-bound West P10 Stair	9.6	8.3	1	42	0.75	1.00	0.05	A
Flushing-bound East P4 Stair	9.9	8.7	3	55	0.75	0.90	0.07	A
Flushing-bound East P2 Stair	10.1	8.8	8	46	0.75	0.90	0.06	A
Manhattan-bound West Ramp Passageway	17.6	15.6	72	4	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	22	6	0.75	0.90	0.01	A

Table 14-102 (cont'd)
2028 No Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekday Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	9	215	0.90	1.00	0.25	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	9	9	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	18	224	0.90	0.90	0.17	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	4	430	0.75	1.00	0.45	A
Flushing-bound West P10 Stair	9.6	8.3	3	458	0.75	1.00	0.49	B
Flushing-bound East P4 Stair	9.9	8.7	4	399	0.75	1.00	0.41	A
Flushing-bound East P2 Stair	10.1	8.8	6	260	0.75	1.00	0.27	A
Manhattan-bound West Ramp Passageway	17.6	15.6	62	20	0.75	0.90	0.03	A
Manhattan-bound East Ramp Passageway	19.6	17.6	25	23	0.75	0.90	0.02	A
Weekend Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	9	318	0.90	1.00	0.37	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	2	6	0.90	0.90	0.01	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	11	324	0.90	1.00	0.22	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	2	289	0.75	1.00	0.30	A
Flushing-bound West P10 Stair	9.6	8.3	0	281	0.75	1.00	0.30	A
Flushing-bound East P4 Stair	9.9	8.7	2	444	0.75	1.00	0.46	B
Flushing-bound East P2 Stair	10.1	8.8	6	274	0.75	1.00	0.28	A
Manhattan-bound West Ramp Passageway	17.6	15.6	52	20	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	19	52	0.75	0.90	0.02	A
Weekend Post-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	135	15	0.90	0.90	0.17	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	15	3	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	150	18	0.90	0.90	0.11	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	392	13	0.75	1.00	0.32	A
Flushing-bound West P10 Stair	9.6	8.3	314	21	0.75	0.90	0.30	A
Flushing-bound East P4 Stair	9.9	8.7	360	15	0.75	1.00	0.29	A
Flushing-bound East P2 Stair	10.1	8.8	588	9	0.75	1.00	0.45	B
Manhattan-bound West Ramp Passageway	17.6	15.6	719	4	0.75	1.00	0.21	A
Manhattan-bound East Ramp Passageway	19.6	17.6	394	8	0.75	1.00	0.10	A

Notes:
Capacities were calculated based on rates presented in the *CEQR Technical Manual* (January 2012 edition).
Surging factors are only applied to the exiting pedestrian volume (*CEQR Technical Manual*).
V/C Stairway = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
V/C Passageway = [Vin / (225 * We * Sf * Ff)]+ [Vx/ (225 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs/passageways
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 14-103
2028 No Action Condition: Subway Station Control Area Analysis

Mets-Willets Point No. 7 Train Station Control Area Elements	Quantity	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
		Into Control Area	Out from Control Area				
Weekday AM Non-Game							
Main Control Area Turnstiles (R532)	5	90	123	0.80	0.90	0.10	A
Weekday PM Non-Game							
Main Control Area Turnstiles (R532)	5	89	168	0.80	0.90	0.12	A
Weekday Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	25	23	0.75	0.90	0.02	A
Manhattan-bound West Ramp Turnstiles	6	62	20	0.75	0.90	0.03	A
Flushing-bound East Stair Turnstiles	8	11	660	0.80	1.00	0.16	A
Flushing-bound West Stair Turnstiles	6	7	888	0.80	1.00	0.29	A
Weekend Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	19	52	0.75	0.90	0.02	A
Manhattan-bound West Ramp Turnstiles	6	52	20	0.75	0.90	0.03	A
Flushing-bound East Stair Turnstiles	8	8	718	0.80	1.00	0.18	A
Flushing-bound West Stair Turnstiles	6	2	570	0.80	1.00	0.18	A
Weekend Post-Game							
Manhattan-bound East Ramp Turnstiles	7	394	8	0.75	1.00	0.14	A
Manhattan-bound West Ramp Turnstiles	6	719	4	0.75	1.00	0.29	A
Flushing-bound East Stair Turnstiles	8	949	24	0.80	1.00	0.29	A
Flushing-bound West Stair Turnstiles	6	706	34	0.80	1.00	0.29	A

Notes: Capacities were calculated based on rates presented in the CEQR Technical Manual (January 2012 edition).
V/C =Vin / (Cin x Ff)+ Vx / (Cx x Sf x Ff)
Vin = Peak 15 Min Entering Passenger Volume
Cin= Total 15-Minute Capacity of all turnstiles for entering Passengers
Vx = Peak 15- Minute Exiting Passenger
Cx = Total 15-minute Capacity of all turnstile for exiting Passengers
Sf = Surging Factor
Ff = Friction Factor

SUBWAY LINE HAUL LEVELS

Subway ridership numbers were also adjusted to 2028 levels using an annual background growth rate of 0.50 percent for the first five years and then 0.25 for the remaining years, and incorporating trips associated with projected No Action projects, as described under "2018 No Action Condition." As shown in **Table 14-104**, the No. 7 train would operate within guideline capacity during the weekday AM peak period for the Manhattan-bound local service and during the PM peak period for the Flushing-bound service. However, the Manhattan-bound express service would continue to exceed the guideline capacity during the weekday AM peak period under the 2028 No Action condition. Between the Draft SEIS and Final SEIS, a detailed examination of line-haul conditions on the N/Q lines will also prepared, in coordination with NYCT.

BUS LINE HAUL LEVELS

The 2028 No Action condition analysis of bus line-haul levels incorporates annual growth rates on the three study area bus routes as mentioned above by applying a 0.50 percent for the first 5 years and a 0.25 percent for the remaining years. The No Action analysis results are presented in **Table 14-105**. As shown, all three bus routes would continue to operate within the guideline capacity during the AM and PM Peak periods.

Table 14-104
2028 No Action Condition: Peak Hour Subway Line Haul

No. 7 Train Direction of Travel	Station	Trains /Hour	Volume	Leave Load		Available Capacity
				Guideline Capacity	V/C Ratio	
AM Peak Period						
Manhattan-bound Express	Woodside–61st Street	15	19,900	18,150	1.10	-1,750
Manhattan-bound Local	40th Street	14	15,598	16,940	0.92	1,342
PM Peak Period						
Flushing-bound Express + Local	Queensboro Plaza	23	22,550	27,830	0.81	5,280

Sources: New York City Transit
Notes: For the AM peak hour, while a total of 29 trains would be expected to traverse the respective express and local peak load points, the total number of scheduled trains during this hour would be 28 trains.

Table 14-105
2028 No Action Condition: Bus Line Haul at NYCT Maximum and District Load Points

Route	Peak Period	Buses Per Hour	Eastbound		Buses Per Hour	Westbound	
			Load Point	AP		Load Point	AP
Q19	AM	3	Astoria Blvd/ 102nd St	43	3	Astoria Blvd/ 77th St	45
	PM	3	Astoria Blvd/ 94th St	28	3	Astoria Blvd/Humphrey St	33
Q48	AM	5	Roosevelt at 126th	34	3	Roosevelt at 126th	9
	PM	5	Roosevelt at 126th	22	5	Roosevelt at 126th	23
Q66 (to Woodside and LIC)	AM	15	Northern Blvd/ 110th St	48	14	Northern Blvd/ 72nd St	47
	PM	10	Northern Blvd/ 110th St	21	10	Northern Blvd/ 106th St	21

Note: AP = average passengers per bus; **(#)** = exceeds NYCT guideline capacity
Source: Q48 ridership data provided by NYCT; Q19 and Q66 ridership data provided by the MTA Bus Company

STREET-LEVEL PEDESTRIAN OPERATIONS

As described above under "2018 No Action Condition," since new trips associated with the No Action projects are not expected to traverse the study area analysis locations, the 2028 No Action pedestrian volumes incorporate only an annual background growth rate of 0.50 percent for the first five years and 0.25 for the remaining years for an overall compounded growth rate of approximately 5.4 percent. The 2028 No Action peak hour pedestrian volumes are shown in **Appendix D**. As shown in **Tables 14-106** through **14-110**, all sidewalk, corner reservoir, and crosswalk analysis locations would continue to operate at acceptable levels (maximum of 8.5 PMF platoon flows for sidewalks; minimum of 19.5 SFP for corners and crosswalks), except at the following locations:

- The north crosswalk of 34th Avenue and 126th Street, which operates at LOS F with 4.5 SFP during the weekend post-game peak 15-minute period.
- The south crosswalk of 34th Avenue and 126th Street, which operates at LOS E with 10.2 SFP during the weekend post-game peak 15-minute period.

Table 14-106

2028 No Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday AM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	45	0.81	0.10	A
	West	6.0	0	0.80	0.00	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	42	0.91	0.05	A
	South	12.5	31	0.80	0.05	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	87	0.80	0.15	A
	South	11.5	43	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	3	0.80	0.01	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	40	0.80	0.33	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	20	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	67	0.80	0.20	A
	South	8.5	92	0.80	0.23	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	85	0.80	0.14	A
	South	13.0	85	0.83	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	61	0.80	0.25	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	14	0.80	0.05	A
Weekday Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	31	0.80	0.07	A
	West	6.0	3	0.80	0.01	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	36	0.80	0.05	A
	South	12.5	46	0.80	0.08	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	54	0.80	0.09	A
	South	11.5	35	0.80	0.06	A
34th Avenue between 126th Street and 126th Place	North	11.5	2	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	31	0.80	0.26	A
	West	8.0	1	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	20	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	58	0.80	0.17	A
	South	8.5	35	0.80	0.09	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	66	0.80	0.11	A
	South	13.0	39	0.80	0.06	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	79	0.80	0.33	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	11	0.80	0.04	A
Weekday PM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	16	0.80	0.04	A
	West	6.0	8	0.80	0.03	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	22	0.80	0.03	A
	South	12.5	45	0.80	0.08	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	57	0.80	0.10	A
	South	11.5	42	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	0	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	60	0.80	0.50	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	20	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	43	0.80	0.13	A
	South	8.5	49	0.80	0.12	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	82	0.80	0.14	A
	South	13.0	51	0.80	0.08	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	53	0.80	0.22	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	27	0.80	0.09	A

Table 14-106 (cont'd)
2028 No Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	149	0.80	0.33	A
	West	6.0	195	0.83	0.65	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	98	0.88	0.12	A
	South	12.5	87	0.80	0.15	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	129	0.80	0.22	A
	South	11.5	69	0.82	0.12	A
34th Avenue between 126th Street and 126th Place	North	11.5	86	0.80	0.16	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	141	0.80	1.18	B
	West	8.0	30	0.80	0.08	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	205	0.80	0.45	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	353	0.80	1.05	B
	South	8.5	199	0.80	0.49	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	249	0.82	0.41	A
	South	13.0	80	0.80	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	212	0.86	0.82	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	147	0.80	0.51	B

Note: PMF = pedestrians per minute per foot.

Table 14-107
2028 No Action Condition: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	35	0.80	0.08	A
	West	6.0	7	0.80	0.02	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	74	0.80	0.10	A
	South	12.5	63	0.80	0.11	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	128	0.82	0.21	A
	South	11.5	44	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	20	0.80	0.04	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	43	0.80	0.36	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	29	0.80	0.06	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	126	0.85	0.35	A
	South	8.5	165	0.80	0.40	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	116	0.89	0.17	A
	South	13.0	110	0.80	0.18	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	81	0.80	0.34	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	36	0.80	0.13	A
Weekend Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	98	0.80	0.21	A
	West	6.0	280	0.80	0.88	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	100	0.80	0.13	A
	South	12.5	165	0.80	0.28	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	132	0.85	0.21	A
	South	11.5	111	0.80	0.20	A
34th Avenue between 126th Street and 126th Place	North	11.5	26	0.80	0.05	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	270	0.80	2.25	B
	West	8.0	25	0.80	0.07	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	171	0.93	0.32	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	324	0.87	0.89	B
	South	8.5	260	0.80	0.64	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	154	0.86	0.24	A
	South	13.0	87	0.80	0.14	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	242	0.80	1.01	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	62	0.80	0.22	A

Table 14-107
2028 No Action Condition: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Post-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	455	0.80	1.00	B
	West	6.0	869	0.80	3.02	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	141	0.80	0.19	A
	South	12.5	162	0.80	0.27	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	165	0.80	0.28	A
	South	11.5	156	0.80	0.28	A
34th Avenue between 126th Street and 126th Place	North	11.5	0	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	585	0.80	4.88	C
	West	8.0	35	0.80	0.09	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	514	0.80	1.13	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	662	0.80	1.97	B
	South	8.5	258	0.80	0.63	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	257	0.80	0.43	A
	South	13.0	64	0.80	0.10	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	411	0.80	1.71	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	125	0.80	0.43	A

Note: PMF = pedestrians per minute per foot.

Table 14-108
2028 No Action Condition: Pedestrian LOS Analysis for Corners

Location	Corner	Weekday								Weekend					
		AM		Midday		PM		Pre-Game		Midday Non-Game		Pre-Game		Post-Game	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Roosevelt Avenue and 126th Street	Northwest	1620.2	A	2299.4	A	2848.0	A	840.1	A	1458.4	A	895.5	A	566.7	A
	Northeast	1270.2	A	1328.8	A	2513.2	A	508.2	A	1074.7	A	578.0	A	336.1	A
Roosevelt Avenue and 114th Street	Northwest	1656.7	A	1452.5	A	1662.7	A	357.1	A	973.9	A	434.8	A	218.7	A
	Southwest	1214.3	A	1536.7	A	1102.5	A	350.1	A	517.5	A	427.4	A	357.5	A

Note: SFP = square feet per pedestrian.

Table 14-109
2028 No Action Condition: Weekday Pedestrian LOS Analysis for Crosswalks

Location	Cross walk	Street Width (feet)	Cross walk Width (feet)	Conditions with Conflicting Vehicles											
				Weekday AM			Weekday Midday			Weekday PM			Weekday Pre-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	47	1633.3	A	42	1660.5	A	25	2683.6	A	118	656.5	A
	East	43.0	14.0	4	3734.2	A	7	2016.4	A	2	6763.1	A	6	2334.4	A
	South	50.0	13.0	23	2685.2	A	39	1565.5	A	29	2131.1	A	87	713.1	A
	West	43.0	13.5	6	2812.3	A	10	1565.9	A	8	2038.8	A	45	152.5	A
34th Avenue and 126th Street	North	81.0	12.5	3	3142.8	A	0	N/A	A	4	2139.3	A	16	476.0	A
	East	30.0	7.0	10	2035.8	A	13	1502.7	A	21	937.3	A	229	78.0	A
	South	61.0	10.5	2	2963.7	A	1	5783.6	A	2	3158.9	A	141	43.8	B
	West	47.5	12.5	0	N/A	A	0	N/A	A	2	19115.5	A	42	907.1	A
Northern Boulevard and 126th Street	East	43.5	14.0	2	6403.9	A	2	5656.4	A	2	5527.5	A	18	584.6	A
	South	51.0	15.0	7	11652.5	A	1	81604.6	A	3	27198.9	A	28	2903.2	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	59	1116.0	A	61	963.3	A	51	1227.2	A	329	157.3	A
	East	44.0	11.0	8	1252.2	A	4	2954.1	A	7	1144.7	A	28	316.5	A
	South	32.5	12.0	70	791.6	A	42	1232.8	A	58	820.1	A	199	230.3	A
	West	43.0	13.0	13	1462.3	A	19	1113.4	A	22	878.2	A	54	338.5	A

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.

Table 14-110
2028 No Action Condition: Weekend Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Cross walk Width (feet)	Conditions with Conflicting Vehicles								
				Weekend Midday Non-Game			Weekend Pre-Game			Weekend Post-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	58	1181.0	A	91	709.9	A	136	545.7	A
	East	43.0	14.0	5	2771.9	A	11	1424.1	A	23	383.0	A
	South	50.0	13.0	67	923.2	A	168	364.9	A	163	380.7	A
	West	43.0	13.5	15	1075.8	A	67	103.2	A	74	187.1	A
34th Avenue and 126th Street	North	81.0	12.5	4	2704.6	A	215	37.3	C	584	4.5	F
	East	30.0	7.0	26	756.1	A	2	9927.5	A	0	N/A	A
	South	61.0	10.5	5	1207.9	A	191	21.9	D	343	10.2	E
	West	47.5	12.5	4	9812.4	A	29	1201.6	A	179	191.2	A
Northern Boulevard and 126th Street	East	43.5	14.0	8	1681.7	A	10	1086.8	A	70	130.4	A
	South	51.0	15.0	3	27198.9	A	10	8152.0	A	7	11647.7	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	111	476.0	A	237	209.2	A	587	70.1	A
	East	44.0	11.0	14	554.0	A	37	157.1	A	43	210.7	A
	South	32.5	12.0	141	334.5	A	145	318.3	A	148	316.5	A
	West	43.0	13.0	34	559.6	A	66	261.2	A	93	186.9	A

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.

2032 NO ACTION CONDITION

TRANSIT AND PEDESTRIAN VOLUME PROJECTIONS

Estimates of peak hour transit and pedestrian volumes in the No Action condition were developed by applying the CEQR-recommended 0.50 percent annual background growth rate for the first five years (year 2012 to year 2017) and then 0.25 percent for the remaining fifteen years (year 2017 to year 2032) onto existing transit and pedestrian volumes and by adding the estimated transit and pedestrian volumes generated by projects within and near the study area that would be completed independent of the proposed project, as described above under "2018 No Action Condition."

SUBWAY STATION OPERATIONS

The same station elements previously analyzed for existing conditions were analyzed under the 2032 No Action condition. Pedestrian volumes were adjusted to 2032 levels using an annual background growth rate of 0.50 percent for the first five years and then 0.25 for the remaining years for an overall compounded growth rate of approximately 6.4 percent by 2032. **Table 14-111** details the operating conditions for stairways and ramps while **Table 14-112** details operating conditions at control areas within the station in the future 2032 No Action condition. As shown, all analyzed stairways and ramps and control areas would continue to operate at acceptable levels during all peak hours.

Table 14-111
2032 No Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekday AM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	13	27	0.90	0.90	0.05	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	7	16	0.90	0.90	0.03	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	20	43	0.90	0.90	0.04	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	1	36	0.75	1.00	0.04	A
Flushing-bound West P10 Stair	9.6	8.3	1	33	0.75	1.00	0.04	A
Flushing-bound East P4 Stair	9.9	8.7	1	39	0.75	1.00	0.04	A
Flushing-bound East P2 Stair	10.1	8.8	3	34	0.75	0.90	0.04	A
Manhattan-bound West Ramp Passageway	17.6	15.6	67	6	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	33	11	0.75	0.90	0.01	A
Weekday PM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	24	21	0.90	0.90	0.05	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	22	15	0.90	0.90	0.04	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	46	36	0.90	0.90	0.06	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	2	46	0.75	1.00	0.05	A
Flushing-bound West P10 Stair	9.6	8.3	1	43	0.75	1.00	0.05	A
Flushing-bound East P4 Stair	9.9	8.7	3	55	0.75	0.90	0.07	A
Flushing-bound East P2 Stair	10.1	8.8	9	47	0.75	0.90	0.06	A
Manhattan-bound West Ramp Passageway	17.6	15.6	72	4	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	22	6	0.75	0.90	0.01	A
Weekday Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	10	217	0.90	1.00	0.26	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	10	10	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	20	227	0.90	0.90	0.18	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	4	434	0.75	1.00	0.45	A
Flushing-bound West P10 Stair	9.6	8.3	3	463	0.75	1.00	0.50	B
Flushing-bound East P4 Stair	9.9	8.7	4	403	0.75	1.00	0.42	A
Flushing-bound East P2 Stair	10.1	8.8	6	263	0.75	1.00	0.27	A
Manhattan-bound West Ramp Passageway	17.6	15.6	63	20	0.75	0.90	0.03	A
Manhattan-bound East Ramp Passageway	19.6	17.6	26	23	0.75	0.90	0.02	A
Weekend Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	10	321	0.90	1.00	0.38	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	2	6	0.90	0.90	0.01	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	12	327	0.90	1.00	0.22	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	2	292	0.75	1.00	0.30	A
Flushing-bound West P10 Stair	9.6	8.3	0	284	0.75	1.00	0.30	A
Flushing-bound East P4 Stair	9.9	8.7	2	448	0.75	1.00	0.46	B
Flushing-bound East P2 Stair	10.1	8.8	6	277	0.75	1.00	0.28	A
Manhattan-bound West Ramp Passageway	17.6	15.6	52	20	0.75	0.90	0.02	A
Manhattan-bound East Ramp Passageway	19.6	17.6	19	52	0.75	0.90	0.02	A

Table 14-111 (cont'd)
2032 No Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekend Post-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	136	15	0.90	0.90	0.17	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	15	3	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	151	18	0.90	0.90	0.11	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	396	13	0.75	1.00	0.32	A
Flushing-bound West P10 Stair	9.6	8.3	317	21	0.75	0.90	0.31	A
Flushing-bound East P4 Stair	9.9	8.7	364	15	0.75	1.00	0.30	A
Flushing-bound East P2 Stair	10.1	8.8	594	10	0.75	1.00	0.46	B
Manhattan-bound West Ramp Passageway	17.6	15.6	726	4	0.75	1.00	0.21	A
Manhattan-bound East Ramp Passageway	19.6	17.6	398	9	0.75	1.00	0.10	A

Notes:
Capacities were calculated based on rates presented in the *CEQR Technical Manual* (January 2012 edition).
Surging factors are only applied to the exiting pedestrian volume (*CEQR Technical Manual*).
V/C Stairway = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
V/C Passageway = [Vin / (225 * We * Sf * Ff)]+ [Vx/ (225 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs/passageways
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 14-112
2032 No Action Condition: Subway Station Control Area Analysis

Mets-Willets Point No. 7 Train Station Control Area Elements	Quantity	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
		Into Control Area	Out from Control Area				
Weekday AM Non-Game							
Main Control Area Turnstiles (R532)	5	90	125	0.80	0.90	0.10	A
Weekday PM Non-Game							
Main Control Area Turnstiles (R532)	5	89	169	0.80	0.90	0.12	A
Weekday Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	26	23	0.75	0.90	0.02	A
Manhattan-bound West Ramp Turnstiles	6	63	20	0.75	0.90	0.04	A
Flushing-bound East Stair Turnstiles	8	11	666	0.80	1.00	0.16	A
Flushing-bound West Stair Turnstiles	6	7	897	0.80	1.00	0.29	A
Weekend Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	19	52	0.75	0.90	0.02	A
Manhattan-bound West Ramp Turnstiles	6	52	20	0.75	0.90	0.03	A
Flushing-bound East Stair Turnstiles	8	9	725	0.80	1.00	0.18	A
Flushing-bound West Stair Turnstiles	6	2	576	0.80	1.00	0.19	A
Weekend Post-Game							
Manhattan-bound East Ramp Turnstiles	7	398	9	0.75	1.00	0.14	A
Manhattan-bound West Ramp Turnstiles	6	726	4	0.75	1.00	0.29	A
Flushing-bound East Stair Turnstiles	8	958	24	0.80	1.00	0.29	A
Flushing-bound West Stair Turnstiles	6	713	34	0.80	1.00	0.29	A

Notes: Capacities were calculated based on rates presented in the CEQR Technical Manual (January 2012 edition).
V/C = Vin / (Cin x Ff)+ Vx / (Cx x Sf x Ff)
Vin = Peak 15 Min Entering Passenger Volume
Cin= Total 15-Minute Capacity of all turnstiles for entering Passengers
Vx = Peak 15-Minute Exiting Passenger
Cx = Total 15-minute Capacity of all turnstile for exiting Passengers
Sf = Surging Factor
Ff = Friction Factor

SUBWAY LINE HAUL LEVELS

Subway ridership numbers were also adjusted to 2032 levels using an annual background growth rate of 0.50 percent for the first five years and then 0.25 for the remaining years, and incorporating trips associated with projected No Action projects, as described under "2018 No Action Condition." As shown in **Table 14-113**, the No. 7 train would operate within guideline capacity during the weekday AM peak period for the Manhattan-bound local service and during the PM peak period for the Flushing-bound service. However, the Manhattan-bound express service would continue to exceed the guideline capacity during the weekday AM peak period under the 2032 No Action condition. Between the Draft SEIS and Final SEIS, a detailed examination of line-haul conditions on the N/Q lines will also prepared, in coordination with NYCT.

Table 14-113
2032 No Action Condition: Peak Hour Subway Line Haul

No. 7 Train Direction of Travel	Station	Trains/ Hour	Volume	Leave Load		Available Capacity
				Guideline Capacity	V/C Ratio	
AM Peak Period						
Manhattan-bound Express	Woodside–61st Street	15	20,082	18,150	1.11	-1,932
Manhattan-bound Local	40th Street	14	15,745	16,940	0.93	1,195
PM Peak Period						
Flushing-bound Express + Local	Queensboro Plaza	23	22,755	27,830	0.82	5,075

Sources: New York City Transit
Notes: For the AM peak hour, while a total of 29 trains would be expected to traverse the respective express and local peak load points, the total number of scheduled trains during this hour would be 28 trains.

BUS LINE HAUL LEVELS

The 2032 No Action condition analysis of bus line-haul levels incorporates annual growth rates on the three study area bus routes as mentioned above by applying a 0.50 percent for the first 5 years and a 0.25 percent for the remaining years. The No Action analysis results are presented in **Table 14-114**. As shown, all three bus routes would continue to operate within the guideline capacity during the AM and PM peak periods.

Table 14-114
2032 No Action Condition: Bus Line Haul at NYCT Maximum and District Load Points

Route	Peak Period	Buses Per Hour	Eastbound		Buses Per Hour	Westbound	
			Load Point	AP		Load Point	AP
Q19	AM	3	Astoria Blvd/ 102nd St	44	3	Astoria Blvd/ 77th St	45
	PM	3	Astoria Blvd/ 94th St	29	3	Astoria Blvd/Humphrey St	33
Q48	AM	5	Roosevelt at 126th	34	3	Roosevelt at 126th	9
	PM	5	Roosevelt at 126th	22	5	Roosevelt at 126th	23
Q66 (to Woodside and LIC)	AM	15	Northern Blvd/ 110th St	48	14	Northern Blvd/ 72nd St	48
	PM	10	Northern Blvd/ 110th St	21	10	Northern Blvd/ 106th St	21

Note: AP = average passengers per bus; **(#)** = exceeds NYCT guideline capacity
Source: Q48 ridership data provided by NYCT; Q19 and Q66 ridership data provided by the MTA Bus Company

STREET-LEVEL PEDESTRIAN OPERATIONS

As described above under "2018 No Action Condition," since new trips associated with the No Action projects are not expected to traverse the study area analysis locations, the 2032 No Action pedestrian volumes incorporate only an annual background growth rate of 0.50 percent for the first five years and 0.25 for the remaining years for an overall compounded growth rate of approximately 6.4 percent. The 2032 No Action peak hour pedestrian volumes are shown in **Appendix D**. As shown in **Tables 14-115** through **14-119**, all sidewalk, corner reservoir, and crosswalk analysis locations would continue to operate at acceptable levels (maximum of 8.5 PMF platoon flows for sidewalks; minimum of 19.5 SFP for corners and crosswalks), except at the following locations:

- The north crosswalk of 34th Avenue and 126th Street, which operates at LOS F with 4.4 SFP during the weekend post-game peak 15-minute period.
- The south crosswalk of 34th Avenue and 126th Street, which operates at LOS E with 10.0 SFP during the weekend post-game peak 15-minute period.

Table 14-115
2032 No Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday AM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	45	0.81	0.10	A
	West	6.0	0	0.80	0.00	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	43	0.91	0.05	A
	South	12.5	32	0.80	0.05	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	88	0.80	0.15	A
	South	11.5	43	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	3	0.80	0.01	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	41	0.80	0.34	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	20	0.80	0.04	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	67	0.80	0.20	A
	South	8.5	94	0.80	0.23	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	87	0.80	0.15	A
	South	13.0	86	0.83	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	62	0.80	0.26	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	15	0.80	0.05	A
Weekday Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	31	0.80	0.07	A
	West	6.0	3	0.80	0.01	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	36	0.80	0.05	A
	South	12.5	47	0.80	0.08	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	56	0.80	0.09	A
	South	11.5	35	0.80	0.06	A
34th Avenue between 126th Street and 126th Place	North	11.5	2	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	31	0.80	0.26	A
	West	8.0	1	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	21	0.80	0.05	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	58	0.80	0.17	A
	South	8.5	37	0.80	0.09	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	67	0.80	0.11	A
	South	13.0	40	0.80	0.06	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	80	0.80	0.33	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	12	0.80	0.04	A

Table 14-115 (cont'd)
2032 No Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday PM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	16	0.80	0.04	A
	West	6.0	8	0.80	0.03	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	22	0.80	0.03	A
	South	12.5	46	0.80	0.08	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	57	0.80	0.10	A
	South	11.5	43	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	0	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	61	0.80	0.51	B
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	21	0.80	0.05	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	43	0.80	0.13	A
	South	8.5	49	0.80	0.12	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	83	0.80	0.14	A
	South	13.0	51	0.80	0.08	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	53	0.80	0.22	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	28	0.80	0.10	A
Weekday Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	150	0.80	0.33	A
	West	6.0	196	0.83	0.66	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	99	0.88	0.12	A
	South	12.5	87	0.80	0.15	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	131	0.80	0.22	A
	South	11.5	69	0.82	0.12	A
34th Avenue between 126th Street and 126th Place	North	11.5	87	0.80	0.16	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	143	0.80	1.19	B
	West	8.0	30	0.80	0.08	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	206	0.80	0.45	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	357	0.80	1.06	B
	South	8.5	201	0.80	0.49	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	251	0.82	0.41	A
	South	13.0	81	0.80	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	214	0.86	0.83	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	148	0.80	0.51	B

Note: PMF = pedestrians per minute per foot.

Table 14-116
2032 No Action Condition: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	35	0.80	0.08	A
	West	6.0	7	0.80	0.02	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	75	0.80	0.10	A
	South	12.5	64	0.80	0.11	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	130	0.82	0.21	A
	South	11.5	45	0.80	0.08	A
34th Avenue between 126th Street and 126th Place	North	11.5	20	0.80	0.04	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	43	0.80	0.36	A
	West	8.0	0	0.80	0.00	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	29	0.80	0.06	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	126	0.85	0.35	A
	South	8.5	166	0.80	0.41	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	117	0.89	0.18	A
	South	13.0	111	0.80	0.18	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	82	0.80	0.34	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	36	0.80	0.13	A
Weekend Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	99	0.80	0.22	A
	West	6.0	283	0.80	0.89	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	101	0.80	0.14	A
	South	12.5	167	0.80	0.28	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	133	0.85	0.21	A
	South	11.5	112	0.80	0.20	A
34th Avenue between 126th Street and 126th Place	North	11.5	26	0.80	0.05	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	272	0.80	2.27	B
	West	8.0	25	0.80	0.07	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	173	0.93	0.33	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	327	0.87	0.90	B
	South	8.5	262	0.80	0.64	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	156	0.86	0.24	A
	South	13.0	89	0.80	0.14	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	243	0.80	1.01	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	63	0.80	0.22	A
Weekend Post-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	9.5	459	0.80	1.01	B
	West	6.0	877	0.80	3.05	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	142	0.80	0.19	A
	South	12.5	163	0.80	0.27	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	167	0.80	0.28	A
	South	11.5	158	0.80	0.29	A
34th Avenue between 126th Street and 126th Place	North	11.5	0	0.80	0.00	A
126th Street between Northern Boulevard and 34th Avenue	East	2.5	592	0.80	4.93	C
	West	8.0	35	0.80	0.09	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	519	0.80	1.14	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	668	0.80	1.99	B
	South	8.5	260	0.80	0.64	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	260	0.80	0.43	A
	South	13.0	65	0.80	0.10	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	415	0.80	1.73	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	126	0.80	0.44	A

Note: PMF = pedestrians per minute per foot.

Table 14-117
2032 No Action Condition: Pedestrian LOS Analysis for Corners

Location	Corner	Weekday								Weekend					
		AM		Midday		PM		Pre-Game		Midday Non-Game		Pre-Game		Post-Game	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Roosevelt Avenue and 126th Street	Northwest	1620.2	A	2268.2	A	2800.5	A	836.4	A	1433.5	A	886.2	A	558.9	A
	Northeast	1270.2	A	1303.3	A	2513.2	A	504.7	A	1057.7	A	573.0	A	331.1	A
Roosevelt Avenue and 114th Street	Northwest	1642.0	A	1428.6	A	1662.7	A	352.9	A	967.9	A	431.0	A	216.5	A
	Southwest	1200.8	A	1514.3	A	1102.5	A	343.4	A	511.8	A	425.4	A	352.0	A

Note: SFP = square feet per pedestrian.

Table 14-118
2032 No Action Condition: Weekday Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with Conflicting Vehicles											
				Weekday AM			Weekday Midday			Weekday PM			Weekday Pre-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	47	1630.7	A	43	1621.1	A	25	2680.2	A	119	650.3	A
	East	43.0	14.0	4	3727.0	A	7	2012.3	A	2	6748.7	A	6	2329.5	A
	South	50.0	13.0	23	2684.1	A	39	1564.3	A	29	2131.1	A	87	713.1	A
	West	43.0	13.5	6	2807.7	A	10	1560.4	A	8	2031.8	A	45	149.4	A
34th Avenue and 126th Street	North	81.0	12.5	3	3137.7	A	0	N/A	A	4	2131.7	A	16	475.0	A
	East	30.0	7.0	10	2035.8	A	14	1394.7	A	21	937.3	A	232	76.9	A
	South	61.0	10.5	2	2947.4	A	1	5767.3	A	2	3150.8	A	142	43.4	B
	West	47.5	12.5	0	N/A	A	0	N/A	A	2	19103.5	A	43	885.2	A
Northern Boulevard and 126th Street	East	43.5	14.0	2	6403.9	A	2	5642.1	A	2	5513.2	A	18	583.0	A
	South	51.0	15.0	7	11652.5	A	1	81604.6	A	3	27198.9	A	29	2802.6	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	60	1096.4	A	62	946.7	A	51	1226.0	A	332	155.5	A
	East	44.0	11.0	8	1243.8	A	4	2937.4	A	7	1135.1	A	28	313.3	A
	South	32.5	12.0	71	779.3	A	42	1232.1	A	58	818.5	A	202	226.5	A
	West	43.0	13.0	13	1462.3	A	20	1057.6	A	22	878.2	A	56	326.3	A

Notes: SFP = square feet per pedestrian.

N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.

Table 14-119
2032 No Action Condition: Weekend Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with Conflicting Vehicles								
				Weekend Midday Non-Game			Weekend Pre-Game			Weekend Post-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	59	1158.5	A	92	700.6	A	138	537.3	A
	East	43.0	14.0	5	2760.3	A	11	1421.5	A	23	379.2	A
	South	50.0	13.0	67	923.2	A	170	360.6	A	164	378.3	A
	West	43.0	13.5	15	1072.1	A	68	99.5	A	75	183.4	A
34th Avenue and 126th Street	North	81.0	12.5	4	2699.8	A	217	36.8	C	590	4.4	F
	East	30.0	7.0	26	755.4	A	2	9908.5	A	0	N/A	A
	South	61.0	10.5	5	1204.7	A	193	21.4	D	347	10.0	E
	West	47.5	12.5	4	9806.4	A	30	1159.6	A	181	188.9	A
Northern Boulevard and 126th Street	East	43.5	14.0	8	1672.8	A	10	1083.9	A	70	129.6	A
	South	51.0	15.0	3	27198.9	A	11	7409.9	A	7	11647.7	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	112	471.0	A	239	207.1	A	592	69.2	A
	East	44.0	11.0	14	547.5	A	37	154.1	A	44	204.3	A
	South	32.5	12.0	143	329.1	A	145	317.7	A	150	311.5	A
	West	43.0	13.0	34	559.6	A	67	256.9	A	95	182.6	A

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.

L. PROBABLE IMPACTS OF THE PROPOSED PROJECT (TRANSIT AND PEDESTRIANS)

The future with the proposed project or the "With Action" condition would result in increased transit and pedestrian volumes within the study area. This section describes the projected travel patterns of the site-related trips and assesses their potential impacts on nearby transit and pedestrian facilities for the 2018, 2028, and 2032 analysis years. Where significant adverse impacts are identified, measures to mitigate the impacts are described in Chapter 21, "Mitigation."

2018 WITH ACTION CONDITION

TRIP DISTRIBUTION AND ASSIGNMENT

Transit and pedestrian volumes for the With Action condition were estimated by overlaying peak hour volumes derived from the trip generation estimates presented in the "Traffic and Parking" section, onto the No Action analysis networks. These volumes were then assigned to the transit and pedestrian analysis locations based on the following assumptions.

- Automobile and taxi person trips associated with the District are expected to have a negligible effect on the pedestrian network, since both would be dispersed throughout the District east of 126th Street, and the associated pedestrian trips, which would mostly occur in the District itself, would traverse a limited number of the pedestrian elements included for analysis. The Willets West development would have an on-site parking garage for autos and a designated taxi drop-off/pick-up area, and therefore, no auto and taxi trips associated with Willets West would traverse any of the pedestrian elements included for analysis. As part of the Willets West development, approximately 3,700 existing CitiField parking spaces would be displaced from the current CitiField parking lot. Specific to Phase 1A, 2,750 of the displaced spaces would be constructed in an interim surface parking lot within the District, with the remaining displaced spaces to be replaced in a new CitiField garage, south of Roosevelt Avenue, within the current "South Lot." The CitiField patrons who in Phase 1A would park in the District's interim parking lot would then need to cross 126th Street to access the stadium. It was assumed that half of the patrons would cross 126th Street at 37th Avenue with the other half would cross at 38th Avenue. The patrons who would park in the new South Lot garage would connect with CitiField via the Mets-Willets Point subway station, as they do currently during game days, and would not traverse any of the pedestrian elements included for analysis. It should be noted that NYCT may ultimately decide to revert back to its pre-CitiField station operating plan. Under this operating plan, the station would function during Met games as it would on non-game days—the wider portion of the mezzanine, which is within the paid zone on most occasions but currently is converted to an unpaid zone during games would be kept as a part of the paid zone at all times. The unpaid corridor at the western end of the mezzanine would remain unpaid at all times and thus could serve as a means of crossing Roosevelt Avenue through the station. If this plan is implemented, NYCT would reposition the agent booth in the unpaid zone to provide added circulation space in the corridor.
- Subway trips were assigned to the Mets-Willets Point subway station. The assignments to specific stairways were based on logical patterns between the subway station and Willets West and the District.

- Based on existing ridership patterns, bus trips were assigned to the study area bus routes as follows: 15 percent to the Q19, 70 percent to the Q66, and 15 percent to the Q48 bus routes. Assignments on these bus routes were made with logical origins and destinations. This allocation of projected bus trips conservatively does not assume other service improvements, such as new bus routes or extension of existing bus routes, that are typical with areas undergoing substantial growth in ridership from new developments. As stated in the FGEIS, discussions were initiated with the MTA to explore opportunities to extend existing bus routes from adjacent neighborhoods (e.g., downtown Flushing) and/or creating new bus routes. Potential bus service improvements discussed include: 1) increasing service frequency on the Q19 and providing westbound stop/loop service to Willets Point; 2) extending some or all bus routes that currently terminate in downtown Flushing to Willets Point, including the Q12, Q13, Q15/Q15A, Q16, Q26, and Q28; and 3) possibly extending the limited Q50 along Roosevelt Avenue through Willets Point. These potential service improvements would require new bus stops and layover areas in and around the project site. While the City is expected to collaborate with the MTA NYCT during and after this environmental review process to ensure that adequate bus service improvements would be implemented, no definitive plans have been made at this time.
- Walk-only trips, primarily within the District, were evenly distributed to the surrounding street network. Even though the majority of the future uses within the District would not be developed yet in Phase 1A, the walk only trips were conservatively distributed to the street network, assuming a higher percentage of trips originating from Corona and Flushing. As part of the later phases, a higher percentage of walk only trips would be generated by other uses within the District, resulting in an increased internal trip capture percentage and a lower percentage of trips originating from Corona and Flushing. As a result of the increased internal capture percentage, a high number of walk only trips generated by uses within the District would not appear on any of the pedestrian elements included for analysis. As for the walk-only trips that would be generated by the Willets West development, all were distributed to the street network, including a portion assumed to originate from or destine to future uses in the District, and no internal capture was assumed. Since the Willets West development would already be developed in Phase 1A and included in the two subsequent phases, the trip distribution remained consistent for all phases. Unlike the uses within the District, however, the percentage of walk-only trips originating from Corona and Flushing would be consistent for all three phases.

CHANGES IN THE PEDESTRIAN ENVIRONMENT

The 2018 With Action condition pedestrian analysis reflects geometric changes to crosswalk lengths, sidewalk widths, and corner dimensions consistent with those outlined in the FGEIS. Specific geometric changes affecting the analysis elements include:

- Modifying 126th Street to serve as the main entryway to the District, resulting in enlarged pedestrian circulation areas on sidewalks on the east side of the street and a new bicycle path on both sides of the street;
- Constructing new streets within the District, resulting in different crossing distances and sidewalk widths from the No Action condition; and
- As part of the project's overall plan of developing Willets West and moving the majority of Mets parking to the south side of Roosevelt Avenue, pedestrian plazas would form within what are currently enclosed parking areas for the Mets. These pedestrian plazas would provide additional means of pedestrian circulation adjacent to Willets West and CitiField.

SUBWAY STATION OPERATIONS

The same station elements previously analyzed for the existing and No Action conditions were analyzed under the With Action condition. Project-generated subway trips were added to the 2018 No Action volumes to generate the 2018 With Action volumes for the analysis of station operations. It was assumed that all incremental subway trips would access the Mets-Willets Point subway station via the street-level and street-mezzanine stairways on the north side of Roosevelt Avenue. Once inside the station, these trips were distributed to the Manhattan-bound and Flushing-bound platforms using the directional split developed for the subway line-haul analysis, as detailed in the next sub-section. Passenger movements between the mezzanine and platform levels were distributed based on existing flow patterns during the various analysis time periods.

As shown in **Tables 14-120** and **14-121**, all analyzed stairways and ramps and control areas would continue to operate at acceptable levels. Therefore, the proposed project would not result in any significant adverse subway station impacts under the 2018 With Action condition. However, as described above, if NYCT reverts back to its pre-CitiField station operating plan, whereby passage through the station between parking in South Lot/Lot D and the north side of Roosevelt Avenue could be made only within the unpaid zone, additional impacts for the station's street-level connections and the unpaid zone passageway could occur during game days. Because game-day conditions occur only 40 to 50 times a year and are subject to game-day traffic and pedestrian management, such impacts would be intermittent and may not require permanent mitigation measures. Furthermore, since the planning and design of this station reconfiguration has not yet taken place, the specific nature of the potential game-day impacts cannot be ascertained and any mitigation measures that may be deemed feasible to address the potential game-day impacts also cannot be identified at this time. If NYCT decides to proceed with this station reconfiguration, which would take place independent of the proposed project, additional interagency coordination is expected to take place to develop the appropriate game-day management strategies. For purposes of disclosure in this Draft SEIS, any impacts that may be attributed to future passage of a reconfigured Mets-Willets Point subway station may potentially be deemed unmitigatable.

SUBWAY LINE HAUL LEVELS

Trips associated with the proposed project were superimposed onto the No Action line-haul volumes to generate the With Action peak period volumes for the subway line-haul analysis. Census data were reviewed to estimate directional travel patterns between Willets Point and Flushing and with various locations to the west. Ratios and trip distribution patterns of current subway trips originating in the area near the project site were developed based on information provided by NYCT, as summarized in **Table 14-122**. Although there are various uses planned for the District and Willets West, subway trip-making patterns during the commuter peak hours are likely to be similar for all uses. Hence, this set of trip distribution patterns was used for assigning all AM and PM peak hour project-generated subway trips to different segments of the No. 7 subway line.

Table 14-120

2018 With Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekday AM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	52	94	0.90	0.90	0.18	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	11	19	0.90	0.90	0.04	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	63	113	0.90	0.90	0.12	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	1	52	0.75	1.00	0.05	A
Flushing-bound West P10 Stair	9.6	8.3	2	48	0.75	1.00	0.05	A
Flushing-bound East P4 Stair	9.9	8.7	1	57	0.75	1.00	0.06	A
Flushing-bound East P2 Stair	10.1	8.8	4	49	0.75	0.90	0.06	A
Manhattan-bound West Ramp Passageway	17.6	15.6	89	7	0.75	0.90	0.03	A
Manhattan-bound East Ramp Passageway	19.6	17.6	46	12	0.75	0.90	0.02	A
Weekday PM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	212	196	0.90	0.90	0.49	B
Roosevelt Avenue (North) S2 Stair	8.0	6.8	35	27	0.90	0.90	0.07	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	247	223	0.90	0.90	0.32	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	3	84	0.75	1.00	0.09	A
Flushing-bound West P10 Stair	9.6	8.3	2	78	0.75	1.00	0.08	A
Flushing-bound East P4 Stair	9.9	8.7	5	105	0.75	1.00	0.11	A
Flushing-bound East P2 Stair	10.1	8.8	14	89	0.75	0.90	0.11	A
Manhattan-bound West Ramp Passageway	17.6	15.6	200	7	0.75	1.00	0.06	A
Manhattan-bound East Ramp Passageway	19.6	17.6	66	12	0.75	0.90	0.02	A
Weekday Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	161	367	0.90	0.90	0.65	B
Roosevelt Avenue (North) S2 Stair	8.0	6.8	12	12	0.90	0.90	0.03	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	173	379	0.90	0.90	0.38	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	6	465	0.75	1.00	0.49	A
Flushing-bound West P10 Stair	9.6	8.3	4	494	0.75	1.00	0.53	B
Flushing-bound East P4 Stair	9.9	8.7	6	435	0.75	1.00	0.45	B
Flushing-bound East P2 Stair	10.1	8.8	9	280	0.75	1.00	0.29	A
Manhattan-bound West Ramp Passageway	17.6	15.6	173	23	0.75	0.90	0.06	A
Manhattan-bound East Ramp Passageway	19.6	17.6	73	29	0.75	0.90	0.03	A
Weekend Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	146	479	0.90	0.90	0.77	C
Roosevelt Avenue (North) S2 Stair	8.0	6.8	6	10	0.90	0.90	0.02	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	152	489	0.90	0.90	0.45	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	4	324	0.75	1.00	0.34	A
Flushing-bound West P10 Stair	9.6	8.3	0	313	0.75	1.00	0.33	A
Flushing-bound East P4 Stair	9.9	8.7	4	498	0.75	1.00	0.51	B
Flushing-bound East P2 Stair	10.1	8.8	11	306	0.75	1.00	0.32	A
Manhattan-bound West Ramp Passageway	17.6	15.6	162	22	0.75	0.90	0.06	A
Manhattan-bound East Ramp Passageway	19.6	17.6	59	58	0.75	0.90	0.04	A

Table 14-120 (cont'd)
2018 With Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes Up	15-Minute Pedestrian Volumes Down	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekend Post-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	311	156	0.90	0.90	0.55	B
Roosevelt Avenue (North) S2 Stair	8.0	6.8	18	7	0.90	0.90	0.03	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	329	163	0.90	0.90	0.33	A
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	384	43	0.75	0.90	0.38	A
Flushing-bound West P10 Stair	9.6	8.3	308	72	0.75	0.90	0.36	A
Flushing-bound East P4 Stair	9.9	8.7	354	49	0.75	0.90	0.36	A
Flushing-bound East P2 Stair	10.1	8.8	577	31	0.75	0.90	0.52	B
Manhattan-bound West Ramp Passageway	17.6	15.6	814	7	0.75	1.00	0.23	A
Manhattan-bound East Ramp Passageway	19.6	17.6	445	12	0.75	1.00	0.12	A

Notes:
Capacities were calculated based on rates presented in the *CEQR Technical Manual* (January 2012 edition).
Surging factors are only applied to the exiting pedestrian volume (*CEQR Technical Manual*).
V/C Stairway = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
V/C Passageway = [Vin / (225 * We * Sf * Ff)]+ [Vx/ (225 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs/passageways
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 14-121
2018 With Action Condition: Subway Station Control Area Analysis

Mets-Willets Point No. 7 Train Station Control Area Elements	Quantity	15-Minute Pedestrian Volumes Into Control Area	15-Minute Pedestrian Volumes Out from Control Area	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekday AM Non-Game							
Main Control Area Turnstiles (R532)	5	128	186	0.80	0.90	0.15	A
Weekday PM Non-Game							
Main Control Area Turnstiles (R532)	5	282	346	0.80	0.90	0.30	A
Weekday Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	73	29	0.75	0.90	0.04	A
Manhattan-bound West Ramp Turnstiles	6	173	23	0.75	0.90	0.09	A
Flushing-bound East Stair Turnstiles	8	15	715	0.80	1.00	0.18	A
Flushing-bound West Stair Turnstiles	6	10	953	0.80	1.00	0.31	A
Weekend Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	59	58	0.75	0.90	0.04	A
Manhattan-bound West Ramp Turnstiles	6	162	22	0.75	0.90	0.08	A
Flushing-bound East Stair Turnstiles	8	14	794	0.80	1.00	0.20	A
Flushing-bound West Stair Turnstiles	6	3	625	0.80	1.00	0.20	A
Weekend Post-Game							
Manhattan-bound East Ramp Turnstiles	7	445	12	0.75	1.00	0.15	A
Manhattan-bound West Ramp Turnstiles	6	814	7	0.75	1.00	0.33	A
Flushing-bound East Stair Turnstiles	8	931	81	0.80	0.90	0.33	A
Flushing-bound West Stair Turnstiles	6	693	115	0.80	0.90	0.35	A

Notes: Capacities were calculated based on rates presented in the CEQR Technical Manual (January 2012 edition).
V/C =Vin / (Cin x Ff)+ Vx / (Cx x Sf x Ff)
Vin = Peak 15 Min Entering Passenger Volume
Cin= Total 15-Minute Capacity of all turnstiles for entering Passengers
Vx = Peak 15- Minute Exiting Passenger
Cx = Total 15-minute Capacity of all turnstile for exiting Passengers
Sf = Surging Factor
Ff = Friction Factor

Table 14-122
Distribution of Willets West and District Subway Trips

No. 7 Train Load	Percent of Total Trips
Westbound Trips (from District)	
Transfer to E/F/M/R	6%
Express Line-Haul @ Woodside	73%
Local Line-Haul @ 40th Street	12%
Transfer to SB N/Q @ Queensboro Plaza	19%
Transfer to SB 4/5 @ Grand Central	10%
Transfer to SB 6 @ Grand Central	6%
Eastbound Trips (to District)	
Transfer from NB 6 @ Grand Central	6%
Transfer from NB 4/5 @ Grand Central	10%
Transfer from NB N/Q @ Queensboro Plaza	19%
Combined Line-Haul East of Queensboro Plaza	85%
Transfer from E/F/M/R	6%

Sources: NYCT

The projected peak hour subway trip increments at the peak load points for the No. 7 subway line were superimposed onto the No Action line-haul volumes. As shown in **Table 14-123**, with the overlay of these project-generated trips, the No. 7 subway line would continue to operate within guideline capacity during the AM peak period for the Manhattan-bound local service and during the PM peak period for the Flushing-bound service. As with the 2018 No Action condition, the Manhattan-bound express service would continue to exceed the guideline capacity during the weekday AM peak period under the 2018 With Action condition. On average, the project-generated subway trips would add one passenger per car to the Manhattan-bound express line at the peak load point during the AM peak period, which is less than the *CEQR Technical Manual* impact threshold of five passengers per car. Hence, Phase 1A of the proposed project would not result in a significant adverse line-haul impact on the No. 7 line.

Table 14-123
2018 With Action Condition: Peak Hour Subway Line Haul

No. 7 Train Direction of Travel	Station	Trains /Hour	Volume	Leave Load		Available Capacity
				Guideline Capacity	V/C Ratio	
AM Peak Period						
Manhattan-bound Express	Woodside–61st Street	15	19,526	18,150	1.08	-1,376
Manhattan-bound Local	40th Street	14	15,232	16,940	0.90	1,708
PM Peak Period						
Flushing-bound Express + Local	Queensboro Plaza	23	22,503	27,830	0.81	5,327

Sources: New York City Transit
Notes: For the AM peak hour, while a total of 29 trains would be expected to traverse the respective express and local peak load points, the total number of scheduled trains during this hour would be 28 trains.

In addition, because NYCT expects that there would be notable transfer activities between the No. 7 line and the N/Q lines at the Queensboro Plaza subway station (across the platform transfers), a detailed examination of line-haul conditions on the N/Q lines will be prepared, in coordination with NYCT, for the Final EIS. However, since the estimated Phase 1A project-generated increments would be fewer than 5 persons per subway car (up to 108 passengers in 120 to 130 train cars) on the N/Q trains, Phase 1A of the proposed project would similarly not result in a significant adverse line-haul impact on the N/Q lines.

BUS LINE HAUL LEVELS

As discussed above, although there would potentially be other bus routes serving the project site once development components of the proposed project are completed and occupied, the 2018 With Action analysis of potential bus line-haul impacts considers only the bus routes and stops that exist currently. Peak hour bus ridership levels were estimated by adding the incremental trips associated with the proposed project to bus stop locations along Roosevelt Avenue at 126th Street for the Q48 and to maximum load points along the Q19 and Q66. It was estimated that 40 percent of the bus trips would originate from Corona and the remaining 60 percent from Flushing. Bus trip assignments were divided into trips coming into and departing from Willets West and the District as follows:

- Into the project site traveling eastbound from Corona
  - 15 percent would take the Q48 along Roosevelt Avenue;
  - 15 percent would take the Q19 along Northern Boulevard; and
  - 70 percent would take the Q66 along Northern Boulevard.
- Into the project site traveling westbound from Flushing
  - 15 percent would take the Q48 along Roosevelt Avenue; and
  - 85 percent would take the Q66 along Northern Boulevard (As discussed, according to the MTA Bus Company, the westbound Q19 does not make a stop within the study area; therefore, no westbound trips were assigned to this route.).
- Out from the project site traveling westbound to Corona
  - 18 percent would take Q48 along Roosevelt Avenue (this includes 9 percent that would transfer to Q19 outside the study area); and
  - 42 percent would take Q66 along Northern Boulevard.
- Out from the project site traveling eastbound to Flushing
  - 6 percent would take Q48 along Roosevelt Avenue;
  - 28 percent would take Q66 along Northern Boulevard; and
  - 6 percent would take Q19 along Northern Boulevard.

As described above, impacts to bus line-haul levels would be considered significant if a proposed action would result in operating conditions above guideline capacities. As shown in **Table 14-124**, all three bus routes would continue to operate within guideline capacity (54 passengers per bus) during the AM and PM peak period under the 2018 With Action condition. Hence, Phase 1A of the proposed project would not result in a significant adverse impact on bus line-haul conditions.

Table 14-124
2018 With Action Condition: Bus Line Haul at NYCT Maximum and District Load Points

Route	Peak Period	Buses Per Hour	Eastbound		Buses Per Hour	Westbound	
			Load Point	AP		Load Point	AP
Q19	AM	3	Astoria Blvd/ 102nd St	50	3	Astoria Blvd/ 77th St	49
	PM	3	Astoria Blvd/ 94th St	47	3	Astoria Blvd/Humphrey St	54
Q48	AM	5	Roosevelt at 126th	38	3	Roosevelt at 126th	15
	PM	5	Roosevelt at 126th	41	5	Roosevelt at 126th	48
Q66 (to Woodside and LIC)	AM	15	Northern Blvd/ 110th St	54	14	Northern Blvd/ 72nd St	51
	PM	10	Northern Blvd/ 110th St	48	10	Northern Blvd/ 106th St	50

Note: AP = average passengers per bus; **(#)** = exceeds NYCT guideline capacity
Source: Q48 ridership data provided by NYCT; Q19 and Q66 ridership data provided by the MTA Bus Company

STREET-LEVEL PEDESTRIAN OPERATIONS

The study area sidewalks, corner reservoirs, and crosswalks were assessed for the weekday AM, midday, PM, and pre-game peak periods, as well as, the weekend midday non-game, pre-game, and post-game peak periods by superimposing project-generated trips onto the No Action pedestrian analysis networks. The 2018 With Action peak hour pedestrian volumes are shown in **Appendix D**. As shown in **Tables 14-125** through **14-127**, all sidewalks and corner reservoirs would continue to operate at acceptable levels (within mid-LOS D, with a maximum of 8.5 PMF platoon flows for sidewalks; minimum of 19.5 SFP for corners) or incur degradations that, when compared to the No Action condition, do not exceed the *CEQR Technical Manual* sliding scale impact thresholds (See **Tables 14-81** and **14-82**). However, as shown in **Tables 14-128** and **14-129**, several study area crosswalks would operate beyond mid-LOS D (less than 19.5 SFP) and incur degradations that, when compared to the No Action condition, would exceed the *CEQR Technical Manual* sliding scale impact thresholds. These significant adverse pedestrian impacts are detailed below. Measures that can potentially mitigate these impacts are discussed in Chapter 21, "Mitigation."

Northern Boulevard and 126th Street

- The east crosswalk would deteriorate to beyond mid-LOS D (15.6 SFP) from a No Action LOS A (5699.3 SFP), LOS E (14.0 SFP) from a No Action LOS A (5584.8 SFP), beyond mid-LOS D (16.1 SFP) from a No Action LOS A (625.9 SFP), LOS E (11.6 SFP) from a No Action LOS A (1695.1 SFP), LOS E (14.7 SFP) from a No Action LOS A (1095.3 SFP), and to LOS E (10.7 SFP) from a No Action LOS A (136.4 SFP) during the weekday midday, weekday PM, weekday pre-game, weekend midday non-game, weekend pre-game, and weekend post-game peak periods, respectively.

Roosevelt Avenue and 126th Street

- The west crosswalk would deteriorate to LOS F (-67.6 SFP) from a No Action LOS A (194.6 SFP) during the weekend post-game peak period.

Table 14-125
2018 With Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday AM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	94	0.81	0.19	A
	West	6.0	3	0.80	0.01	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	62	0.91	0.07	A
	South	12.5	40	0.80	0.07	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	136	0.80	0.23	A
	South	11.5	85	0.80	0.15	A
34th Avenue between 126th Street and 126th Place	North	11.5	9	0.80	0.02	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	395	0.80	0.82	B
	West	8.0	6	0.80	0.02	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	218	0.80	0.48	A
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	91	0.80	0.27	A
	South	8.5	95	0.80	0.23	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	91	0.80	0.15	A
	South	13.0	89	0.83	0.14	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	66	0.80	0.28	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	21	0.80	0.07	A
Weekday Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	260	0.80	0.54	B
	West	6.0	10	0.80	0.03	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	124	0.80	0.17	A
	South	12.5	97	0.80	0.16	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	250	0.80	0.42	A
	South	11.5	164	0.80	0.30	A
34th Avenue between 126th Street and 126th Place	North	11.5	23	0.80	0.04	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	1126	0.80	2.35	B
	West	8.0	19	0.80	0.05	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	626	0.80	1.37	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	132	0.80	0.39	A
	South	8.5	42	0.80	0.10	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	87	0.80	0.15	A
	South	13.0	60	0.80	0.10	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	98	0.80	0.41	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	32	0.80	0.11	A

Table 14-125 (cont'd)
2018 With Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

(Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday PM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	191	0.80	0.40	A
	West	6.0	13	0.80	0.05	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	99	0.80	0.13	A
	South	12.5	79	0.80	0.13	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	237	0.80	0.40	A
	South	11.5	168	0.80	0.30	A
34th Avenue between 126th Street and 126th Place	North	11.5	28	0.80	0.05	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	1155	0.80	2.41	B
	West	8.0	23	0.80	0.06	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	617	0.80	1.35	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	125	0.80	0.37	A
	South	8.5	55	0.80	0.13	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	105	0.80	0.18	A
	South	13.0	74	0.80	0.12	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	74	0.80	0.31	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	50	0.80	0.17	A
Weekday Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	200	0.80	0.42	A
	West	6.0	194	0.83	0.65	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	169	0.88	0.21	A
	South	12.5	110	0.80	0.18	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	212	0.80	0.35	A
	South	11.5	171	0.82	0.30	A
34th Avenue between 126th Street and 126th Place	North	11.5	117	0.80	0.21	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	1090	0.80	2.27	B
	West	8.0	52	0.80	0.14	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	726	0.80	1.59	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	422	0.80	1.26	B
	South	8.5	197	0.80	0.48	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	263	0.82	0.43	A
	South	13.0	99	0.80	0.16	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	226	0.86	0.88	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	162	0.80	0.56	B

Note: PMF = pedestrians per minute per foot.

Table 14-126
2018 With Action Condition: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	214	0.80	0.45	A
	West	6.0	11	0.80	0.04	A
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	179	0.80	0.24	A
	South	12.5	108	0.80	0.18	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	326	0.82	0.53	B
	South	11.5	220	0.80	0.40	A
34th Avenue between 126th Street and 126th Place	North	11.5	56	0.80	0.10	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	1584	0.80	3.30	C
	West	8.0	30	0.80	0.08	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	876	0.80	1.92	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	236	0.85	0.66	B
	South	8.5	167	0.80	0.41	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	145	0.89	0.22	A
	South	13.0	139	0.80	0.22	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	109	0.80	0.45	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	65	0.80	0.23	A
Weekend Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	173	0.80	0.36	A
	West	6.0	278	0.80	0.88	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	182	0.80	0.24	A
	South	12.5	198	0.80	0.33	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	228	0.85	0.36	A
	South	11.5	232	0.80	0.42	A
34th Avenue between 126th Street and 126th Place	North	11.5	55	0.80	0.10	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	1376	0.80	2.87	B
	West	8.0	49	0.80	0.13	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	785	0.93	1.49	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	398	0.87	1.09	B
	South	8.5	255	0.80	0.63	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	174	0.86	0.27	A
	South	13.0	109	0.80	0.17	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	257	0.80	1.07	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	82	0.80	0.28	A
Weekend Post-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	520	0.80	1.08	B
	West	6.0	852	0.80	2.96	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	216	0.80	0.29	A
	South	12.5	189	0.80	0.32	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	256	0.80	0.43	A
	South	11.5	249	0.80	0.45	A
34th Avenue between 126th Street and 126th Place	North	11.5	35	0.80	0.06	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	1478	0.80	3.08	C
	West	8.0	58	0.80	0.15	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1000	0.80	2.19	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	720	0.80	2.14	B
	South	8.5	254	0.80	0.62	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	271	0.80	0.45	A
	South	13.0	84	0.80	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	421	0.80	1.75	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	143	0.80	0.50	A

Note: PMF = pedestrians per minute per foot.

Table 14-127
2018 With Action Condition: Pedestrian LOS Analysis for Corners

Location	Corner	Weekday								Weekend					
		AM		Midday		PM		Pre-Game		Midday Non-Game		Pre-Game		Post-Game	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Roosevelt Avenue and 126th Street	Northwest	1110.3	A	616.9	A	689.6	A	616.1	A	528.3	A	585.0	A	434.0	A
	Northeast	1487.0	A	508.2	A	648.3	A	729.0	A	559.4	A	666.2	A	518.4	A
Roosevelt Avenue and 114th Street	Northwest	1473.1	A	1093.5	A	1213.0	A	334.4	A	728.9	A	396.6	A	212.6	A
	Southwest	1039.0	A	929.8	A	733.4	A	309.7	A	396.2	A	364.5	A	316.9	A

Note: SFP = square feet per pedestrian.

Table 14-128
2018 With Action Condition: Weekday Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with Conflicting Vehicles											
				Weekday AM			Weekday Midday			Weekday PM			Weekday Pre-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	96	794.4	A	232	289.3	A	203	319.7	A	200	261.4	A
	East	43.0	14.0	14	1054.4	A	63	211.5	A	38	336.7	A	22	638.4	A
	South	50.0	13.0	33	1870.9	A	76	800.7	A	61	1010.6	A	102	607.9	A
	West	43.0	13.5	8	2084.0	A	12	1230.3	A	10	1530.2	A	44	334.7	A
34th Avenue and 126th Street	North	81.0	12.5	89	98.1	A	259	25.8	C	280	21.4	D	275	67.9	A
	East	43.0	7.0	286	74.3	A	872	20.8	D	867	21.2	D	948	10.4	**E+**
	South	61.0	10.5	88	60.9	A	260	16.5	**D+**	278	18.1	**D+**	398	23.8	D
	West	47.5	12.5	6	6444.5	A	18	2047.8	A	25	1431.8	A	64	325.7	A
Northern Boulevard and 126th Street	East	43.5	14.0	162	71.0	A	512	15.6	**D+**	523	14.0	**E+**	466	16.1	**D+**
	South	51.0	15.0	13	6272.3	A	19	4289.6	A	26	3133.2	A	51	1592.6	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	74	875.4	A	101	546.7	A	95	607.1	A	360	133.2	A
	East	44.0	11.0	20	495.1	A	38	291.9	A	45	166.6	A	63	131.4	A
	South	32.5	12.0	85	652.9	A	83	621.2	A	103	460.5	A	234	196.0	A
	West	43.0	13.0	13	1464.4	A	18	1177.3	A	20	969.2	A	54	339.0	A

Notes: SFP = square feet per pedestrian.

+ Denotes a significant adverse impact.

Table 14-129
2018 With Action Condition: Weekend Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with Conflicting Vehicles								
				Weekend Midday Non-Game			Weekend Pre-Game			Weekend Post-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	255	258.8	A	186	267.2	A	224	327.6	A
	East	43.0	14.0	47	282.6	A	36	433.7	A	47	178.2	A
	South	50.0	13.0	107	576.2	A	188	325.7	A	177	350.1	A
	West	43.0	13.5	16	887.0	A	68	161.2	A	74	-67.6	**F+**
34th Avenue and 126th Street	North	81.0	12.5	397	17.9	**D+**	504	34.1	C	820	6.9	F
	East	43.0	7.0	1209	14.3	**E+**	850	11.4	**E+**	692	31.4	C
	South	61.0	10.5	398	11.8	**E+**	481	14.1	**E+**	586	9.95	E
	West	47.5	12.5	34	1068.0	A	53	366.1	A	199	128.0	A
Northern Boulevard and 126th Street	East	43.5	14.0	731	11.6	**E+**	529	14.7	**E+**	503	10.7	**E+**
	South	51.0	15.0	33	2467.3	A	34	2394.1	A	31	2626.2	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	168	284.4	A	274	168.6	A	610	62.3	A
	East	44.0	11.0	67	104.4	A	77	69.0	A	78	111.6	A
	South	32.5	12.0	198	237.1	A	183	252.1	A	183	256.3	A
	West	43.0	13.0	32	596.5	A	65	266.5	A	91	191.7	A

Notes: SFP = square feet per pedestrian.
+ Denotes a significant adverse impact.

34th Avenue and 126th Street

- The north crosswalk would deteriorate to beyond mid-LOS D (17.9 SFP) from a No Action LOS A (2714.0 SFP) during the weekend non-game peak period.
- The south crosswalk would deteriorate to beyond mid-LOS D (16.5 SFP) from a No Action LOS A (5848.7 SFP), beyond mid-LOS D (18.1 SFP) from a No Action LOS A (3183.4 SFP), LOS E (11.8 SFP) from a No Action LOS A (1217.7 SFP), and to LOS E (14.1 SFP) from a No Action LOS D (23.0 SFP) during the weekday midday, weekday PM, weekend midday non-game, and weekend pre-game peak periods, respectively.

The east crosswalk would deteriorate to LOS E (10.4 SFP) from a No Action LOS A (80.0 SFP), LOS E (14.3 SFP) from a No Action LOS A (820.4 SFP), and to LOS E (11.4 SFP) from a No Action LOS A (9927.5 SFP) during the weekday pre-game, weekend midday non-game, and weekend pre-game peak periods, respectively.

The significant adverse pedestrian impacts detailed above for the 2018 analysis year are summarized in **Table 14-130**.

Table 14-130
Summary of 2018 Significant Adverse Transit and Pedestrian Impacts

Analysis Element		Analysis Time Period						
		Weekday				Weekend		
		AM	Midday	PM	Pre-Game	Midday	Pre-Game	Post-Game
Pedestrian Impacts								
Northern Blvd & 126th St	E Crosswalk		X	X	X	X	X	X
Roosevelt Ave & 126th St	W Crosswalk							X
34th Ave & 126th St	N Crosswalk					X		
	S Crosswalk		X	X		X	X	
	E Crosswalk				X	X	X	

Notes: X = Significantly Impacted

2028 WITH ACTION CONDITION

TRIP DISTRIBUTION AND ASSIGNMENT

Transit and pedestrian volumes for the 2028 With Action condition were estimated by overlaying peak hour volumes derived from the trip generation estimates presented in the "Traffic and Parking" section onto the No Action analysis networks. These volumes were then assigned to the transit and pedestrian analysis locations based on the following assumptions.

- As detailed above under "2018 With Action Condition," automobile and taxi person trips associated with the District are expected to have a negligible effect on the pedestrian network, since both would be dispersed throughout the District east of 126th Street, and the associated pedestrian trips, which would mostly occur in the District itself, would traverse a limited number of the pedestrian elements included for analysis. The Willets West development would have an on-site parking garage for autos and a designated taxi drop-off/pick-up area, and therefore, no auto and taxi trips associated with Willets West would traverse any of the pedestrian elements included for analysis. Prior to or during the development of Phase 1B uses in the District, the 2,750-space interim surface parking lot constructed in Phase 1A would be eliminated and replaced by two additional CitiField parking garages south of Roosevelt Avenue, within the current South Lot and Lot D. Therefore, the CitiField patrons who would park within the interim surface parking lot in the

District in Phase 1A would instead park within South Lot/Lot D and no longer need to traverse the pedestrian study area in Phase 1B. As in Phase 1A, CitiField patrons who park in the new South Lot/Lot D garages would connect with CitiField via the Met-Willets Point subway station, as they do currently during game days, and would not traverse any of the pedestrian elements included for analysis. As noted for the 2018 With Action analysis, NYCT may ultimately decide to revert back to its pre-CitiField station operating plan. Under this operating plan, the station would function during Met games as it would on non-game days—the wider portion of the mezzanine, which is within the paid zone on most occasions but currently is converted to an unpaid zone during games would be kept as a part of the paid zone at all times. The unpaid corridor at the western end of the mezzanine would remain unpaid at all times and thus could serve as a means of crossing Roosevelt Avenue through the station. If this plan is implemented, NYCT would reposition the agent booth in the unpaid zone to provide added circulation space in the corridor.

- Subway trips were assigned to the Mets-Willets Point subway station. The assignments to specific stairways were based on logical patterns of travel to/from the subway station and Willets West and the District.
- Based on existing ridership patterns, bus trips were assigned to the study area bus routes as follows: 15 percent to the Q19, 70 percent to the Q66, and 15 percent to the Q48 bus routes. Assignments on these bus routes were made with logical origins and destinations. As with the analysis prepared for Phase 1A, the allocation of projected bus trips conservatively does not assume other potential service improvements, such as new bus routes or extension of existing bus routes.
- Walk-only trips, primarily within the District, were evenly distributed to the surrounding street network. As detailed above under "2018 With Action Condition," a higher percentage of walk only trips in Phase 1B would be generated by other uses within the District, resulting in an increased internal trip capture percentage and a lower percentage of trips originating from Corona and Flushing. As a result of the increased internal capture percentage, a high number of walk-only trips generated by uses in the District would not appear on any of the pedestrian elements included for analysis. The walk-only trip assignments for Willets West during Phase 1B would be the same as those described for Phase 1A.

CHANGES IN THE PEDESTRIAN ENVIRONMENT

In addition to the geometric changes identified above under "2018 With Action Condition" and the completion of numerous internal roadways within the District to serve the future Phase 1B uses, Willets Point Boulevard would be realigned and change its intersection with 126th Street from its existing location at Roosevelt Avenue to a new location further north at approximately the same location as existing 38th Avenue. This change, along with the build-out of Phase 1B's southern development components, would also necessitate the reconfiguration of the Roosevelt Avenue and 126th Street intersection's northeast corner.

SUBWAY STATION OPERATIONS

Phase 1B project-generated subway trips were added to the 2028 No Action volumes in the same manner as described for Phase 1A. As shown in **Tables 14-131** and **14-132**, all analyzed stairways and ramps and control areas would continue to operate at acceptable levels. Therefore, the proposed project would not result in any significant adverse subway station impacts under the 2028 With Action condition. However, as with the 2018 With Action condition, if NYCT

Table 14-131
2028 With Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekday AM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	182	153	0.90	0.90	0.40	A
Roosevelt Avenue (North) S2 Stair	8.0	6.8	209	167	0.90	0.90	0.43	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	391	320	0.90	0.90	0.48	B
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	5	103	0.75	1.00	0.11	A
Flushing-bound West P10 Stair	9.6	8.3	5	94	0.75	0.90	0.12	A
Flushing-bound East P4 Stair	9.9	8.7	4	111	0.75	1.00	0.12	A
Flushing-bound East P2 Stair	10.1	8.8	11	97	0.75	0.90	0.12	A
Manhattan-bound West Ramp Passageway	17.6	15.6	270	11	0.75	1.00	0.08	A
Manhattan-bound East Ramp Passageway	19.6	17.6	148	19	0.75	0.90	0.05	A
Weekday PM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	313	337	0.90	0.90	0.78	C
Roosevelt Avenue (North) S2 Stair	8.0	6.8	259	252	0.90	0.90	0.59	B
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	572	589	0.90	0.90	0.79	C
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	5	162	0.75	1.00	0.17	A
Flushing-bound West P10 Stair	9.6	8.3	3	152	0.75	1.00	0.16	A
Flushing-bound East P4 Stair	9.9	8.7	9	207	0.75	1.00	0.22	A
Flushing-bound East P2 Stair	10.1	8.8	23	176	0.75	0.90	0.22	A
Manhattan-bound West Ramp Passageway	17.6	15.6	413	14	0.75	1.00	0.12	A
Manhattan-bound East Ramp Passageway	19.6	17.6	138	23	0.75	0.90	0.05	A
Weekday Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	222	471	0.90	0.90	0.85	C
Roosevelt Avenue (North) S2 Stair	8.0	6.8	139	202	0.90	0.90	0.40	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	361	673	0.90	0.90	0.71	C
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	8	550	0.75	1.00	0.58	B
Flushing-bound West P10 Stair	9.6	8.3	6	584	0.75	1.00	0.63	B
Flushing-bound East P4 Stair	9.9	8.7	8	519	0.75	1.00	0.54	B
Flushing-bound East P2 Stair	10.1	8.8	12	327	0.75	1.00	0.34	A
Manhattan-bound West Ramp Passageway	17.6	15.6	298	29	0.75	0.90	0.11	A
Manhattan-bound East Ramp Passageway	19.6	17.6	127	38	0.75	0.90	0.05	A
Weekend Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	213	561	0.90	0.90	0.95	C
Roosevelt Avenue (North) S2 Stair	8.0	6.8	147	154	0.90	0.90	0.35	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	360	715	0.90	0.90	0.74	C
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	6	380	0.75	1.00	0.40	A
Flushing-bound West P10 Stair	9.6	8.3	0	365	0.75	1.00	0.39	A
Flushing-bound East P4 Stair	9.9	8.7	6	584	0.75	1.00	0.60	B
Flushing-bound East P2 Stair	10.1	8.8	17	359	0.75	1.00	0.37	A
Manhattan-bound West Ramp Passageway	17.6	15.6	317	24	0.75	0.90	0.11	A
Manhattan-bound East Ramp Passageway	19.6	17.6	114	69	0.75	0.90	0.06	A

Table 14-131 (cont'd)
2028 With Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes Up	15-Minute Pedestrian Volumes Down	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekend Post-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	392	229	0.90	0.90	0.74	C
Roosevelt Avenue (North) S2 Stair	8.0	6.8	153	134	0.90	0.90	0.33	A
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	545	363	0.90	0.90	0.61	B
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	396	86	0.75	0.90	0.44	A
Flushing-bound West P10 Stair	9.6	8.3	317	141	0.75	0.90	0.45	A
Flushing-bound East P4 Stair	9.9	8.7	364	97	0.75	0.90	0.42	A
Flushing-bound East P2 Stair	10.1	8.8	595	62	0.75	0.90	0.57	B
Manhattan-bound West Ramp Passageway	17.6	15.6	964	11	0.75	1.00	0.28	A
Manhattan-bound East Ramp Passageway	19.6	17.6	524	18	0.75	1.00	0.14	A

Notes:
Capacities were calculated based on rates presented in the *CEQR Technical Manual* (January 2012 edition).
Surging factors are only applied to the exiting pedestrian volume (*CEQR Technical Manual*).
V/C Stairway = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
V/C Passageway = [Vin / (225 * We * Sf * Ff)]+ [Vx/ (225 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs/passageways
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 14-132
2028 With Action Condition: Subway Station Control Area Analysis

Mets-Willets Point No. 7 Train Station Control Area Elements	Quantity	15-Minute Pedestrian Volumes Into Control Area	15-Minute Pedestrian Volumes Out from Control Area	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekday AM Non-Game							
Main Control Area Turnstiles (R532)	5	431	378	0.80	0.90	0.39	A
Weekday PM Non-Game							
Main Control Area Turnstiles (R532)	5	602	707	0.80	0.90	0.62	B
Weekday Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	127	38	0.75	0.90	0.06	A
Manhattan-bound West Ramp Turnstiles	6	298	29	0.75	0.90	0.14	A
Flushing-bound East Stair Turnstiles	8	22	849	0.80	1.00	0.21	A
Flushing-bound West Stair Turnstiles	6	13	1115	0.80	1.00	0.37	A
Weekend Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	114	69	0.75	0.90	0.07	A
Manhattan-bound West Ramp Turnstiles	6	317	24	0.75	0.90	0.15	A
Flushing-bound East Stair Turnstiles	8	21	921	0.80	1.00	0.23	A
Flushing-bound West Stair Turnstiles	6	5	719	0.80	1.00	0.23	A
Weekend Post-Game							
Manhattan-bound East Ramp Turnstiles	7	524	18	0.75	1.00	0.18	A
Manhattan-bound West Ramp Turnstiles	6	963	11	0.75	1.00	0.39	A
Flushing-bound East Stair Turnstiles	8	961	159	0.80	0.90	0.36	A
Flushing-bound West Stair Turnstiles	6	714	227	0.80	0.90	0.40	A

Notes: Capacities were calculated based on rates presented in the CEQR Technical Manual (January 2012 edition).
V/C =Vin / (Cin x Ff)+ Vx / (Cx x Sf x Ff)
Vin = Peak 15 Min Entering Passenger Volume
Cin= Total 15-Minute Capacity of all turnstiles for entering Passengers
Vx = Peak 15- Minute Exiting Passenger
Cx = Total 15-minute Capacity of all turnstile for exiting Passengers
Sf = Surging Factor
Ff = Friction Factor

decides to proceed with the reconfiguration of the Mets-Willets Point subway station, which would take place independent of the proposed project, additional interagency coordination is expected to take place to develop the appropriate game-day management strategies. For purposes of disclosure in this Draft SEIS, any impacts that may be attributed to future passage of the reconfigured station may potentially be deemed unmitigatable.

SUBWAY LINE HAUL LEVELS

As described for the 2018 With Action condition, the projected peak hour subway trip increments were distributed to the peak load points based on information provided by NYCT and superimposed onto the No Action line-haul volumes. As shown in **Table 14-133**, with the overlay of these project-generated trips, the No. 7 subway line would continue to operate within guideline capacity during the AM peak period for the Manhattan-bound local service and during the PM peak period for the Flushing-bound service. As with the 2028 No Action condition, the Manhattan-bound express service would continue to exceed the guideline capacity during the weekday AM peak period under the 2028 With Action condition. On average, the project-generated subway trips would add just under five passengers per car to the Manhattan-bound express line at the peak load point during the AM peak period, which is less than the *CEQR Technical Manual* impact threshold of five passengers per car. Hence, Phase 1B of the proposed project would not result in a significant adverse line-haul impact on the No. 7 line.

Table 14-133
2028 With Action Condition: Peak Hour Subway Line Haul

No. 7 Train Direction of Travel	Station	Trains/ Hour	Volume	Leave Load		Available Capacity
				Guideline Capacity	V/C Ratio	
AM Peak Period						
Manhattan-bound Express	Woodside–61st Street	15	20,723	18,150	1.14	-2,573
Manhattan-bound Local	40th Street	14	15,732	16,940	0.93	1,208
PM Peak Period						
Flushing-bound Express + Local	Queensboro Plaza	23	23,977	27,830	0.86	3,853

Sources: New York City Transit
Notes: For the AM peak hour, while a total of 29 trains would be expected to traverse the respective express and local peak load points, the total number of scheduled trains during this hour would be 28 trains.

In addition, because NYCT expects that there would be notable transfer activities between the No. 7 line and the N/Q lines at the Queensboro Plaza subway station (across the platform transfers), a detailed examination of line-haul conditions on the N/Q lines will be prepared, in coordination with NYCT, for the Final EIS. However, since the estimated Phase 1B project-generated increments would be fewer than 5 persons per subway car (up to 319 passengers in 120 to 130 train cars) on the N/Q trains, Phase 1B of the proposed project would similarly not result in a significant adverse line-haul impact on the N/Q lines.

BUS LINE HAUL LEVELS

As with the 2018 With Action condition analysis, no potential new or extended bus routes serving the project site were assumed in the 2028 (Phase 1B) bus line-haul analysis. Peak hour bus ridership levels were estimated by adding the incremental trips associated with the proposed project to bus stop locations along Roosevelt Avenue at 126th Street for the Q48 and to maximum load points along the Q19 and Q66. Impacts to bus line-haul levels would be considered significant if a proposed action would result in operating conditions above guideline

capacities. As shown in **Table 14-134**, the eastbound and westbound Q48 would continue to operate within guideline capacity (54 passengers per bus) during the AM peak period but would operate above the guideline capacity during the PM peak period. The eastbound and westbound Q19 and Q66 would operate above guideline capacity during both the AM and PM peak periods. These projected increases in bus ridership beyond guideline capacities constitute significant adverse bus line-haul impacts.

Table 14-134
2028 With Action Condition: Bus Line Haul at NYCT Maximum and District Load Points

Route	Peak Period	Buses Per Hour	Eastbound		Buses Per Hour	Westbound	
			Load Point	AP		Load Point	AP
Q19	AM	3	Astoria Blvd/ 102nd St	**(65)**	3	Astoria Blvd/ 77th St	**(61)**
	PM	3	Astoria Blvd/ 94th St	**(69)**	3	Astoria Blvd/Humphrey St	**(80)**
Q48	AM	5	Roosevelt at 126th	47	3	Roosevelt at 126th	29
	PM	5	Roosevelt at 126th	**(63)**	5	Roosevelt at 126th	**(79)**
Q66 (to Woodside and LIC)	AM	15	Northern Blvd/ 110th St	**(68)**	14	Northern Blvd/ 72nd St	**(64)**
	PM	10	Northern Blvd/ 110th St	**(78)**	10	Northern Blvd/ 106th St	**(87)**

Note: AP = average passengers per bus; **(#)** = exceeds NYCT guideline capacity
Source: Q48 ridership data provided by NYCT; Q19 and Q66 ridership data provided by the MTA Bus Company

Potential measures to mitigate the significant adverse bus line-haul impacts include scheduling additional buses to increase capacity. NYCT routinely monitors changes in bus ridership and would make the necessary service adjustments where warranted. These service adjustments are subject to fiscal and operational constraints and, if implemented, are expected to occur over time. These measures are discussed in greater detail in Chapter 21, "Mitigation."

STREET-LEVEL PEDESTRIAN OPERATIONS

The study area sidewalks, corner reservoirs, and crosswalks were assessed for the weekday AM, midday, PM, and pre-game peak periods, as well as, the weekend midday non-game, pre-game, and post-game peak periods by superimposing project-generated trips onto the No Action pedestrian analysis networks. The 2028 With Action peak hour pedestrian volumes are shown in **Appendix D**. As shown in **Tables 14-135** through **14-137**, all sidewalks and corner reservoirs would continue to operate at acceptable levels (within mid-LOS D, with a maximum of 8.5 PMF platoon flows for sidewalks; minimum of 19.5 SFP for corners) or incur degradations that, when compared to the No Action condition, do not exceed the *CEQR Technical Manual* sliding scale impact thresholds (See **Tables 14-81** and **14-82**). However, as shown in **Tables 14-138** and **14-139**, several study area crosswalks would operate beyond mid-LOS D (less than 19.5 SFP) and incur degradations that, when compared to the No Action condition, would exceed the *CEQR Technical Manual* sliding scale impact thresholds. These significant adverse pedestrian impacts are detailed below. Measures that can potentially mitigate these impacts are discussed in Chapter 21, "Mitigation."

Table 14-135
2028 With Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday AM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	1158	0.81	2.39	B
	West	6.0	184	0.80	0.64	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	705	0.91	0.83	B
	South	12.5	40	0.80	0.07	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	1379	0.80	2.30	B
	South	11.5	169	0.80	0.31	A
34th Avenue between 126th Street and 126th Place	North	11.5	9	0.80	0.02	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	1083	0.80	2.26	B
	West	8.0	6	0.80	0.02	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	585	0.80	1.28	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	115	0.80	0.34	A
	South	8.5	117	0.80	0.29	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	104	0.80	0.17	A
	South	13.0	103	0.83	0.16	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	79	0.80	0.33	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	32	0.80	0.11	A

Table 14-135 (cont'd)
2028 With Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	2065	0.80	4.30	C
	West	6.0	206	0.80	0.72	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1274	0.80	1.71	B
	South	12.5	94	0.80	0.16	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	1577	0.80	2.63	B
	South	11.5	330	0.80	0.60	B
34th Avenue between 126th Street and 126th Place	North	11.5	23	0.80	0.04	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2530	0.80	5.27	C
	West	8.0	19	0.80	0.05	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1371	0.80	3.01	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	173	0.80	0.51	B
	South	8.5	79	0.80	0.19	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	109	0.80	0.18	A
	South	13.0	80	0.80	0.13	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	119	0.80	0.50	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	51	0.80	0.18	A
Weekday PM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	1976	0.80	4.12	C
	West	6.0	253	0.80	0.88	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1280	0.80	1.72	B
	South	12.5	78	0.80	0.13	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	1953	0.80	3.26	C
	South	11.5	322	0.80	0.58	B
34th Avenue between 126th Street and 126th Place	North	11.5	28	0.80	0.05	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2412	0.80	5.03	C
	West	8.0	23	0.80	0.06	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1271	0.80	2.79	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	170	0.80	0.51	B
	South	8.5	100	0.80	0.25	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	128	0.80	0.21	A
	South	13.0	96	0.80	0.15	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	96	0.80	0.40	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	70	0.80	0.24	A
Weekday Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	1540	0.80	3.21	C
	West	6.0	381	0.83	1.28	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	991	0.88	1.22	B
	South	12.5	113	0.80	0.19	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	1456	0.80	2.43	B
	South	11.5	300	0.82	0.53	B
34th Avenue between 126th Street and 126th Place	North	11.5	119	0.80	0.22	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2040	0.80	4.25	C
	West	8.0	53	0.80	0.14	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1235	0.80	2.71	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	471	0.80	1.40	B
	South	8.5	240	0.80	0.59	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	291	0.82	0.47	A
	South	13.0	121	0.80	0.19	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	251	0.86	0.98	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	186	0.80	0.65	B

Note: PMF = pedestrians per minute per foot.

Table 14-136
2028 With Action Condition: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	2090	0.80	4.35	C
	West	6.0	215	0.80	0.75	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1315	0.80	1.77	B
	South	12.5	106	0.80	0.18	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	1734	0.82	2.80	B
	South	11.5	412	0.80	0.75	B
34th Avenue between 126th Street and 126th Place	North	11.5	57	0.80	0.10	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2923	0.80	6.09	D
	West	8.0	30	0.80	0.08	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1587	0.80	3.48	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	311	0.85	0.87	B
	South	8.5	239	0.80	0.59	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	185	0.89	0.28	A
	South	13.0	177	0.80	0.28	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	146	0.80	0.61	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	101	0.80	0.35	A
Weekend Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	1757	0.80	3.66	C
	West	6.0	450	0.80	1.42	B
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1099	0.80	1.48	B
	South	12.5	201	0.80	0.34	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	1431	0.85	2.23	B
	South	11.5	394	0.80	0.71	B
34th Avenue between 126th Street and 126th Place	North	11.5	57	0.80	0.10	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2509	0.80	5.23	C
	West	8.0	49	0.80	0.13	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1386	0.93	2.63	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	465	0.87	1.28	B
	South	8.5	318	0.80	0.78	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	209	0.86	0.32	A
	South	13.0	140	0.80	0.22	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	293	0.80	1.22	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	113	0.80	0.39	A
Weekend Post-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	1897	0.80	3.95	C
	West	6.0	1027	0.80	3.57	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1015	0.80	1.36	B
	South	12.5	194	0.80	0.32	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	1334	0.80	2.22	B
	South	11.5	389	0.80	0.70	B
34th Avenue between 126th Street and 126th Place	North	11.5	35	0.80	0.06	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2454	0.80	5.11	C
	West	8.0	59	0.80	0.15	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1512	0.80	3.32	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	789	0.80	2.35	B
	South	8.5	308	0.80	0.75	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	307	0.80	0.51	B
	South	13.0	110	0.80	0.18	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	456	0.80	1.90	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	170	0.80	0.59	B

Note: PMF = pedestrians per minute per foot.

Table 14-137
2028 With Action Condition: Pedestrian LOS Analysis for Corners

Location	Corner	Weekday								Weekend					
		AM		Midday		PM		Pre-Game		Midday Non-Game		Pre-Game		Post-Game	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Roosevelt Avenue and 126th Street	Northwest	121.9	A	97.6	A	79.1	A	112.7	A	88.4	A	104.0	A	107.0	A
	Northeast	126.2	A	84.4	A	74.3	A	113.0	A	93.4	A	96.8	A	104.8	A
Roosevelt Avenue and 114th Street	Northwest	1234.2	A	858.1	A	911.9	A	300.7	A	535.8	A	337.9	A	193.7	A
	Southwest	857.4	A	676.4	A	539.4	A	269.2	A	301.4	A	291.7	A	267.6	A

Note: SFP = square feet per pedestrian.

Table 14-138
2028 With Action Condition: Weekday Pedestrian LOS Analysis for Crosswalks

Location	Cross walk	Street Width (feet)	Cross walk Width (feet)	Conditions with Conflicting Vehicles											
				Weekday AM			Weekday Midday			Weekday PM			Weekday Pre-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	1167	57.3	B	1384	41.1	B	1703	32.0	C	1281	54.4	B
	East	43.0	14.0	87	148.4	A	205	46.4	B	167	54.2	B	129	83.7	A
	South	50.0	13.0	106	577.8	A	221	271.1	A	194	313.3	A	212	289.1	A
	West	43.0	13.5	19	822.8	A	33	381.6	A	32	366.8	A	66	-22.6	**F+**
34th Avenue and 126th Street	North	81.0	12.5	89	80.4	A	259	22.4	D	280	16.2	**D+**	276	74.5	A
	East	43.0	7.0	973	18.8	**D+**	2274	6.2	**F+**	2124	6.9	**F+**	1899	3.8	**F+**
	South	61.0	10.5	88	35.4	C	260	9.9	**E+**	278	14.7	**E+**	401	34.7	C
	West	47.5	12.5	6	6381.0	A	18	1914.3	A	25	1279.8	A	65	273.9	A
Northern Boulevard and 126th Street	East	43.5	14.0	483	21.6	D	1168	4.9	**F+**	1124	4.8	**F+**	909	6.5	**F+**
	South	51.0	15.0	15	5435.2	A	21	3880.5	A	29	2808.4	A	53	1532.3	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	97	660.7	A	141	376.2	A	141	379.8	A	409	113.5	A
	East	44.0	11.0	20	480.7	A	38	289.0	A	45	161.2	A	65	100.9	A
	South	32.5	12.0	107	516.2	A	120	426.7	A	147	319.7	A	277	163.8	A
	West	43.0	13.0	13	1462.3	A	19	1113.4	A	22	878.2	A	54	338.5	A
126th Street and New Willets Point Boulevard	North	50.0	15.0	226	99.9	A	356	52.5	B	417	40.0	C	356	57.4	B
	South	50.0	15.0	233	91.5	A	375	47.8	B	427	38.4	C	365	46.4	B

Notes: SFP = square feet per pedestrian.

+ Denotes a significant adverse impact.

Table 14-139
2028 With Action Condition: Weekend Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Cross walk Width (feet)	Conditions with Conflicting Vehicles								
				Weekend Midday Non-Game			Weekend Pre-Game			Weekend Post-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	1494	37.1	C	1248	47.4	B	1174	34.2	C
	East	43.0	14.0	200	46.1	B	168	70.9	A	159	75.1	A
	South	50.0	13.0	264	229.7	A	323	187.1	A	294	208.4	A
	West	43.0	13.5	54	230.1	A	98	-22.4	**F+**	101	115.4	A
34th Avenue and 126th Street	North	81.0	12.5	397	13.7	**E+**	510	33.0	C	835	24.8	C
	East	43.0	7.0	2550	5.3	**F+**	1976	4.2	**F+**	1654	5.1	**F+**
	South	61.0	10.5	398	8.4	**E+**	486	19.1	**D+**	594	34.2	C
	West	47.5	12.5	34	1008.7	A	53	381.8	A	203	72.6	A
Northern Boulevard and 126th Street	East	43.5	14.0	1358	4.7	**F+**	1055	5.7	**F+**	962	-2.7	**F+**
	South	51.0	15.0	39	2086.9	A	40	2034.2	A	37	2199.5	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	242	188.3	A	338	131.2	A	677	54.0	B
	East	44.0	11.0	68	99.6	A	78	45.4	B	79	107.4	A
	South	32.5	12.0	269	172.2	A	244	186.6	A	234	198.9	A
	West	43.0	13.0	34	559.6	A	66	261.2	A	93	186.9	A
126th Street and New Willets Point Boulevard	North	50.0	15.0	469	41.4	B	367	52.4	B	322	64.0	A
	South	50.0	15.0	478	37.5	C	377	43.8	B	333	58.6	B

Notes: SFP = square feet per pedestrian.
+ Denotes a significant adverse impact.

Northern Boulevard and 126th Street

- The east crosswalk would deteriorate to LOS F (4.9 SFP) from a No Action LOS A (5656.4 SFP), LOS F (4.8 SFP) from a No Action LOS A (5527.5 SFP), LOS F (6.5 SFP) from a No Action LOS A (584.6 SFP), LOS F (4.7 SFP) from a No Action LOS A (1681.7 SFP), LOS F (5.7 SFP) from a No Action LOS A (1086.8 SFP), and to LOS F (-2.7 SFP) from a No Action LOS A (130.4 SFP) during the weekday midday, weekday PM, weekday pre-game, weekend midday non-game, weekend pre-game, and weekend post-game peak periods, respectively.

Roosevelt Avenue and 126th Street

- The west crosswalk would deteriorate to LOS F (-22.6 SFP) from a No Action LOS A (152.5 SFP) and to LOS F (-22.4 SFP) from a No Action LOS A (103.2 SFP) during the weekday pre-game and weekend pre-game peak periods, respectively.

34th Avenue and 126th Street

- The north crosswalk would deteriorate to beyond mid-LOS D (16.2 SFP) from a No Action LOS A (2139.3 SFP), and to LOS E (13.7 SFP) from a No Action LOS A (2704.6 SFP) during the weekday PM and weekend non-game peak periods, respectively.
- The south crosswalk would deteriorate to LOS E (9.9 SFP) from a No Action LOS A (5783.6 SFP), LOS E (14.7 SFP) from a No Action LOS A (3158.9 SFP), LOS E (8.4 SFP) from a No Action LOS A (1207.9 SFP), and to beyond mid-LOS D (19.1 SFP) from a No Action LOS D (21.9 SFP) during the weekday midday, weekday PM, weekend midday non-game, and weekend pre-game peak periods, respectively.
- The east crosswalk would deteriorate to beyond mid-LOS D (18.8 SFP) from a No Action LOS A (2035.8 SFP), LOS F (6.2 SFP) from a No Action LOS A (1502.7 SFP), LOS F (6.9 SFP) from a No Action LOS A (937.3 SFP), LOS F (3.8 SFP) from a No Action LOS A

(78.0 SFP), LOS F (5.3 SFP) from a No Action LOS A (756.1 SFP), LOS F (4.2 SFP) from a No Action LOS A (9927.5 SFP), and to LOS F (5.1 SFP) from a No Action LOS A during the weekday AM, weekday midday, weekday PM, weekday pre-game, weekend midday non-game, weekend pre-game, and weekend post-game peak periods, respectively.

The significant adverse transit and pedestrian impacts detailed above for the 2028 analysis year are summarized in **Table 14-140**.

Table 14-140
Summary of 2028 Significant Adverse Transit and Pedestrian Impacts

Analysis Element		Analysis Time Period						
		Weekday				Weekend		
		AM	Midday	PM	Pre-Game	Midday	Pre-Game	Post-Game
Bus Impacts								
Q19 Bus Route	EB	X		X				
	WB	X		X				
Q48 Bus Route	EB			X				
	WB			X				
Q66 Bus Route	EB	X		X				
	WB	X		X				
Pedestrian Impacts								
Northern Blvd & 126th St	E Crosswalk		X	X	X	X	X	X
Roosevelt Ave & 126th St	W Crosswalk				X		X	
34th Ave & 126th St	N Crosswalk			X		X		
	S Crosswalk		X	X		X	X	
	E Crosswalk	X	X	X	X	X	X	X

Notes: X = Significantly Impacted

2032 WITH ACTION CONDITION

TRIP DISTRIBUTION AND ASSIGNMENT

Transit and pedestrian volumes for the 2032 With Action condition were estimated by overlaying peak hour volumes derived from the trip generation estimates presented in the "Traffic and Parking" section, onto the No Action analysis networks. These volumes were then assigned to the transit and pedestrian analysis locations based on the same assumptions described above for the 2028 With Action condition. In addition, the reasonable worst-case development scenario assumes that Lot B development would be completed by 2032, with its parking demand accommodated by available parking within the South Lot/Lot D. Therefore, the auto person trips associated with Lot B were assumed to cross Roosevelt Avenue at the Lot B driveway or 126th Street crosswalks to access the development.

CHANGES IN THE PEDESTRIAN ENVIRONMENT

In addition to the geometric changes described above for the 2018 and 2028 With Action conditions, the intersection of Roosevelt Avenue and Lot B driveway, which would incur more notable pedestrian trip-making, was added to the pedestrian study area. This intersection is comprised of three crosswalks, two crosswalks across Roosevelt Avenue and one crosswalk across the Lot B driveway along the north side of Roosevelt Avenue.

SUBWAY STATION OPERATIONS

Project-generated subway trips were added to the 2032 No Action volumes in the same manner as described for Phase 1A. As shown in **Tables 14-141** and **14-142**, all analyzed stairways and

Table 14-141
2032 With Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
Weekday AM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	384	259	0.90	0.90	0.77	C
Roosevelt Avenue (North) S2 Stair	8.0	6.8	420	314	0.90	0.90	0.84	C
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	804	573	0.90	0.90	0.93	C
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	9	163	0.75	0.90	0.20	A
Flushing-bound West P10 Stair	9.6	8.3	9	150	0.75	0.90	0.19	A
Flushing-bound East P4 Stair	9.9	8.7	7	176	0.75	1.00	0.19	A
Flushing-bound East P2 Stair	10.1	8.8	21	154	0.75	0.90	0.19	A
Manhattan-bound West Ramp Passageway	17.6	15.6	498	15	0.75	1.00	0.15	A
Manhattan-bound East Ramp Passageway	19.6	17.6	276	27	0.75	0.90	0.09	A
Weekday PM Non-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	477	528	0.90	0.90	1.21	**D+**
Roosevelt Avenue (North) S2 Stair	8.0	6.8	487	473	0.90	0.90	1.11	**D+**
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	964	1001	0.90	0.90	1.34	**E+**
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	8	251	0.75	1.00	0.27	A
Flushing-bound West P10 Stair	9.6	8.3	4	235	0.75	1.00	0.25	A
Flushing-bound East P4 Stair	9.9	8.7	13	320	0.75	1.00	0.34	A
Flushing-bound East P2 Stair	10.1	8.8	36	273	0.75	0.90	0.34	A
Manhattan-bound West Ramp Passageway	17.6	15.6	667	21	0.75	1.00	0.20	A
Manhattan-bound East Ramp Passageway	19.6	17.6	224	35	0.75	0.90	0.08	A
Weekday Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	325	604	0.90	0.90	1.14	**D+**
Roosevelt Avenue (North) S2 Stair	8.0	6.8	286	382	0.90	0.90	0.78	C
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	611	986	0.90	0.90	1.10	**D+**
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	11	363	0.75	1.00	0.67	B
Flushing-bound West P10 Stair	9.6	8.3	8	674	0.75	1.00	0.73	C
Flushing-bound East P4 Stair	9.9	8.7	12	603	0.75	1.00	0.63	B
Flushing-bound East P2 Stair	10.1	8.8	16	376	0.75	1.00	0.39	A
Manhattan-bound West Ramp Passageway	17.6	15.6	465	35	0.75	0.90	0.16	A
Manhattan-bound East Ramp Passageway	19.6	17.6	199	48	0.75	0.90	0.07	A
Weekend Pre-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	306	671	0.90	0.90	1.20	**D+**
Roosevelt Avenue (North) S2 Stair	8.0	6.8	283	304	0.90	0.90	0.68	B
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	589	975	0.90	0.90	1.08	**D+**
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	8	442	0.75	1.00	0.46	B
Flushing-bound West P10 Stair	9.6	8.3	0	421	0.75	1.00	0.45	A
Flushing-bound East P4 Stair	9.9	8.7	8	678	0.75	1.00	0.70	C
Flushing-bound East P2 Stair	10.1	8.8	25	416	0.75	0.90	0.49	B
Manhattan-bound West Ramp Passageway	17.6	15.6	487	27	0.75	0.90	0.17	A
Manhattan-bound East Ramp Passageway	19.6	17.6	175	80	0.75	0.90	0.08	A

Table 14-141 (cont'd)
2032 With Action Condition: Subway Station Vertical Circulation Analysis

Mets-Willets Point No. 7 Train Station Vertical Circulation Elements	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes Up	15-Minute Pedestrian Volumes Down	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekend Post-Game								
Street to Mezzanine								
Roosevelt Avenue (North) S3 Stair	8.0	6.5	516	339	0.90	0.90	1.02	D
Roosevelt Avenue (North) S2 Stair	8.0	6.8	302	269	0.90	0.90	0.66	B
Roosevelt Avenue (North) M4A/4B Stairs	12.8	11.5	818	608	0.90	0.90	0.96	C
Mezzanine to Platform								
Flushing-bound West P12 Stair	9.8	8.6	404	139	0.75	0.90	0.51	B
Flushing-bound West P10 Stair	9.6	8.3	323	226	0.75	0.90	0.55	B
Flushing-bound East P4 Stair	9.9	8.7	372	155	0.75	0.90	0.49	B
Flushing-bound East P2 Stair	10.1	8.8	607	100	0.75	0.90	0.62	B
Manhattan-bound West Ramp Passageway	17.6	15.6	1139	16	0.75	1.00	0.33	A
Manhattan-bound East Ramp Passageway	19.6	17.6	618	27	0.75	1.00	0.17	A

Notes:
Capacities were calculated based on rates presented in the *CEQR Technical Manual* (January 2012 edition).
Surging factors are only applied to the exiting pedestrian volume (*CEQR Technical Manual*).
V/C Stairway = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
V/C Passageway = [Vin / (225 * We * Sf * Ff)]+ [Vx/ (225 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs/passageways
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)
+ Denotes a significant adverse impact

Table 14-142
2032 With Action Condition: Subway Station Control Area Analysis

Mets-Willets Point No. 7 Train Station Control Area Elements	Quantity	15-Minute Pedestrian Volumes Into Control Area	15-Minute Pedestrian Volumes Out from Control Area	Surging Factor	Friction Factor	V/C Ratio	LOS
Weekday AM Non-Game							
Main Control Area Turnstiles (R532)	5	810	613	0.80	0.90	0.69	B
Weekday PM Non-Game							
Main Control Area Turnstiles (R532)	5	984	1110	0.80	0.90	1.00	C
Weekday Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	199	48	0.75	0.90	0.09	A
Manhattan-bound West Ramp Turnstiles	6	465	35	0.75	0.90	0.22	A
Flushing-bound East Stair Turnstiles	8	30	983	0.80	1.00	0.25	A
Flushing-bound West Stair Turnstiles	6	18	1277	0.80	1.00	0.42	A
Weekend Pre-Game							
Manhattan-bound East Ramp Turnstiles	7	175	80	0.75	0.90	0.09	A
Manhattan-bound West Ramp Turnstiles	6	487	27	0.75	0.90	0.23	A
Flushing-bound East Stair Turnstiles	8	31	1059	0.80	1.00	0.27	A
Flushing-bound West Stair Turnstiles	6	7	821	0.80	1.00	0.27	A
Weekend Post-Game							
Manhattan-bound East Ramp Turnstiles	7	618	27	0.75	1.00	0.22	A
Manhattan-bound West Ramp Turnstiles	6	1139	16	0.75	1.00	0.46	B
Flushing-bound East Stair Turnstiles	8	978	254	0.80	0.90	0.39	A
Flushing-bound West Stair Turnstiles	6	726	364	0.80	0.90	0.45	B

Notes: Capacities were calculated based on rates presented in the CEQR Technical Manual (January 2012 edition).
V/C = Vin / (Cin x Ff)+ Vx / (Cx x Sf x Ff)
Vin = Peak 15 Min Entering Passenger Volume
Cin = Total 15-Minute Capacity of all turnstiles for entering Passengers
Vx = Peak 15-Minute Exiting Passenger
Cx = Total 15-minute Capacity of all turnstile for exiting Passengers
Sf = Surging Factor
Ff = Friction Factor

ramps and control areas would continue to operate at acceptable levels, except for the north stairway (S-3) on Roosevelt Avenue that faces Willets West, which would operate at LOS D with a v/c ratio of 1.21, 1.14, 1.20, and 1.02 during the weekday PM non-game, weekday pre-game, weekend pre-game, and weekend post-game peak periods, respectively, for the north stairway (S-2) on Roosevelt Avenue that faces the District, which would operate at LOS D with a v/c ratio of 1.1 during the weekday PM non-game peak period, and for the north stairway (M-4) that connects to the mezzanine and street level stairways, which would operate at LOS E with a v/c ratio of 1.34 during the weekday PM non-game peak period and LOS D with a v/c ratio of 1.10 and 1.08 during the weekday pre-game and weekend pre-game peak periods, respectively.

As described above, station stairway impacts are defined in terms of width increment threshold based on the minimum amount of additional capacity that would be required to either mitigate the location to its service conditions (LOS) under the No Action levels, or to bring it to a v/c ratio of 1.00, whichever is greater. Compared to the No Action service levels, the calculated WITs are greater than the *CEQR Technical Manual* WIT impact thresholds for stairway S-3 during the weekday PM non-game, weekday pre-game, and weekend pre-game peak periods, for stairway S-2 during the weekday PM non-game peak period, and for stairway M-4 during the weekday PM non-game, weekday pre-game, and weekend pre-game peak periods. Therefore, the proposed project would be expected to result in significant adverse subway station impacts under the 2032 With Action condition. Measures that can be implemented to mitigate these impacts are discussed in Chapter 21, "Mitigation." In addition, as with the 2018 and 2028 With Action conditions, if NYCT decides to proceed with the reconfiguration of the Mets-Willets Point subway station, which would take place independent of the proposed project, additional interagency coordination is expected to take place to develop the appropriate game-day management strategies. For purposes of disclosure in this Draft SEIS, any impacts that may be attributed to future passage of the reconfigured station may potentially be deemed unmitigatable.

SUBWAY LINE HAUL LEVELS

As described for the 2018 With Action condition, the projected peak hour subway trip increments were distributed to the peak load points based on information provided by NYCT and superimposed onto the No Action line-haul volumes. As shown in **Table 14-143**, with the overlay of these project-generated trips, the No. 7 subway line would continue to operate within guideline capacity during the AM peak period for the Manhattan-bound local service and during the PM peak period for the Flushing-bound service. As with the 2032 No Action condition, the Manhattan-bound express service would continue to exceed the guideline capacity during the weekday AM peak period under the 2032 With Action condition. On average, the project-generated subway trips would add 11 passengers per car to the Manhattan-bound express line at the peak load point during the AM peak period, which is more than the *CEQR Technical Manual* impact threshold of five passengers per car. Hence, the proposed project in 2032 would be expected to result in a significant adverse line-haul impact on the No. 7 line. As discussed, the City had consulted with the MTA on extending regular LIRR service to Willets Point when the actual demand shows that such service improvement is warranted. The addition of regular LIRR service to Willets Point would provide substantial relief to the No. 7 subway line and may prevent this significant adverse subway impact from materializing. Since there are constraints on what service improvements are available to NYCT, the identified significant line-haul capacity impact on the No. 7 line would likely remain unmitigated absent the introduction of new LIRR service to the area.

Table 14-143
2032 With Action Condition: Peak Hour Subway Line Haul

No. 7 Train Direction of Travel	Station	Trains /Hour	Volume	Leave Load		Available Capacity
				Guideline Capacity	V/C Ratio	
AM Peak Period						
Manhattan-bound Express	Woodside–61st Street	15	21,823	18,150	1.20	-3,673
Manhattan-bound Local	40th Street	14	16,028	16,940	0.95	912
PM Peak Period						
Flushing-bound Express + Local	Queensboro Plaza	23	25,247	27,830	0.91	2,583

Sources: New York City Transit
Notes: For the AM peak hour, while a total of 29 trains would be expected to traverse the respective express and local peak load points, the total number of scheduled trains during this hour would be 28 trains.

In addition, because NYCT expects that there would be notable transfer activities between the No. 7 line and the N/Q lines at the Queensboro Plaza subway station (across the platform transfers), a detailed examination of line-haul conditions on the N/Q lines will be prepared, in coordination with NYCT, for the Final EIS. However, since the estimated Phase 2 project-generated increments would be fewer than 5 persons per subway car (up to 557 passengers in 120 to 130 train cars) on the N/Q trains, Phase 2 of the proposed project would not result in a significant adverse line-haul impact on the N/Q lines.

BUS LINE HAUL LEVELS

As with the 2018 and 2028 With Action condition analyses, no potential new or extended bus routes serving the project site were assumed in the 2032 bus line-haul analysis. Peak hour bus ridership levels were estimated by adding the incremental trips associated with the proposed project to bus stop locations along Roosevelt Avenue at 126th Street for the Q48 and to maximum load points along the Q19 and Q66. Impacts to bus line-haul levels would be considered significant if a proposed action would result in operating conditions above guideline capacities. As shown in **Table 14-144**, the eastbound and westbound Q48 would continue to operate within guideline capacity (54 passengers per bus) during the AM peak period but would operate above the guideline capacity during the PM peak period. The eastbound and westbound Q19 and Q66 would operate above guideline capacity during both the AM and PM peak periods. These projected increases in bus ridership beyond guideline capacities constitute significant adverse bus line-haul impacts.

Potential measures to mitigate the significant adverse bus line-haul impacts include scheduling additional buses to increase capacity. NYCT routinely monitors changes in bus ridership and would make the necessary service adjustments where warranted. These service adjustments are subject to fiscal and operational constraints and, if implemented, are expected to occur over time. These measures are discussed in greater detail in Chapter 21, “Mitigation.”

Table 14-144
2032 With Action Condition: Bus Line Haul at NYCT Maximum and District Load Points

Route	Peak Period	Buses Per Hour	Eastbound		Buses Per Hour	Westbound	
			Load Point	AP		Load Point	AP
Q19	AM	3	Astoria Blvd/ 102nd St	**(77)**	3	Astoria Blvd/ 77th St	**(74)**
	PM	3	Astoria Blvd/ 94th St	**(87)**	3	Astoria Blvd/Humphrey St	**(100)**
Q48	AM	5	Roosevelt at 126th	54	3	Roosevelt at 126th	44
	PM	5	Roosevelt at 126th	**(80)**	5	Roosevelt at 126th	**(103)**
Q66 (to Woodside and LIC)	AM	15	Northern Blvd/ 110th St	**(79)**	14	Northern Blvd/ 72nd St	**(77)**
	PM	10	Northern Blvd/ 110th St	**(103)**	10	Northern Blvd/ 106th St	**(114)**

Note: AP = average passengers per bus; **(#)** = exceeds NYCT guideline capacity
Source: Q48 ridership data provided by NYCT; Q19 and Q66 ridership data provided by the MTA Bus Company

STREET-LEVEL PEDESTRIAN OPERATIONS

The study area sidewalks, corner reservoirs, and crosswalks were assessed for the weekday AM, midday, PM, and pre-game peak periods, as well as, the weekend midday non-game, pre-game, and post-game peak periods by superimposing project-generated trips onto the No Action pedestrian analysis networks. The 2032 With Action peak hour pedestrian volumes are shown in **Appendix D**. As shown in **Tables 14-145** through **14-147**, all sidewalks and corner reservoirs would continue to operate at acceptable levels (within mid-LOS D, with a maximum of 8.5 PMF platoon flows for sidewalks; minimum of 19.5 SFP for corners) or incur degradations that, when compared to the No Action condition, do not exceed the *CEQR Technical Manual* sliding scale impact thresholds (See **Tables 14-81** and **14-82**). However, as shown in **Tables 14-148** and **14-149**, several study area crosswalks would operate beyond mid-LOS D (less than 19.5 SFP) and incur degradations that, when compared to the No Action condition, would exceed the *CEQR Technical Manual* sliding scale impact thresholds. These significant adverse pedestrian impacts are detailed below. Measures that can potentially mitigate these impacts are discussed in Chapter 21, "Mitigation."

Northern Boulevard and 126th Street

- The east crosswalk would deteriorate to LOS E (12.0 SFP) from a No Action LOS A (6403.9 SFP), LOS F (2.3 SFP) from a No Action LOS A (5642.1 SFP), LOS F (2.2 SFP) from a No Action LOS A (5513.2 SFP), LOS F (3.5 SFP) from a No Action LOS A (583.0 SFP), LOS F (2.5 SFP) from a No Action LOS A (1672.8 SFP), LOS F (3.2 SFP) from a No Action LOS A (1083.9 SFP), and to LOS F (-2.9 SFP) from a No Action LOS A (129.6 SFP) during the weekday AM, weekday midday, weekday PM, weekday pre-game, weekend midday non-game, weekend pre-game, and weekend post-game peak periods, respectively.

Roosevelt Avenue and 126th Street

- The west crosswalk would deteriorate to LOS E (8.0 SFP) from a No Action LOS A (1560.4 SFP), LOS F (4.4 SFP) from a No Action LOS A (2031.8 SFP), LOS F (-4.8 SFP) from a No Action LOS A (149.4 SFP), LOS F (5.7 SFP) from a No Action LOS A (1072.1 SFP), LOS F (-4.0 SFP) from a No Action LOS A (99.5 SFP), and to LOS E (9.6 SFP) from a No Action LOS A (183.4 SFP) during the weekday midday, weekday PM, weekday pre-game, weekend non-game, weekend pre-game, and weekend post-game peak periods, respectively.
- The north crosswalk would deteriorate to beyond mid-LOS D (16.4 SFP) from a No Action LOS A (2680.2 SFP), and to beyond mid-LOS D (17.4 SFP) from a No Action LOS A (537.3 SFP) during the weekday PM and weekend post-game peak periods, respectively.

Table 14-145

2032 With Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday AM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	1862	0.81	3.84	C
	West	6.0	1010	0.80	3.51	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1127	0.91	1.33	B
	South	12.5	41	0.80	0.07	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	3009	0.80	5.02	C
	South	11.5	810	0.80	1.47	B
34th Avenue between 126th Street and 126th Place	North	11.5	398	0.80	0.72	B
126th Street between Northern Boulevard and 34th Avenue	East	10.0	1366	0.80	2.85	B
	West	8.0	62	0.80	0.16	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1232	0.80	2.70	B
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	166	0.80	0.49	A
	South	8.5	136	0.80	0.33	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	130	0.80	0.22	A
	South	13.0	120	0.83	0.18	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	96	0.80	0.40	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	49	0.80	0.17	A
Weekday Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	3182	0.80	6.63	D
	West	6.0	1659	0.80	5.76	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1908	0.80	2.56	B
	South	12.5	95	0.80	0.16	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	3410	0.80	5.68	C
	South	11.5	1406	0.80	2.55	B
34th Avenue between 126th Street and 126th Place	North	11.5	234	0.80	0.42	A
126th Street between Northern Boulevard and 34th Avenue	East	10.0	3106	0.80	6.47	D
	West	8.0	89	0.80	0.23	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	2229	0.80	4.89	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	316	0.80	0.94	B
	South	8.5	95	0.80	0.23	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	170	0.80	0.28	A
	South	13.0	115	0.80	0.18	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	154	0.80	0.64	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	86	0.80	0.30	A
Weekday PM Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	2991	0.80	6.23	D
	West	6.0	1618	0.80	5.62	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1861	0.80	2.50	B
	South	12.5	79	0.80	0.13	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	4253	0.80	7.09	D
	South	11.5	1562	0.80	2.83	B
34th Avenue between 126th Street and 126th Place	North	11.5	379	0.80	0.69	B
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2930	0.80	6.10	D
	West	8.0	111	0.80	0.29	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	2103	0.80	4.61	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	239	0.80	0.71	B
	South	8.5	119	0.80	0.29	A
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	160	0.80	0.27	A
	South	13.0	116	0.80	0.19	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	116	0.80	0.48	A
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	91	0.80	0.32	A

Table 14-145 (cont'd)
2032 With Action Condition: Weekday Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekday Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	2301	0.80	4.79	C
	West	6.0	1201	0.83	4.03	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1405	0.88	1.73	B
	South	12.5	113	0.80	0.19	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	3034	0.80	5.06	C
	South	11.5	1070	0.82	1.90	B
34th Avenue between 126th Street and 126th Place	North	11.5	397	0.80	0.72	B
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2409	0.80	5.02	C
	West	8.0	111	0.80	0.29	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	1850	0.80	4.06	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	509	0.80	1.51	B
	South	8.5	258	0.80	0.63	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	309	0.82	0.50	B
	South	13.0	133	0.80	0.21	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	264	0.86	1.03	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	198	0.80	0.69	B

Note: PMF = pedestrians per minute per foot.

Table 14-146
2032 With Action Condition: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Midday Non-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	3081	0.80	6.42	D
	West	6.0	1498	0.80	5.20	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1731	0.80	2.33	B
	South	12.5	107	0.80	0.18	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	3741	0.82	6.05	D
	South	11.5	1743	0.80	3.16	C
34th Avenue between 126th Street and 126th Place	North	11.5	456	0.80	0.83	B
126th Street between Northern Boulevard and 34th Avenue	East	10.0	3502	0.80	7.30	D
	West	8.0	127	0.80	0.33	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	2343	0.80	5.14	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	387	0.85	1.08	B
	South	8.5	280	0.80	0.69	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	223	0.89	0.34	A
	South	13.0	205	0.80	0.33	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	174	0.80	0.73	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	128	0.80	0.44	A
Weekend Pre-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	2629	0.80	5.48	C
	West	6.0	1434	0.80	4.53	C
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1473	0.80	1.98	B
	South	12.5	203	0.80	0.34	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	3053	0.85	4.76	C
	South	11.5	1393	0.80	2.52	B
34th Avenue between 126th Street and 126th Place	North	11.5	411	0.80	0.74	B
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2988	0.80	6.23	D
	West	8.0	125	0.80	0.33	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	2045	0.93	3.88	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	530	0.87	1.46	B
	South	8.5	355	0.80	0.87	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	243	0.86	0.38	A
	South	13.0	165	0.80	0.26	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	317	0.80	1.32	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	137	0.80	0.48	A

Table 14-146 (cont'd)
2032 With Action Condition: Weekend Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (feet)	1-Hour Two-Way Volume	Peak Hour Factor (PHF)	Platoon	
					PMF	LOS
Weekend Post-Game						
126th Street between 34th Avenue and Roosevelt Avenue	East	10.0	2763	0.80	5.76	C
	West	6.0	1845	0.80	6.41	D
Roosevelt Avenue between 126th Street and the Van Wyck Expressway	North	15.5	1387	0.80	1.86	B
	South	12.5	195	0.80	0.33	A
Roosevelt Avenue between 126th Street and Grand Central Parkway	North	12.5	2811	0.80	4.69	C
	South	11.5	1179	0.80	2.14	B
34th Avenue between 126th Street and 126th Place	North	11.5	422	0.80	0.76	B
126th Street between Northern Boulevard and 34th Avenue	East	10.0	2894	0.80	6.03	D
	West	8.0	123	0.80	0.32	A
Northern Boulevard between 126th Street and 126th Place	South	9.5	2153	0.80	4.72	C
Roosevelt Avenue between 114th Street and Grand Central Parkway	North	7.0	855	0.80	2.54	B
	South	8.5	345	0.80	0.85	B
Roosevelt Avenue between 114th Street and 112th Street	North	12.5	340	0.80	0.57	B
	South	13.0	133	0.80	0.21	A
114th Street between Roosevelt Avenue and 39th Avenue	West	5.0	482	0.80	2.01	B
114th Street between Roosevelt Avenue and 41st Avenue	West	6.0	193	0.80	0.67	B

Note: PMF = pedestrians per minute per foot.

Table 14-147
2032 With Action Condition: Pedestrian LOS Analysis for Corners

Location	Corner	Weekday								Weekend					
		AM		Midday		PM		Pre-Game		Midday Non-Game		Pre-Game		Post-Game	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Roosevelt Avenue and 126th Street	Northwest	48.3	B	31.8	C	23.3	D	43.1	B	28.2	C	37.7	C	41.6	B
	Northeast	68.2	A	48.6	B	43.4	B	68.8	A	56.0	B	59.7	B	63.2	A
Roosevelt Avenue and 114th Street	Northwest	972.3	A	578.6	A	731.7	A	282.7	A	438.6	A	301.0	A	180.4	A
	Southwest	687.4	A	457.8	A	442.4	A	248.3	A	255.1	A	253.9	A	235.0	A

Note: SFP = square feet per pedestrian.

Table 14-148
2032 With Action Condition: Weekday Pedestrian LOS Analysis for Crosswalks

Location	Cross walk	Street Width (feet)	Cross walk Width (feet)	Conditions with Conflicting Vehicles											
				Weekday AM			Weekday Midday			Weekday PM			Weekday Pre-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	2133	27.6	C	2426	20.2	D	2884	16.4	**D+**	2135	29.6	C
	East	43.0	14.0	141	80.6	A	292	23.2	D	248	20.8	D	189	40.8	B
	South	50.0	13.0	160	374.6	A	308	189.7	A	275	216.9	A	272	222.0	A
	West	43.0	13.5	607	20.4	D	1022	8.0	**E+**	1191	4.4	**F+**	775	-4.8	**F+**
34th Avenue and 126th Street	North	81.0	12.5	130	39.4	C	302	16.8	**D+**	337	9.7	**E+**	315	62.5	A
	East	43.0	7.0	1530	10.6	**E+**	2786	4.6	**F+**	2736	4.8	**F+**	2346	3.0	**F+**
	South	61.0	10.5	104	13.9	**E+**	288	1.9	**F+**	312	6.8	**F+**	423	29.1	C
	West	47.5	12.5	104	355.0	A	131	237.9	A	168	160.8	A	164	104.4	A
Northern Boulevard and 126th Street	East	43.5	14.0	785	12.0	**E+**	1686	2.3	**F+**	1600	2.2	**F+**	1250	3.5	**F+**
	South	51.0	15.0	74	1097.0	A	93	871.7	A	120	674.3	A	115	703.1	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	137	463.1	A	234	217.4	A	190	252.8	A	439	99.3	A
	East	44.0	11.0	33	283.4	A	89	121.1	A	64	111.3	A	72	89.4	A
	South	32.5	12.0	138	398.3	A	185	274.1	A	185	252.1	A	303	149.0	A
	West	43.0	13.0	13	1462.3	A	20	1057.6	A	22	878.2	A	56	326.3	A
Roosevelt Avenue and Lot B Driveway	North	30.0	12.5	2720	13.7	**E+**	2949	11.8	**E+**	3819	7.3	**F+**	2624	14.3	**E+**
	East	43.0	12.5	5	4329.2	A	0	N/A	A	0	N/A	A	0	N/A	A
	West	43.0	12.5	54	398.4	A	141	162.8	A	121	176.6	A	99	216.3	A
126th Street and New Willets Point Boulevard	North	50.0	15.0	539	47.3	B	621	33.0	C	786	22.7	D	624	35.4	C
	South	50.0	15.0	550	36.8	C	642	26.0	C	798	18.7	**D+**	634	26.2	C

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.
+ Denotes a significant adverse impact.

Table 14-149
2032 With Action Condition: Weekend Pedestrian LOS Analysis for Crosswalks

Location	Crosswalk	Street Width (feet)	Cross walk Width (feet)	Conditions with Conflicting Vehicles								
				Weekend Midday Non-Game			Weekend Pre-Game			Weekend Post-Game		
				2-way Volume	SFP	LOS	2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
Roosevelt Avenue and 126th Street	North	53.0	16.0	2418	19.8	D	2046	25.5	C	1972	**17.4**	**D+**
	East	43.0	14.0	280	21.6	D	240	38.7	C	228	38.5	C
	South	50.0	13.0	344	172.3	A	397	149.7	A	364	165.8	A
	West	43.0	13.5	1306	5.7	**F+**	1026	-4.0	**F+**	823	9.6	**E+**
34th Avenue and 126th Street	North	81.0	12.5	460	8.0	**F+**	563	33.5	C	887	8.2	E
	East	30.0	7.0	3233	3.7	**F+**	2558	3.3	**F+**	2224	5.4	**F+**
	South	61.0	10.5	435	3.4	**F+**	515	20.6	D	619	14.6	E
	West	47.5	12.5	193	161.4	A	180	117.7	A	316	76.0	A
Northern Boulevard and 126th Street	East	43.5	14.0	1799	2.5	**F+**	1428	3.2	**F+**	1312	-2.9	**F+**
	South	51.0	15.0	143	564.9	A	123	657.7	A	109	742.9	A
Roosevelt Avenue and 114th Street	North	41.0	12.5	306	140.6	A	392	108.4	A	733	47.2	B
	East	44.0	11.0	81	81.7	A	88	38.2	C	88	95.2	A
	South	32.5	12.0	324	141.6	A	289	156.3	A	279	165.8	A
	West	43.0	13.0	34	559.6	A	67	256.9	A	95	182.6	A
Roosevelt Avenue and Lot B Driveway	North	30.0	12.5	3228	10.7	**E+**	2605	14.2	**E+**	2343	16.1	**D+**
	East	43.0	12.5	17	1270.9	A	0	N/A	A	0	N/A	A
	West	43.0	12.5	183	115.9	A	118	181.0	A	91	235.5	A
126th Street and New Willets Point Boulevard	North	50.0	15.0	736	29.1	C	596	36.6	C	547	41.3	B
	South	50.0	15.0	747	21.9	D	607	27.0	C	560	33.9	C

Notes: SFP = square feet per pedestrian.
N/A = Crosswalk volume is zero, and SFP is not calculable. LOS is assumed to be A.
+ Denotes a significant adverse impact.

34th Avenue and 126th Street

- The north crosswalk would deteriorate to beyond mid-LOS D (16.8 SFP) from a No Action LOS A, LOS E (9.7 SFP) from a No Action LOS A (2131.7 SFP), and to LOS F (8.0 SFP) from a No Action LOS A (2699.8 SFP) during the weekday midday, weekday PM, and weekend midday non-game peak periods, respectively.
- The south crosswalk would deteriorate to LOS E (13.9 SFP) from a No Action LOS A (2947.4 SFP), LOS F (1.9 SFP) from a No Action LOS A (5767.3 SFP), LOS F (6.8 SFP) from a No Action LOS A (3150.8 SFP), and to LOS F (3.4 SFP) from a No Action LOS A (1204.7 SFP) during the weekday AM, weekday midday, weekday PM, and weekend midday non-game peak periods, respectively.
- The east crosswalk would deteriorate to LOS E (10.6 SFP) from a No Action LOS A (2035.8 SFP), LOS F (4.6 SFP) from a No Action LOS A (1394.7 SFP), LOS F (4.8 SFP) from a No Action LOS A (937.3 SFP), LOS F (3.0 SFP) from a No Action LOS A (76.9 SFP), LOS F (3.7 SFP) from a No Action LOS A (755.4 SFP), LOS F (3.3 SFP) from a No Action LOS A (9908.5 SFP), and to LOS F (5.4 SFP) from a No Action LOS A during the weekday AM, weekday midday, weekday PM, weekday pre-game, weekend midday non-game, weekend pre-game, and weekend post-game peak periods, respectively.

Roosevelt Avenue and the Lot B Driveway

- The north crosswalk would operate at LOS E (13.7 SFP), LOS E (11.8 SFP), LOS F (7.3 SFP), LOS E (14.3 SFP), LOS E (10.7 SFP), LOS E (14.2 SFP), and LOS D (16.1 SFP) during the weekday AM, weekday midday, weekday PM, weekday pre-game, weekend midday non-game, weekend pre-game, and weekend post-game peak periods, respectively.

126th Street and New Willets Point Boulevard

- The south crosswalk would operate at beyond mid-LOS D (18.7 SFP) during the weekday PM peak period.

The significant adverse transit and pedestrian impacts detailed above for the 2032 analysis year are summarized in **Table 14-150**.

Table 14-150
Summary of 2032 Significant Adverse Transit and Pedestrian Impacts

Analysis Element		Analysis Time Period						
		Weekday				Weekend		
		AM	Midday	PM	Pre-Game	Midday	Pre-Game	Post-Game
Subway Impacts								
Mets-Willets Point Station	S2 Stairs			X				
	S3 Stairs			X	X		X	
	M4A/4B Stairs			X	X		X	
No. 7 Line-Haul	WB	X						
Bus Impacts								
Q19 Bus Route	EB	X		X				
	WB	X		X				
Q48 Bus Route	EB			X				
	WB			X				
Q66 Bus Route	EB	X		X				
	WB	X		X				
Pedestrian Impacts								
Northern Blvd & 126th St	E Crosswalk	X	X	X	X	X	X	X
Roosevelt Ave & 126th St	N Crosswalk			X				X
	W Crosswalk		X	X	X	X	X	X
34th Ave & 126th St	N Crosswalk		X	X		X		
	S Crosswalk	X	X	X		X		
	E Crosswalk	X	X	X	X	X	X	X
New Willets Point Blvd & 126th St	S Crosswalk			X				
Roosevelt Ave & Lot B Driveway	N Crosswalk	X	X	X	X	X	X	X

Notes: X = Significantly Impacted

M. VEHICULAR AND PEDESTRIAN SAFETY

Crash data for the study area intersections were obtained from the New York State Department of Transportation (NYSDOT) for the time period between January 1, 2009 and December 31, 2011. The data obtained quantify the total number of reportable accidents (involving fatality, injury, or more than $1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related accidents at each location. According to the *CEQR Technical Manual*, a high accident location is one where there were five or more pedestrian/bicyclist-related accidents or 48 or more reportable and non-reportable accidents in any consecutive 12 months within the most recent 3-year period for which data are available.

During the January 1, 2009 to December 31, 2011 3-year period, a total of 709 reportable and non-reportable accidents, 2 fatalities, 697 injuries, and 166 pedestrian/bicyclist-related accidents occurred at the study area intersections. A rolling total of accident data identifies seven study area intersections as high pedestrian accident locations in the 2009 to 2011 period. These locations are 114th Street at Roosevelt Avenue, Main Street at Northern Boulevard, Main Street at Roosevelt Avenue, Main Street at 41st Avenue/Kissena Boulevard, Union Street at Northern Boulevard, Union Street at Roosevelt Avenue and Parsons Boulevard at Northern Boulevard. **Table 14-151** depicts total accident characteristics by intersection during the study period, as well as a breakdown of pedestrian and bicycle accidents by year and location. **Table 14-152** shows a detailed description of each accident at the seven high accident locations during the three year period.

Table 14-151
Accident Summary

Intersection		Study Period					Accidents by Year					
North-South Roadway	East-West Roadway	All Accidents by Year			Total Fatalities	Total Injuries	Pedestrian			Bicycle		
		2009	2010	2011			2009	2010	2011	2009	2010	2011
108th Street	Astoria Blvd	1	8	5	0	20						
108th Street	Northern Blvd	4	10	11	0	31			4			
108th Street	Roosevelt Ave	5	5	6	0	17	2		2	1		1
111th Street	Roosevelt Ave	4	5	1	0	10		4		2		
114th Street	Northern Blvd	16	17	8	0	47						
114th Street	34th Avenue	2	3	2	0	16						
114th Street	**Roosevelt Ave**	9	12	7	0	25		1		5	2	1
126th Street	Northern Blvd	23	29	25	0	106						
126th Street	34th Avenue	2	3	2	0	9						
126th Street	Roosevelt Ave	8	8	6	0	22				1	3	1
Willets Point Blvd	Northern Blvd	1	1	0	0	0						
College Point Blvd	32nd Avenue	3	3	2	0	9					1	
College Point Blvd	Northern Blvd	5	1	2	0	8						
College Point Blvd	Roosevelt Ave	16	13	11	0	42	1	1	1		2	1
College Point Blvd	Sanford Ave	4	4	3	0	9	1	1	2	1		
Prince Street	Northern Blvd	15	7	14	0	37						
Prince Street	Roosevelt Ave	13	9	2	0	9	2		1	2		1
Main Street	**Northern Blvd**	14	11	17	0	29	3	2	3	1		
Main Street	**Roosevelt Ave**	10	12	7	0	29	6	6	4		4	2
Main Street	**41st Avenue**	9	6	6	1	16	4	2	4		1	
Union Street	**Northern Blvd**	40	33	25	1	92	10	15	6	2		
Union Street	**Roosevelt Ave**	16	5	9	0	19	6		4	2		
Union Street	Sanford Ave	9	12	3	0	11	1	1	1		2	
Parsons Blvd	**Northern Blvd**	16	20	18	0	56	3	5	6	1		
Parsons Blvd	Roosevelt Ave	4	8	5	0	8	1	2	2			1
Parsons Blvd	Sanford Ave	3	10	5	0	20	1		3			1
Shea Road	CitiField Lot N.	0	0	0	0	0						
Shea Road	GCP On/Off ramp	0	0	0	0	0						

Note: **Bold** intersections are high pedestrian accident locations.
Source: NYSDOT January 1, 2009 and December 31, 2011 accident data.

Table 14-152
Vehicle and Pedestrian Accident Details

Intersection	Year	Date	Time	Accident Class		Action of Vehicle	Action of Pedestrian	Cause of Accident			
				Injured	Killed			Left / Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
114th Street & Roosevelt Avenue	2009	8/27	10:53 AM	X		Unknown	Unknown				Unknown
		9/13	4:10 AM	X		Going straight – East	Crossing against signal		X		Alcohol involvement
		9/18	9:45 AM	x		Merging – East	Crossing				Unknown
		10/27	14:50 PM	X		Going straight – East	Unknown				Unknown
		11/2	7:10 AM	X		Making right turn – East	Crossing with signal	X			
	2010	5/4	14:50 PM	X		Going straight – West	Crossing		X		
		6/27	9:00 AM	X		Going straight – West	Crossing with signal				Following too closely, Failure to yield R.o.W.
		7/25	3:00 AM	X		Going straight – West	Crossing				Unknown
	2011	3/26	18:00 PM	X		Going straight – Unknown	Along highway with traffic				Driver inexperience
Main Street & Northern Boulevard	2009	4/24	20:40 PM	x		Making left turn – Northwest	Crossing with signal	X			
		5/9	22:59 PM	X		Unknown	Crossing with signal				Unknown
		8/3	18:20 PM	X		Unknown	Unknown				Unknown
		8/16	8:20 AM	X		Making left turn – South	Crossing	X			
	2010	10/11	11:01 AM	X		Going straight – West	Crossing against signal		X		
		11/25	21:10 PM	X		Going straight – East	Crossing against signal		X		
	2011	1/6	13:05 PM	X		Making right turn – North	Crossing with signal	X			Other electronic device
		2/11	20:00 PM	X		Going straight – West	Unknown				Unknown
		10/7	15:45 PM	X		Backing – West	Crossing with signal				Unknown

Table 14-152 (cont'd)
Vehicle and Pedestrian Accident Details

Intersection	Year	Date	Time	Accident Class		Action of Vehicle	Action of Pedestrian	Cause of Accident			
				Injured	Killed			Left / Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
Main Street & Roosevelt Avenue	2009	6/21	N/A	X		Making left turn – North	Crossing with signal	X			
		9/3	11:50 AM	x		Going straight – North	Crossing against signal		x	X	
		9/17	7:35 AM	X		Going straight – North	Crossing against signal		X		
		9/17	10:15 AM	X		Going straight – Unknown	Crossing against signal		X		
		12/22	8:50 AM	X		Making right turn – East	Crossing with signal	X			
		12/22	8:40 AM	X		Going straight – North	Crossing with signal				Unknown
	2010	1/14	18:35 PM	X		Going straight – West	Crossing against signal		X		
		4/8	15:00 PM	X		Starting from parking – West	Not in roadway		X		
		5/3	7:13 AM	X		Making left turn – North	Crossing against signal	X	X		Oversized vehicle
		5/24	40:45 AM	X		Making U turn – East	Along highway against traffic	X			
		6/27	10:40 AM	X		Making U turn – East	Going straight – South	X			Turning improper
		6/30	20:11 PM	X		Going straight – East	Crossing with signal			X	
		8/30	7:30 AM	X		Stopped in traffic – West	Going straight – West				Unknown
		9/29	14:30 PM	X		Going straight – South	Going straight – East		X		
		11/9	7:50 AM	X		Going straight – East	Crossing		X		
		12/8	16:05 PM	X		Going straight – East	Crossing with signal				Driver inexperience, Traffic control disregarded
	2011	2/11	12:15 PM	X		Backing – Northeast	Other actions in roadway			X	Backing unsafely
		4/8	18:50 PM	X		Going straight – South	Crossing				Unknown
		7/17	11:15 AM	X		Going straight – South	Crossing against signal		X		Failure to yield R.o.W.
		8/5	19:35 PM	X		Starting from parking – East	Along highway with traffic				Unsafe lane change
		8/9	11:10 AM	X		Parked – West	Other actions in roadway		X		
		12/6	10:00 AM	X		Backing – East	Other actions in roadway				Backing unsafely

Table 14-152 (cont'd)
Vehicle and Pedestrian Accident Details

Intersection	Year	Date	Time	Accident Class		Action of Vehicle	Action of Pedestrian	Cause of Accident			
				Injured	Killed			Left / Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
Main Street & 41st Avenue / Kissena Boulevard	2009	1/27	12:06 PM	X		Going straight – South	Other actions in roadway		X		Failure to keep right
		8/4	9:40 AM	X		Going straight – West	Other actions in roadway				Unknown
		12/26	15:07 PM	X		Starting from parking – South	Working in roadway				Aggressive driving / road rage
	2010	2/18	17:10 PM	X		Going straight – North	Crossing				Unknown
		5/23	12:00 PM	X		Making right turn – South	Crossing with signal	X			Unsafe speed, Failure to yield R.o.W.
		7/4	16:48 PM	X		Going straight – South	Crossing				Unknown
		7/16	10:14 AM		X	Going straight – South	Along highway with traffic				Pavement defective
	2011	2/26	8:00 AM	X		Making right turn – North	Crossing with signal	X			Failure to yield R.o.W.
		5/14	9:55 AM	X		Making left turn – West	Crossing with signal	X	X	X	
		8/27	18:30 PM	X		Making right turn – North	Crossing with signal	X			Failure to yield R.o.W.
		12/4	15:50 PM	X		Making left turn – Southwest	Crossing with signal	X			Turning improper, unsafe speed
Union Street & Northern Boulevard	2009	3/9	14:00 PM	X		Making right turn – North	Crossing with signal	X			
		3/26	20:17 PM	X		Making left turn – Northwest	Crossing with signal	X			
		5/1	20:25 PM	X		Making left turn – West	Crossing	X			
		5/14	11:15 AM	X		Going straight – South	Crossing against signal		X		
		5/15	10:00 AM	X		Unknown	Not in roadway				Unknown
		6/3	9:40 AM	X		Going straight – North	Crossing against signal		X		
		6/27	15:30 PM	X		Unknown	Unknown				Unknown
		7/28	13:30 PM	X		Making left turn – Southeast	Crossing with signal	X			
		8/24	18:45 PM	X		Making right turn – South	Crossing with signal	X			
		11/5	19:10 PM	X		Making left turn – West	Crossing with signal	X		X	
		11/9	10:15 AM	X		Making left turn – West	Crossing with signal	X			Failure to yield R.o.W.
		11/21	8:23 AM	X		Making right turn on red – West	Making right turn on red – West	X	X	X	Driver inexperience, Passenger distraction
	2010	2/1	15:45 PM	X		Making left turn – North	Crossing with signal	X			
		2/18	15:32 PM	X		Making left turn – West	Crossing with signal	X	X		
		2/25	13:37 PM	X		Making left turn – Southeast	Crossing with signal	X			
		2/27	23:30 PM	X		Going straight – West	Crossing with signal				Unknown
		3/22	9:15 AM	X		Going straight – South	Unknown		X	X	
		3/23	17:35 PM	X		Making left turn – North	Unknown	X	X		

Table 14-152 (cont'd)
Vehicle and Pedestrian Accident Details

Intersection	Year	Date	Time	Accident Class		Action of Vehicle	Action of Pedestrian	Cause of Accident			
				Injured	Killed			Left / Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
Union Street & Northern Boulevard	2010	5/8	16:50 PM	X		Making left turn – East	Crossing with signal	X			Failure to yield R.o.W.
		6/13	11:10 AM	X		Making left turn – Northwest	Crossing with signal	X			Failure to yield R.o.W.
		6/14	14:20 PM	X		Going straight – North	Crossing				Unknown
		7/28	8:15 AM	X		Making right turn – West	Crossing with signal	X			Failure to yield R.o.W.
		9/22	12:40 PM	X		Going straight – East	Crossing against signal		X		
		10/14	20:00 PM	X		Unknown	Crossing				Unknown
		11/8	21:17 PM		X	Going straight – North	Crossing with signal				Failure to yield R.o.W.
		12/17	9:35 AM	X		Making left turn – East	Crossing with signal	X			Failure to yield R.o.W.
	2011	1/28	23:28 PM	X		Making left turn – Southwest	Crossing with signal	X			Alcohol involvement
		2/16	20:40 PM	X		Making right turn – North	Unknown	X			
		3/24	22:10 PM	X		Going straight – East	Crossing				Unknown
		9/16	14:00 PM	X		Making right turn – West	Crossing with signal	X	X	X	
		9/22	17:15 PM	X		Making right turn – East	Crossing with signal	X			
		10/7	15:00 PM	X		Making right turn – West	Crossing with signal	X			
		11/4	22:30 PM	X		Making right turn – Northeast	Crossing with signal	X			Turning improper
Union Street & Roosevelt Avenue	2009	1/12	14:44 PM	X		Making left turn – West	Crossing with signal	X			Glare
		1/15	14:35 PM	X		Making left turn – South	Crossing with signal	X			
		2/17	10:30 AM	X		Unknown	Unknown				Unknown
		3/12	13:00 PM	X		Making right turn – East	Along highway with traffic	X			
		5/24	13:00 PM	X		Stopped in traffic – West	Crossing with signal				Brakes defective
		8/4	19:00 PM			Starting in traffic – North	Unknown				Aggressive driving / road rage
		12/23	19:45 PM	X		Making left turn – Southeast	Crossing with signal	X			Turning improper
		12/26	22:00 PM	X		Making right turn – North	Crossing with signal	X			
	2011	2/11	10:45 AM	X		Backing - East	Crossing				Backing unsafely
		3/10	10:15 AM	X		Making right turn – Southeast	Child getting on/off school bus	X		X	
		9/24	8:10 AM	X		Going straight – East	Crossing		X		
		11/28	18:00 PM	X		Making right turn – Southeast	Crossing with signal	X			

Table 14-152 (cont'd)
Vehicle and Pedestrian Accident Details

Intersection	Year	Date	Time	Accident Class		Action of Vehicle	Action of Pedestrian	Cause of Accident			
				Injured	Killed			Left / Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
Parsons Boulevard & Northern Boulevard	2009	4/17	15:30 PM	X		Making left turn – West	Unknown	X			
		4/22	12:04 PM	X		Making left turn – Southwest	Crossing	X			
		8/4	10:30 AM	X		Making right turn – Southeast	Unknown	X			
		10/22	12:53 PM	X		Going straight – West	Crossing against signal		X	X	Unsafe speed, Failure to yield R.o.W.
	2010	2/2	13:15 PM	X		Going straight – West	Crossing against signal		X		Failure to yield R.o.W.
		7/6	17:25 PM	X		Unknown	Unknown				Unknown
		8/3	21:00 PM	X		Unknown	Unknown				Unknown
		12/24	18:30 PM	X		Going straight – West	Crossing		X		
	2011	1/27	12:45 PM	X		Backing – North	Crossing with signal				Backing unsafely
		7/25	18:50 PM	X		Making left turn – Northwest	Crossing with signal	X			
		8/22	13:00 PM	X		Making left turn – West	Crossing with signal	X			Failure to yield R.o.W.
		8/23	14:20 PM	X		Other – Northwest	Not in roadway			X	
		9/28	13:50 PM	X		Making left turn – Southeast	Crossing with signal	X			
		11/2	15:30 PM	X		Unknown	Unknown				Unknown

Source: NYSDOT January 1, 2009 and December 31, 2011 accident data.

114TH STREET AND ROOSEVELT AVENUE

Based on the review of the accident history at the intersection of 114th Street and Roosevelt Avenue, no prevailing trends with regard to geometric deficiencies were identified as the primary causes of recorded accidents. With respect to geometric deficiencies that could potentially cause safety hazards, the intersection of 114th Street and Roosevelt Avenue is signalized and provides two high-visibility crosswalks and two regular crosswalks. In terms of project-generated activity, the intersection would experience incremental peak-hour volume increases of approximately 810 or fewer vehicle trips and 200 or fewer pedestrian trips at any crosswalks at this intersection during each of the seven analysis peak hours by the 2032 With Action condition. As discussed in the "Traffic and Parking" section, this intersection would be impacted during all seven analysis peak hours under the 2032 With Action condition.

As described in Chapter 21, "Mitigation," the predicted impacts at this intersection could be fully mitigated with standard traffic engineering measures under the 2018 and 2028 With Action conditions. For the 2032 With Action condition, the predicted impacts at this intersection would be fully mitigated during the non-game analysis peak hours and would be partially mitigated during the game day analysis peak hours. In addition, the Queens Development Group, LLC (QDG), in consultation with the lead agency and NYCDOT, would develop and conduct a detailed traffic monitoring plan at various interim buildout phases of the proposed project to determine whether actual future With Action conditions have, in fact, resulted in significant traffic impacts and verify the need and effectiveness of the proposed mitigation measures identified in this SEIS or similar measures identified through the traffic monitoring plan.

Therefore, the proposed project is not anticipated to exacerbate any of the current causes of pedestrian-related accidents. Nonetheless, additional safety measures, such as the installation of pedestrian safety signs (i.e., "Turning Vehicles Yield to Pedestrians" signs on all approaches), the installation of countdown timers for all crosswalks, and restriping the north and south crosswalks as high-visibility crosswalks, can be implemented to improve pedestrian safety at this intersection.

MAIN STREET AND NORTHERN BOULEVARD

Based on the review of the accident history at the intersection of Main Street and Northern Boulevard, no prevailing trends with regard to geometric deficiencies were identified as the primary causes of recorded accidents. With respect to geometric deficiencies that could potentially cause safety hazards, Main Street and Northern Boulevard is a signalized, three-way intersection with three high-visibility crosswalks. In addition, countdown timers are installed for all crosswalks at this intersection. In terms of project-generated activity, this intersection is located in the secondary traffic study area and would experience incremental peak-hour volume increases of approximately 580 or fewer vehicle trips (all through) and there would not be any project-generated pedestrian trips at any crosswalks at this intersection during each of the seven analysis peak hours by the 2032 With Action condition. As discussed in the "Traffic and Parking" section, this intersection would be impacted during all seven analysis peak hours under the 2032 With Action condition.

As described in Chapter 21, "Mitigation," the predicted impacts at this intersection could not be mitigated with standard traffic engineering measures under the 2032 With Action condition. However, as described above, all the proposed project-generated vehicle trips would be through trips at this intersection and there would be a negligible number of project-generated pedestrian trips at any crosswalks at this intersection, while a review of the vehicle and pedestrian accident details presented in **Table 14-152** indicates that the majority of pedestrian-related accidents were caused by pedestrian inattentiveness and driver failure to yield right of way. Since these accidents occurred primarily during vehicles making left and right turning movements, the through vehicle trips generated by the proposed project is not anticipated to result in additional conflicts with normal pedestrian flow. In addition, QDG, in consultation with the lead agency and NYCDOT, would develop and conduct a detailed traffic monitoring plan at various interim buildout phases of the proposed project to determine whether actual future With Action conditions have, in fact, resulted in significant traffic impacts and verify the need and effectiveness of the proposed mitigation measures identified in the this SEIS or similar measures identified through the traffic monitoring plan. Therefore, the proposed project is not anticipated to exacerbate any of the current causes of pedestrian-related accidents. Nonetheless, additional safety measures, such as the installation of pedestrian safety signs (i.e., "Turning Vehicles Yield to Pedestrians" signs on all approaches and "Wait for Walk Signal" signs for pedestrians) can be implemented to improve pedestrian safety at this intersection.

MAIN STREET AND ROOSEVELT AVENUE

Based on the review of the accident history at the intersection of Main Street and Roosevelt Avenue, no prevailing trends with regard to geometric deficiencies were identified as the primary causes of recorded accidents. With respect to geometric deficiencies that could potentially cause safety hazards, the intersection of Main Street and Roosevelt Avenue is signalized and provides four school crosswalks. In addition, countdown timers are installed at all crosswalks at this intersection. Based on the detailed description, half of the pedestrian-related accidents were related to pedestrian error, with pedestrians crossing against the signal listed as a

contributing factor in six of the twenty-two accidents. In terms of project-generated activity, this intersection is located in the secondary traffic study area and would experience incremental peak-hour volume increases of approximately 220 or fewer vehicle trips (all through) and there would not be any project-generated pedestrian trips at any crosswalks at this intersection during each of the seven analysis peak hours by the 2032 With Action condition. As discussed in the "Traffic and Parking" section, this intersection would be impacted during all seven analysis peak hours under the 2032 With Action condition.

As described in Chapter 21, "Mitigation," the predicted impacts at this intersection could be fully or partially mitigated with standard traffic engineering measures during the weekday AM and weekend midday non-game, weekday and weekend pre-game and weekend post-game peak hours, and could not be mitigated during the weekday midday and PM non-game peak hours under the 2032 With Action condition. However, as described above, all the proposed project-generated vehicle trips would be through trips at this intersection and there would be a negligible number of project-generated pedestrian trips at any crosswalks at this intersection, while a review of the vehicle and pedestrian accident details presented in **Table 14-152** indicates that the majority of pedestrian-related accidents were caused by pedestrian inattentiveness and driver failure to yield right of way. Since these accidents occurred primarily during vehicles making left and right turning movements and pedestrian inattentiveness, the through vehicle trips generated by the proposed project is not anticipated to result in additional conflicts with normal pedestrian flow. In addition, QDG, in consultation with the lead agency and NYCDOT, would develop and conduct a detailed traffic monitoring plan at various interim buildout phases of the proposed project to determine whether actual future With Action conditions have, in fact, resulted in significant traffic impacts and verify the need and effectiveness of the proposed mitigation measures identified in the this SEIS or similar measures identified through the traffic monitoring plan. Therefore, the proposed project is not anticipated to exacerbate any of the current causes of pedestrian-related accidents. Nonetheless, additional safety measures, such as the installation of pedestrian safety signs (i.e., "Turning Vehicles Yield to Pedestrians" signs on all approaches and "Wait for Walk Signal" signs for pedestrians) can be implemented to improve pedestrian safety at this intersection.

MAIN STREET AND 41ST AVENUE/KISSENA BOULEVARD

Based on the review of the accident history at the intersection of Main Street and 41st Avenue/Kissena Boulevard, no prevailing trends with regard to geometric deficiencies were identified as the primary causes of recorded accidents. With respect to geometric deficiencies that could potentially cause safety hazards, the intersection of Main Street and 41st Avenue/Kissena Boulevard is signalized and provides four school crosswalks. In addition, countdown timers are installed at the Kissena Boulevard and Main Street crosswalks. Based on the detailed description, half of the pedestrian-related accidents were related to vehicles making left or right turning movements. In terms of project-generated activity, this intersection is located in the secondary traffic study area and would experience incremental peak-hour volume increases of approximately 10 or fewer vehicle trips and there would be a negligible number of project-generated pedestrian trips at any crosswalks at this intersection during each of the seven analysis peak hours by the 2032 With Action condition. As discussed in the "Traffic and Parking" section, this intersection would be impacted during the weekday and weekend non-game midday peak hours and the weekend pre-game peak hour under the 2032 With Action condition.

As described in Chapter 21, "Mitigation," the predicted impacts at this intersection could be fully mitigated with standard traffic engineering measures under the 2032 With Action condition. In addition, QDG, in consultation with the lead agency and NYCDOT, would develop and conduct a detailed traffic monitoring plan at various interim buildout phases of the proposed project to determine whether actual future With Action conditions have, in fact, resulted in significant traffic impacts and verify the need and effectiveness of the proposed mitigation measures identified in the this SEIS or similar measures identified through the traffic monitoring plan. Therefore, the proposed project is not anticipated to exacerbate any of the current causes of pedestrian-related accidents. Nonetheless, additional safety measures, such as the installation of pedestrian safety signs (i.e., "Turning Vehicles Yield to Pedestrians" signs on all approaches), the installation of countdown timers on the remaining two crosswalks (the east and west crosswalks of 41st Avenue), and restriping a faded crosswalk on the western leg of 41st Avenue, can be implemented to improve pedestrian safety at this intersection.

UNION STREET AND NORTHERN BOULEVARD

Based on the review of the accident history at the intersection of Union Street and Northern Boulevard, no prevailing trends with regard to geometric deficiencies were identified as the primary causes of recorded accidents. With respect to geometric deficiencies that could potentially cause safety hazards, the intersection of Union Street and Northern Boulevard is signalized and provides three school crosswalks and one regular crosswalk. In addition, countdown timers are installed at all crosswalks at this intersection and School Advance Warning Signs are located at all approaches except to the west. Based on the detailed description, two-thirds of the pedestrian-related accidents were related to vehicles making left or right turning movements. In all of these accidents, pedestrians were crossing with the signal; failure to yield right-of-way was listed as a contributing factor in five. In terms of project-generated activity, this intersection is located in the secondary traffic study area and would experience incremental peak-hour volume increases of approximately 580 or fewer vehicle trips (mostly through) and there would be a negligible number of project-generated pedestrian trips at any crosswalks at this intersection during each of the seven analysis peak hours by the 2032 With Action condition. As discussed in the "Traffic and Parking" section, this intersection would be impacted during all seven analysis peak hours under the 2032 With Action condition.

As described in Chapter 21, "Mitigation," the predicted impacts at this intersection could be partially mitigated with standard traffic engineering measures during all analysis peak hours except for the weekday AM non-game peak hour where it could not be mitigated under the 2032 With Action condition. However, as described above, most of the proposed project-generated vehicle trips would be through trips at this intersection and there would not be any project-generated pedestrian trips at any crosswalks at this intersection, while a review of the vehicle and pedestrian accident details presented in **Table 14-152** indicates that the majority of pedestrian-related accidents were caused by pedestrian inattentiveness and driver failure to yield right of way. Since these accidents occurred primarily during vehicles making left and right turning movements, the mostly through vehicle trips generated by the proposed project is not anticipated to result in additional conflicts with normal pedestrian flow. In addition, QDG, in consultation with the lead agency and NYCDOT, would develop and conduct a detailed traffic monitoring plan at various interim buildout phases of the proposed project to determine whether actual future With Action conditions have, in fact, resulted in significant traffic impacts and verify the need and effectiveness of the proposed mitigation measures identified in the this SEIS or similar measures identified through the traffic monitoring plan. Therefore, the proposed project is not anticipated to exacerbate any of the current causes of pedestrian-related accidents.

Nonetheless, additional safety measures, such as the installation of pedestrian safety signs (i.e., "Turning Vehicles Yield to Pedestrians" signs on all approaches) and restriping the southern crosswalk as a high-visibility crosswalk, can be implemented to improve pedestrian safety at this intersection.

UNION STREET AND ROOSEVELT AVENUE

Based on the review of the accident history at the intersection of Union Street and Roosevelt Avenue, no prevailing trends with regard to geometric deficiencies were identified as the primary causes of recorded accidents. With respect to geometric deficiencies that could potentially cause safety hazards, the intersection of Union Street and Roosevelt Avenue is signalized and provides two school crosswalks and two regular crosswalks. Based on the detailed description, half of the pedestrian-related accidents were related to vehicles making left or right turning movements. In all of these accidents, pedestrians were crossing with the signal. In terms of project-generated activity, this intersection is located in the secondary traffic study area and would experience incremental peak-hour volume increases of approximately 220 or fewer vehicle trips (mostly through) and there would be a negligible number of project-generated pedestrian trips at any crosswalks at this intersection during each of the seven analysis peak hours by the 2032 With Action condition. As discussed in the "Traffic and Parking" section, this intersection would be impacted during all seven analysis peak hours under the 2032 With Action condition.

As described in Chapter 21, "Mitigation," the predicted impacts at this intersection could not be mitigated with standard traffic engineering measures under the 2032 With Action condition. However, as described above, most of the proposed project-generated vehicle trips would be through trips at this intersection and there would not be any project-generated pedestrian trips at any crosswalks at this intersection, while a review of the vehicle and pedestrian accident details presented in **Table 14-152** indicates that the majority of pedestrian-related accidents were caused by driver failure to yield right of way. Since these accidents occurred primarily during vehicles making left and right turning movements, the mostly through vehicle trips generated by the proposed project is not anticipated to result in additional conflicts with normal pedestrian flow. In addition, QDG, in consultation with the lead agency and NYCDOT, would develop and conduct a detailed traffic monitoring plan at various interim buildout phases of the proposed project to determine whether actual future With Action conditions have, in fact, resulted in significant traffic impacts and verify the need and effectiveness of the proposed mitigation measures identified in the this SEIS or similar measures identified through the traffic monitoring plan. Therefore, the proposed project is not anticipated to exacerbate any of the current causes of pedestrian-related accidents. Nonetheless, additional safety measures, such as the installation of pedestrian safety signs (i.e., "Turning Vehicles Yield to Pedestrians" signs on all approaches), the installation of countdown timers on all crosswalks, and restriping the north and south crosswalks as high-visibility crosswalks, can be implemented to improve pedestrian safety at this intersection.

PARSONS BOULEVARD AND NORTHERN BOULEVARD

Based on the review of the accident history at the intersection of Parsons Boulevard and Northern Boulevard, no prevailing trends with regard to geometric deficiencies were identified as the primary causes of recorded accidents. With respect to geometric deficiencies that could potentially cause safety hazards, the intersection of Parsons Boulevard and Northern Boulevard is signalized and provides four high-visibility crosswalks. In addition, countdown timers are installed at the north and south crosswalks at this intersection. Based on the detailed description,

half of the pedestrian-related accidents were related to vehicles making left or right turning movements. In terms of project-generated activity, this intersection is located in the secondary traffic study area and would experience incremental peak-hour volume increases of approximately 580 or fewer vehicle trips (mostly through) and there would be a negligible number of project-generated pedestrian trips at any crosswalks at this intersection during each of the seven analysis peak hours by the 2032 With Action condition. As discussed in the "Traffic and Parking" section, this intersection would be impacted during all seven analysis peak hours under the 2032 With Action condition.

As described in Chapter 21, "Mitigation," the predicted impacts at this intersection could be fully or partially mitigated with standard traffic engineering measures during all analysis peak hours under the 2032 With Action condition. However, as described above, most of the proposed project-generated vehicle trips would be through trips at this intersection and there would not be any project-generated pedestrian trips at any crosswalks at this intersection, while a review of the vehicle and pedestrian accident details presented in **Table 14-152** indicates that the majority of pedestrian-related accidents were caused by pedestrian inattentiveness and driver failure to yield right of way. Since these accidents occurred primarily during vehicles making left and right turning movements, the mostly through vehicle trips generated by the proposed project is not anticipated to result in additional conflicts with normal pedestrian flow. In addition, QDG, in consultation with the lead agency and NYCDOT, would develop and conduct a detailed traffic monitoring plan at various interim buildout phases of the proposed project to determine whether actual future With Action conditions have, in fact, resulted in significant traffic impacts and verify the need and effectiveness of the proposed mitigation measures identified in the this SEIS or similar measures identified through the traffic monitoring plan. Therefore, the proposed project is not anticipated to exacerbate any of the current causes of pedestrian-related accidents. Nonetheless, additional safety measures, such as the installation of pedestrian safety signs (i.e., "Turning Vehicles Yield to Pedestrians" signs on all approaches), the installation of countdown timers on the remaining two crosswalks, can be implemented to improve pedestrian safety at this intersection.

N. DUAL EVENT CONDITIONS WITH U.S. TENNIS OPEN

Met home games and the US Tennis Open event occur during the same two-week period in late August/early September every other year. The 2008 FGEIS stated that the proposed Willets Point Development Plan "would add significant traffic volumes to the surrounding highway network and key local roadways, such as Northern Boulevard and Roosevelt Avenue," and that the Dual Event Condition with a Met game and the US Open "would experience worsened delays and additional queuing compared with the No Action condition," and that "more rigorous management of traffic operations at locations where control is already maintained during the Dual Event Condition would likely be necessary with the proposed Development Plan," but that "this condition would represent an infrequent special case with the overlap of two concurrent events in combination with the expected traffic activity of the proposed Development Plan". These conclusions vis-à-vis the US Open would again apply to conditions with the newly-proposed Development Plan that is the subject of this SEIS.

O. POTENTIAL MAJOR LEAGUE SOCCER STADIUM

TRAFFIC AND PARKING

Major League Soccer (MLS) is proposing to build a stadium within the eastern section of Flushing Meadows-Corona Park on Industry Pond. The stadium plans currently call for an initial

25,000-seat stadium that can be expanded to accommodate 10,000 more seats—to a total of 35,000 seats—in the future. The planned year would be 2016, with the expectation that the stadium would be expanded approximately ten years later, in or about 2026. It is possible that the full stadium shell could be built by 2016 with the initial 25,000 seats ready for use at that time, with the additional seating added ten years or so later. MLS games are expected to occur on approximately 17 to 20 days of the year (17 pre-season and regular season games, plus up to three playoff games should the team advance to and through the playoffs). Scheduling of Met and soccer games would avoid any concurrency or overlap in trips between games at the two stadiums. Similarly, off-season events that may take place at CitiField and the MLS stadium would be coordinated to avoid any concurrency or overlap in scheduling. Since a Met game and an MLS game would be representative worst-case events at the respective venues, these other off-season events are expected to generate relatively smaller attendances and trip-making. Thus, the discussion below focuses on a comparison of trip-making characteristics between a Met game and an MLS game.

The expectation is that the vast majority of MLS games (approximately 85 percent) would be played on a Saturday night and the remainder would be played on a weekday night (15 percent). MLS parking would occur primarily within parking facilities used by Met fans and would be supplemented by parking spaces to be provided within the park, likely under a section of the Van Wyck Expressway or other parking lots within Flushing Meadows-Corona Park. While the exact location and number of parking spaces to be provided within the park is not known at this time, the most recent information from MLS on the anticipated parking within the park and its planned use of Mets parking was used in the assessments discussed below.

Because MLS is expecting to start with a stadium with 25,000 seats and expand to one with 35,000 seats—both less than the capacity of CitiField—it is not expected that an MLS game would add more traffic to the roadway network than would a Met game. Traffic analyses being prepared for MLS by others indicate that the attendance would be approximately 90 percent of stadium capacity (22,500 fans for a 25,000 seat stadium; 31,500 fans for a 35,000 seat stadium) on a typical day, which would be within the 85th percentile attendance analyzed for conditions with a Met game. For the purposes of a conservative analysis, the assessments presented below are based on the construction of 35,000 seats in 2016. The auto and taxi share of MLS trips (estimated by MLS based on actual surveys of MLS games to range between 49 and 52 percent) is also expected to be lower than those for Met trips (62 percent per the Shea Stadium Redevelopment FEIS, 2001). For the average number of patrons per vehicle, MLS estimated that it would be the same as the Mets, at 2.7. MLS also estimated based on surveys that 55 percent of the arrivals on weekends and 65 percent of the arrivals on weekdays would occur during the peak arrival hour, as compared to 61 percent for the Met. So overall, an MLS event would generate fewer vehicle trips than would a Met game. Although traffic routes used by MLS fans will be similar to those used by Met fans, it is possible that MLS vehicular trip patterns will be slightly different from those for Met games since trip origins may be somewhat different and since some percentage of MLS fans will take routes to parking within Flushing Meadows-Corona Park that are not used by Met fans.

Although consideration of an MLS event would include less overall vehicular traffic than would a Met game, two sets of traffic assignments were conducted—one for just Met game-generated vehicle trips and the other for just MLS soccer-generated vehicle trips for both types of events for a weeknight arrival peak hour and for a weekend arrival peak hour. This was done so this SEIS could preliminarily identify which, if any, traffic analysis locations could possibly have more vehicle traffic in the baseline (No Action) condition due to differences in traffic routes

used to get to each venue, especially since MLS fans driving to a soccer game would, to some degree, park at locations within Flushing Meadows-Corona Park and therefore use routes that Met fans might not use en route to parking at CitiField. These sets of traffic assignments—and the conclusions reached—are preliminary, for the purposes of this SEIS, since they are based on preliminary information available at this time. Follow-up analyses will be conducted if updated information becomes available, potentially during the period between certification of this Draft SEIS and the Final SEIS. Based on the assessments presented below, for the majority of the traffic study area intersections, an MLS game would result in fewer vehicle trips than a Met game. However, based on the assessment of information available at this time, it is possible that higher traffic volumes could occur at up to nine study area intersections with an MLS game during peak arrival periods. These intersections could potentially incur worsened significant impacts with an MLS game in the background condition, or it is also possible that the magnitude of significant impacts identified earlier in this chapter would remain the same or could be lower with an MLS game. For those intersections that could operate at somewhat worsened conditions with an MLS event in the background instead of a Met game, it is possible that additional mitigation may be needed or it may be possible that one or more additional intersections could not be mitigated.

WEEKNIGHT PRE-GAME VEHICLE TRAFFIC ARRIVALS

Traffic assignments were prepared for the peak arrival hour for a weeknight Met game and for the peak arrival hour for a weeknight MLS game, and a comparison was made of traffic volumes for each traffic analysis location (intersection analysis locations and highway segments). The Met weeknight pregame traffic arrival peak hour (for a 7 PM start time) is 5:30 to 6:30PM; the MLS weeknight pregame traffic arrival peak hour (for a 7 PM expected start time) is expected to be somewhat later at 6:15 to 7:15PM. Overall, Met game vehicle trips are approximately 43 percent higher than MLS vehicle trips. Also, MLS games are only expected to occur on weeknights approximately three times per year. The detailed route-by-route, intersection-by-intersection trip assignments, however, show—in Phase 1A with a fully built 35,000 seat MLS stadium—that there could be up to nine intersections where background volumes for an MLS event are higher than those for a Met game, including the following:

- Northern Boulevard at Parsons Boulevard, Union Street, Main Street, and Prince Street
- Northern Boulevard westbound service road at College Point Boulevard
- Northern Boulevard at 126th Street
- College Point Boulevard at Roosevelt Avenue and at Sanford Avenue
- Roosevelt Avenue at 126th Street

There are three other intersections analyzed along Roosevelt Avenue west of CitiField—at 114th Street, 111th Street, and 108th Street—where the increase in traffic volumes with MLS is just one vehicle trip higher than for Met game nights; it is unlikely that this difference of just one vehicle trip would significantly change level of service, delay or significant traffic impact conclusions at these three intersections, where such an increase would represent less than 0.1 percent of the existing peak hour traffic volumes at these intersections. At some of the nine intersections cited above, the increase of vehicle trips between Met games and MLS games may occur for one specific traffic movement (e.g., left turns from westbound Roosevelt Avenue onto southbound College Point Boulevard) while the overall volumes through the intersection are higher for Met games than for MLS games. Therefore, the number of intersections with worsened conditions may be fewer than the nine intersections listed above.

As noted above, the preliminary volume comparison is based on the full 35,000 seat MLS stadium being built in 2016 (and is assumed to thus be in place by the proposed project's Phase 1A Build year) even though future MLS updates may confirm that only a 25,000 seat stadium would be in place by Phase 1A, in which case the magnitude of MLS-generated volumes would be lower and its volumes may exceed Met-generated volumes at fewer than the nine intersections listed above. For Phases 1B and 2, with the full 35,000 seat MLS stadium built, the comparison of vehicle trip assignments shows that the same nine intersections cited above could have volumes higher than on Met weeknight games.

Overall, MLS trips that are expected to arrive via the highway network are lower than Met trips arriving from the same origins via the highway network. However, due to the proposed MLS parking facilities located under a section of the Van Wyck Expressway or other parking lots within Flushing Meadows-Corona Park, three highway mainline segments and ramps analyzed for this SEIS would experience volumes higher than for a Met game: the southbound Van Wyck Expressway between Roosevelt Avenue and the LIE; the ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway; and the ramp from the southbound Whitestone Expressway to the southbound Van Wyck Expressway. These three highway elements do not carry any Met trips under existing conditions and are not expected to carry any Met trips under No Action or With Action conditions.

WEEKNIGHT POST-GAME VEHICLE TRAFFIC DEPARTURES

The weeknight post-game condition would generally occur much later at night, and only three times per year, when traffic generated by the proposed project would be much lower and background traffic volumes are much lower than in the peak hours analyzed in the FGEIS and in the SEIS. Therefore a weeknight post-game traffic analysis is not needed either for background conditions with an MLS game or with a Met game. As noted above, an MLS game would only occur approximately three times per year on a weeknight.

WEEKEND PRE-GAME VEHICLE TRAFFIC ARRIVALS

Traffic assignments were also prepared for the peak arrival hour for a weekend Met game and for the peak arrival hour for a weekend MLS game, and a comparison was made of traffic volumes for each traffic analysis location (intersection analysis locations and highway segments). Overall, Met game vehicle trips are approximately 47 percent higher than MLS vehicle trips. The detailed route-by-route, intersection-by-intersection trip assignments, however, show—in Phase 1A with a fully built 35,000 seat MLS stadium -- that there could be up to nine intersections where background volumes for an MLS event are higher than those for a Met game; these are the same locations listed above for weeknights.

As noted above for the weeknight pre-game condition, at some of the intersections, the increase of vehicle trips between Met games and MLS games may occur for one specific traffic movement (e.g., left turns from westbound Roosevelt Avenue onto southbound College Point Boulevard) while the overall volumes through the intersection are higher for Met games than for MLS games. Therefore, the number of intersections with worsened conditions may be less than the nine intersections listed above.

Overall, MLS trips that are expected to arrive via the highway network are lower than Met trips arriving from the same origins via the highway network. However, due to the proposed MLS parking facilities located under a section of the Van Wyck Expressway or other parking lots within Flushing Meadows-Corona Park, three highway mainline segments and ramps analyzed for this SEIS would experience volumes higher than for a Met game: the southbound Van Wyck

Expressway between Roosevelt Avenue and the LIE; the ramp from the northbound Whitestone Expressway to the southbound Van Wyck Expressway; and the ramp from the southbound Whitestone Expressway to the southbound Van Wyck Expressway. These three highway elements do not carry any Met trips under existing conditions and are not expected to carry any Met trips under No Action or With Action conditions.

WEEKEND POST-GAME VEHICLE TRAFFIC DEPARTURES

The weekend post-game condition would generally occur much later at night as was noted above for weeknight post-game conditions, when traffic generated by the proposed project would be much lower and background traffic conditions are also much lower than in the peak hours analyzed in the FGEIS and in the SEIS. Therefore a weekend post-game traffic analysis is not needed either for background conditions with an MLS game or with a Met game.

LEVELS OF SERVICE AND THE POTENTIAL FOR ADDITIONAL OR WORSENED SIGNIFICANT TRAFFIC IMPACTS

For conditions with a Met game, previous sections of this chapter indicate that eight of the nine intersections identified above would be significantly impacted in Phases 1A and 1B of the proposed project; during Phase 2 of the proposed project, all nine would be significantly impacted on Met game nights. These intersections could potentially incur worsened significant impacts with an MLS game in the background condition, or it is also possible that the magnitude of significant impacts identified earlier in this chapter would remain the same or could be lower with an MLS game. As described in Chapter 21, "Mitigation", several of these intersections can be mitigated using standard traffic capacity improvements such as signal timing changes, parking regulation modifications, lane re-striping, geometric improvements, or other measures for conditions with a Met game as part of the background condition. For those intersections that could operate at somewhat worsened conditions with an MLS event in the background instead of a Met game, it is possible that additional mitigation may be needed or it may be possible that one or more additional intersections could not be mitigated. An updated analysis of these intersections will be conducted if updated MLS information becomes available, potentially during the period between certification of this Draft SEIS and the Final SEIS.

If more information is available, the traffic assignments conducted for this Draft SEIS will be reviewed and updated if necessary, and a full level of service impact analysis will be conducted for locations where volumes with MLS would significantly exceed those with a Met game, on weekends, to determine whether new impacts or worsened impacts could be expected under future baseline conditions with an MLS stadium. A weeknight pregame traffic level of service analysis would not be needed since it is expected that MLS will have games on only three weeknights of the year.

TRANSIT AND PEDESTRIANS

For transit use, the current projections prepared for MLS show approximately 45 percent higher peak hour usage of the Mets-Willets Point subway station for weekday and weekend arrival than accounted for Met games in this Draft SEIS's transit analysis. At the station's street-level stairways on the north side of Roosevelt Avenue, although significant adverse impacts have been identified, they would not be exacerbated by an MLS event since all of its trip-making through this station would be directed to the south end of the station. The MLS pedestrian movements would be facilitated by the station's southern connection to the passerelle, similar to what would occur during the US Open at the National Tennis Center. However, there would be more projected subway riders at the station elements connecting to the No. 7 train platforms (i.e.,

stairways, ramps, and control areas) during the peak arrival hour to an MLS game than to a Met game. Based on the impact analysis conducted for these station elements, no significant adverse impacts were identified with Met trips assumed in the future No Action background. It is expected that the higher MLS trips would not result in new impacts on the Manhattan-bound ramps and turnstiles during these peak arrival periods. However, at the Queens-bound stairways and connecting turnstiles, the higher background volumes from the MLS could result in the potential for new significant adverse impacts that would not otherwise occur with the Mets. Between the Draft and Final SEIS, if more updated information from the MLS study becomes available, it will be used to examine the potential for significant adverse impacts at these station elements. If impacts are identified, improvement measures, such as stairway widenings, will be explored to mitigate these impacts to the extent practicable. If no feasible measures can be identified at that time, these impacts will be disclosed as unmitigatable. In addition, as discussed in Section I, "Scope of Analysis (Transit and Pedestrians)," NYCT's potential future reconfiguration of the Mets-Willets Point subway station to maintain a single set of fare zone condition for game-day and non-game day operations could alter the circulation path of MLS patrons through the station, possibly via more constrained station elements. This potentially more congested background condition overlaid with project-generated trips could result in worse or new significant adverse impacts at the existing and future station elements. Accordingly, potential improvement measures will be explored to mitigate these impacts to the extent practicable. If no feasible measures can be identified at that time, these impacts will likewise be disclosed as unmitigatable.

With regard to pedestrian conditions analyzed in this Draft SEIS, an MLS game may also result in increased volumes at some of the study area pedestrian analysis locations. As discussed above, all MLS trips made to the Mets-Willets Point subway station would be directed onto the passerelle and would not affect on-street elements in the pedestrian study area. MLS's projected higher travel by City buses would also have minimal effects (Q48 passengers only along Roosevelt Avenue) since this would still be a very small percentage of MLS's overall trip-making. Its walk-only trips would largely be limited to locations near the MLS stadium, outside of this Draft SEIS's pedestrian study area. The only travel that could potentially have an effect on the study area pedestrian elements would be related to auto trips accommodated in Met parking facilities and walking via the passerelle to the MLS stadium. For those parking in Southfield/Lot D, they would not traverse the study area pedestrian elements. Hence, during Phase 1B and Phase 2 of the proposed project, with all MLS parkers accommodated within parking near the MLS stadium and within parking in Southfield/Lot D, a background condition with a Met game would be conservatively representative for evaluating potential impacts at this Draft SEIS's pedestrian study area.

During Phase 1A when approximately 2,750 parking spaces would be provided in the interim parking lots within the District, Met and MLS parkers would need to walk at-grade for part of their trips to CitiField or the MLS stadium. The numbers of vehicles arriving at the District's interim parking lots during the Met weekday pre-game and weekend pre-game peak hours were estimated at approximately 1,500. Based on MLS's current projections, the corresponding numbers of MLS parkers during these arrival periods would be approximately 1,750. At 2.7 persons per vehicle, the Met arrivals during the weekday pre-game and weekend pre-game peak hours would yield approximately 4,000 pedestrians, who would need to cross 126th Street to get to CitiField. The corresponding numbers of MLS pedestrians during these arrival periods, also at 2.7 persons per vehicle, would be approximately 4,700. On Met game days, traffic control officers are present to facilitate vehicular and pedestrian flow and to minimize conflicts at

strategic locations. For those parking at the District's interim parking lots during Phase 1A, pedestrians crossing 126th Street between 34th and Roosevelt Avenues are expected to be managed by these traffic control officers. Game-day management of patrons parking at the District's interim parking lots is expected to be comparable on an MLS game day. After crossing over to the west side of 126th Street, however, the MLS patrons would be expected to either use the pedestrian plaza adjacent to CitiField and Willets West or along the north side of Roosevelt Avenue to walk to the grand stairs connecting to the Mets-Willets Point subway station. As with Met game days, crossing Roosevelt Avenue at this location is restricted by traffic control officers. Therefore, these MLS patrons would be expected then to walk up the grand stairs, through the station, and continue south onto the passerelle, or as noted above via other existing or new station circulation elements.

As discussed above, crossing 126th Street between 34th and Roosevelt Avenues would be managed by traffic control officers and the slightly higher pedestrian volumes associated with the MLS parkers would not be expected to materially affect how the game-day management here would take place. However, at Roosevelt Avenue, an MLS game could result in more pedestrian trips at the 126th Street north crosswalk and on the north sidewalk of Roosevelt Avenue between 126th Street and the Mets-Willets Point subway station. Under Phase 1A, neither of these pedestrian elements was determined to incur significant adverse pedestrian impacts. If new information on the MLS project becomes available between the Draft and Final SEIS regarding the phased construction of the MLS stadium, it will be used to examine if new significant adverse pedestrian impacts could potentially occur at these locations. Where appropriate, mitigation measures similar to those presented in this Draft SEIS will be explored to address these impacts to the extent practicable, and where pedestrian impacts cannot be feasibly mitigated, they will be disclosed as unmitigatable.

Detailed Intersection Level of Service Tables

TABLE 1
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2012 EXISTING TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
SIGNALIZED INTERSECTIONS																	
ASTORIA BOULEVARD																	
108th Street at Astoria Boulevard																	
108th Street	NB	DefL	0.61	47.9	D	DefL	0.32	23.3	C	DefL	0.42	40.7	D	DefL	0.39	24.5	C
		T	0.19	35.1	D	T	0.09	19.7	B	T	0.17	34.8	C	T	0.16	20.5	C
	SB	LTR	0.31	37.5	D	LTR	0.13	20.1	C	LTR	0.32	37.6	D	LTR	0.21	21.0	C
Astoria Boulevard	EB	TR	0.54	24.5	C	TR	0.73	26.1	C	TR	0.84	24.9	C	TR	0.84	28.0	C
	WB	L	0.51	13.0	B	L	0.61	22.7	C	L	0.68	42.8	D	L	0.53	21.9	C
		TR	0.73	7.3	A	TR	0.29	12.0	B	TR	0.30	9.4	A	TR	0.32	12.2	B
Overall Intersection		-	**0.70**	**15.9**	**B**	-	**0.59**	**21.2**	**C**	-	**0.71**	**23.8**	**C**	-	**0.64**	**22.3**	**C**
NORTHERN BOULEVARD																	
108th Street at Northern Boulevard (RT. 25A)																	
108th Street	NB	LTR	1.03	72.6	E	LTR	1.00	62.3	E	LTR	1.00	64.5	E	LTR	0.97	59.9	E
	SB	LTR	0.82	58.1	E	LTR	0.74	49.9	D	LTR	0.93	58.6	E	LTR	0.76	50.8	D
Northern Boulevard (Rt. 25A)	EB	L	0.07	16.2	B	L	0.06	16.7	B	L	0.12	22.7	C	L	0.15	29.2	C
		TR	0.65	17.8	B	TR	0.73	22.2	C	TR	0.75	11.9	B	TR	0.81	24.3	C
	WB	L	0.33	14.8	B	L	0.48	26.2	C	L	0.51	30.9	C	L	0.51	30.8	C
		TR	0.92	15.5	B	TR	0.81	24.5	C	TR	0.96	26.8	C	TR	1.02	39.3	D
Overall Intersection		-	**0.83**	**22.2**	**C**	-	**0.87**	**29.1**	**C**	-	**0.91**	**24.7**	**C**	-	**0.90**	**35.9**	**D**
114th Street at Northern Boulevard (RT. 25A)																	
114th Street	SB	LTR	0.45	47.1	D	LTR	0.37	43.9	D	LTR	0.38	45.5	D	LTR	0.35	43.3	D
Northern Boulevard (Rt. 25A)	EB	T	0.70	33.8	C	T	0.63	21.7	C	T	0.99	24.0	C	T	0.58	20.7	C
		R	0.66	34.9	C	R	0.37	18.0	B	R	0.74	15.5	B	R	0.51	20.6	C
	WB	LT	1.01	25.6	C	DefL	0.40	10.6	B	DefL	0.82	48.7	D	DefL	0.58	12.0	B
		-	-	-	-	T	0.59	9.8	A	T	0.77	11.7	B	T	0.84	14.5	B
Overall Intersection		-	**0.90**	**28.8**	**C**	-	**0.94**	**16.2**	**B**	-	**1.33**	**19.9**	**B**	-	**1.11**	**17.6**	**B**
126th Street at Northern Boulevard (RT. 25A)																	
126th Street	NB	L	0.17	39.6	D	L	0.33	41.8	D	L	0.27	40.9	D	L	0.34	41.9	D
		R	0.25	40.9	D	R	0.29	41.6	D	R	0.26	40.9	D	R	0.32	41.8	D
Northern Boulevard	EB	T	0.17	6.0	A	T	0.25	6.5	A	T	0.30	6.8	A	T	0.24	6.4	A
	WB	T	0.57	9.5	A	T	0.23	6.4	A	T	0.30	6.9	A	T	0.23	6.3	A
Grand Central Parkway Ramp	EB	T	0.34	7.2	A	T	0.29	6.8	A	T	0.38	7.5	A	T	0.32	7.0	A
Van Wyck & Whitestone Expressway Ramp	WB	T	1.05	85.4	F	T	0.71	14.3	B	T	0.84	19.9	B	T	0.70	13.6	B
Overall Intersection		-	**0.86**	**34.9**	**C**	-	**0.62**	**13.1**	**B**	-	**0.71**	**13.8**	**B**	-	**0.62**	**13.1**	**B**
Prince Street at Northern Boulevard (RT. 25A)																	
Prince Street	NB	LTR	1.04	88.7	F	LTR	1.05	73.2	E	LTR	1.05	75.0	E	LTR	1.05	72.2	E
	SB	LTR	0.75	51.3	D	LTR	0.51	40.6	D	LTR	0.49	41.0	D	LTR	0.44	36.3	D
Northern Boulevard (Rt. 25A)	EB	L	0.91	83.9	F	L	0.85	67.1	E	L	0.58	44.8	D	L	0.63	48.4	D
		T	0.60	17.4	B	T	0.64	23.6	C	T	0.73	25.4	C	T	0.75	26.0	C
	WB	L	0.82	72.7	E	L	0.80	76.7	E	L	0.74	65.9	E	L	0.76	60.6	E
		T	0.96	27.1	C	T	0.79	32.5	C	T	0.79	34.6	C	T	0.86	34.7	C
Northern Boulevard Service Rd.	EB	TR	0.30	14.2	B	TR	0.39	20.8	C	TR	0.41	21.1	C	TR	0.47	22.1	C
	WB	TR	0.57	17.2	B	TR	0.60	30.7	C	TR	0.56	31.6	C	TR	0.63	30.7	C
Overall Intersection		-	**0.97**	**31.0**	**C**	-	**0.88**	**35.3**	**D**	-	**0.83**	**34.5**	**C**	-	**0.87**	**34.9**	**C**
Main Street at Northern Boulevard (RT. 25A)																	
Main Street	NB	L	0.43	34.5	C	L	0.43	34.4	C	L	0.40	33.9	C	L	0.45	34.8	C
		R	0.78	47.0	D	R	0.63	36.9	D	R	0.86	55.3	E	R	0.83	53.9	D
Northern Boulevard (Rt 25A)	EB	T	0.70	28.2	C	T	0.66	27.1	C	T	0.80	26.2	C	T	0.68	27.3	C
		R	0.81	39.2	D	R	0.87	42.6	D	R	0.85	36.5	D	R	1.03	68.0	E
Northern Boulevard (Rt 25A)	WB	L	0.16	26.3	C	L	0.10	25.6	C	L	0.16	26.7	C	L	0.08	25.1	C
		T	0.95	19.8	B	T	0.67	20.5	C	T	0.68	20.7	C	T	0.84	24.5	C
Overall Intersection		-	**0.80**	**26.5**	**C**	-	**0.76**	**27.8**	**C**	-	**0.85**	**27.7**	**C**	-	**0.94**	**33.2**	**C**
Union Street at Northern Boulevard (RT. 25A)																	
Union Street	NB	TR	0.59	32.9	C	TR	0.62	33.6	C	TR	0.66	34.4	C	TR	0.62	33.6	C
	SB	TR	0.83	38.9	D	TR	0.50	31.1	C	TR	0.75	36.5	D	TR	0.59	32.9	C
Northern Boulevard (Rt. 25A)	EB	L	0.89	53.7	D	L	0.48	19.3	B	L	0.72	33.5	C	L	0.69	30.8	C
		TR	0.88	38.0	D	TR	0.88	38.5	D	TR	0.83	33.3	C	TR	1.01	47.6	D
	WB	L	0.79	32.9	C	L	0.73	32.3	C	L	0.65	31.4	C	L	0.60	28.3	C
		TR	0.89	34.5	C	TR	0.74	34.4	C	TR	0.84	36.7	D	TR	0.93	39.2	D
Overall Intersection		-	**0.87**	**36.6**	**D**	-	**0.79**	**34.7**	**C**	-	**0.82**	**34.8**	**C**	-	**0.84**	**39.8**	**D**
Parsons Boulevard at Northern Boulevard (RT. 25A)																	
Parsons Boulevard	NB	L	0.85	68.4	E	L	0.61	47.9	D	L	0.74	56.2	E	L	0.71	53.4	D
		TR	0.53	38.9	D	TR	0.49	38.1	D	TR	0.47	34.7	C	TR	0.57	39.9	D
	SB	LTR	0.75	43.5	D	LTR	1.02	62.1	E	LTR	1.04	65.3	E	LTR	1.04	67.3	E
Northern Boulevard (Rt. 25A)	EB	L	0.50	43.3	D	L	0.64	44.9	D	L	0.40	40.0	D	L	0.44	44.1	D
		TR	0.90	37.6	D	TR	0.86	34.7	C	TR	0.82	27.9	C	TR	0.94	37.2	D
	WB	L	0.38	30.3	C	L	0.29	27.1	C	L	0.36	33.1	C	L	0.44	37.5	D
		TR	1.02	42.7	D	TR	1.00	42.5	D	TR	0.96	38.3	D	TR	1.03	48.5	D
Overall Intersection		-	**0.97**	**42.0**	**D**	-	**0.98**	**41.7**	**D**	-	**0.94**	**37.3**	**D**	-	**1.05**	**45.8**	**D**
34TH AVENUE																	
114th Street at 34th Avenue																	
114th Street	SB	L	0.74	33.5	C	L	0.70	34.6	C	L	0.88	42.7	D	L	0.85	42.7	D
		T	0.30	24.4	C	T	0.22	23.9	C	T	0.38	25.7	C	T	0.32	25.1	C
34th Avenue	EB	TR	0.42	11.7	B	TR	0.38	11.2	B	TR	0.36	11.0	B	TR	0.54	13.2	B
Overall Intersection		-	**0.53**	**21.7**	**C**	-	**0.49**	**22.1**	**C**	-	**0.54**	**27.6**	**C**	-	**0.65**	**25.4**	**C**
126th Street/GCP Ramp at 34th Avenue																	
126th Street	NB	-	-	-	-	-	-	-	-	DefL	0.31	22.8	C	-	-	-	-
		LTR	0.13	19.4	B	LTR	0.20	20.2	C	TR	0.19	20.2	C	LTR	0.21	20.4	C
Northern Boulevard Ramp	SB	LTR	0.25	21.3	C	LTR	0.30	22.1	C	LTR	0.21	20.8	C	LTR	0.29	22.0	C
GCP Ramp	SB	LTR	0.57	50.1	D	LTR	0.60	51.2	D	LTR	0.55	49.5	D	LTR	0.63	52.4	D
Shea Road	EB	LTR	0.45	42.7	D	LTR	0.53	44.2	D	LTR	0.42	42.1	D	LTR	0.59	45.5	D
34th Avenue	WB	LTR	0.60	51.1	D	LTR	0.60	50.8	D	LTR	0.91	78.3	E	LTR	0.74	59.8	E
Overall Intersection		-	**0.41**	**36.2**	**D**	-	**0.44**	**35.5**	**D**	-	**0.52**	**39.7**	**D**	-	**0.49**	**37.3**	**D**

TABLE 1
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2012 EXISTING TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE																	
108th Street at Roosevelt Avenue																	
108th Street	NB	LTR	0.91	57.5	E	LTR	0.91	58.8	E	LTR	0.96	59.0	E	LTR	1.03	69.3	E
	SB	LTR	0.95	60.8	E	LTR	1.03	70.1	E	LTR	1.03	67.9	E	LTR	1.00	59.8	E
Roosevelt Avenue	EB	LTR	0.49	11.6	B	LTR	0.54	12.7	B	LTR	0.57	6.4	A	LTR	0.55	12.5	B
	WB	LTR	0.69	7.1	A	LTR	0.63	14.1	B	LTR	0.60	12.0	B	LTR	0.63	12.0	B
	Overall Intersection	-	**0.76**	**26.3**	**C**	-	**0.74**	**32.1**	**C**	-	**0.71**	**30.3**	**C**	-	**0.74**	**31.9**	**C**
111th Street at Roosevelt Avenue																	
111th Street	NB	LTR	0.94	57.7	E	LTR	0.69	48.9	D	LTR	0.81	52.8	D	LTR	0.99	60.9	E
Roosevelt Avenue	EB	LTR	0.48	11.4	B	LTR	0.48	11.1	B	LTR	0.59	6.4	A	LTR	0.64	14.2	B
	WB	LTR	0.79	9.6	A	LTR	0.65	14.7	B	LTR	0.94	24.9	C	LTR	0.98	27.7	C
	Overall Intersection	-	**0.83**	**20.9**	**C**	-	**0.66**	**19.6**	**B**	-	**0.90**	**23.8**	**C**	-	**0.98**	**29.5**	**C**
114th Street at Roosevelt Avenue																	
114th Street	NB	LTR	0.96	59.7	E	LTR	0.67	48.7	D	LTR	0.93	54.4	D	LTR	0.96	58.5	E
	SB	LTR	0.98	63.7	E	LTR	0.63	49.4	D	LTR	1.03	68.6	E	LTR	1.04	71.3	E
Roosevelt Avenue	EB	LTR	0.60	14.1	B	LTR	0.61	14.2	B	LTR	0.68	8.2	A	LTR	0.91	24.6	C
	WB	LTR	0.47	4.6	A	LTR	0.36	9.4	A	LTR	0.57	12.0	B	LTR	0.58	12.0	B
	Overall Intersection	-	**0.71**	**22.8**	**C**	-	**0.62**	**20.5**	**C**	-	**0.78**	**24.2**	**C**	-	**0.95**	**29.6**	**C**
126th Street at Roosevelt Avenue																	
126th Street	NB	LTR	0.21	36.9	D	LTR	0.84	58.4	E	LTR	0.61	50.2	D	LTR	0.33	39.7	D
	SB	DefL	0.70	56.4	E	DefL	0.63	53.8	D	DefL	0.66	49.3	D	DefL	0.72	53.8	D
		TR	0.63	50.9	D	TR	0.60	49.9	D	TR	0.62	46.4	D	TR	0.50	43.0	D
Roosevelt Avenue	EB	LTR	0.40	10.0	A	LTR	0.35	9.4	A	LTR	0.49	4.9	A	LTR	0.50	11.2	B
	WB	LTR	0.47	4.7	A	LTR	0.33	9.1	A	LTR	0.38	9.6	A	LTR	0.36	9.3	A
	Overall Intersection	-	**0.53**	**17.6**	**B**	-	**0.49**	**23.0**	**C**	-	**0.53**	**19.2**	**B**	-	**0.56**	**20.3**	**C**
College Point Boulevard at Roosevelt Avenue																	
College Point Boulevard	NB	L	0.55	34.6	C	L	0.66	37.0	D	L	0.66	48.6	D	L	0.77	43.7	D
		TR	0.51	22.0	C	TR	0.67	22.5	C	TR	0.60	26.7	C	TR	0.76	24.4	C
	SB	TR	0.58	33.7	C	TR	0.67	30.2	C	TR	0.70	39.1	D	TR	0.69	29.8	C
Roosevelt Avenue	EB	L	0.19	34.7	C	L	0.31	26.4	C	L	0.32	34.0	C	L	0.40	18.9	B
		TR	0.71	33.2	C	TR	0.96	33.6	C	TR	0.96	40.1	D	TR	0.99	36.6	D
	WB	L	0.21	45.0	D	L	0.25	33.0	C	L	0.22	43.2	D	L	0.31	33.8	C
		TR	0.57	40.8	D	TR	0.34	24.8	C	TR	0.32	33.3	C	TR	0.37	24.9	C
	Overall Intersection	-	**0.73**	**31.5**	**C**	-	**0.90**	**28.6**	**C**	-	**0.90**	**36.1**	**D**	-	**0.95**	**29.4**	**C**
Prince Street at Roosevelt Avenue																	
Prince Street	SB	LTR	0.45	29.4	C	LTR	0.66	34.5	C	LTR	0.50	30.1	C	LTR	0.78	38.1	D
Roosevelt Avenue	EB	-	-	-	-	-	-	-	-	DefL	0.49	20.4	C	-	-	-	-
		LTR	0.41	18.2	B	LTR	0.44	9.9	A	TR	0.58	22.0	C	LTR	0.49	10.3	B
	WB	LTR	0.73	24.7	C	LTR	0.38	9.9	A	LTR	0.46	18.4	B	LTR	0.46	10.8	B
	Overall Intersection	-	**0.61**	**23.3**	**C**	-	**0.51**	**16.1**	**B**	-	**0.54**	**22.9**	**C**	-	**0.58**	**17.4**	**B**
Main Street at Roosevelt Avenue																	
Main Street	NB	T	0.55	21.2	C	T	0.62	23.3	C	T	0.47	20.3	C	T	0.71	24.9	C
	SB	T	0.41	19.0	B	T	0.48	21.1	C	T	0.50	21.0	C	T	0.61	23.0	C
Roosevelt Avenue	EB	LTR	0.60	37.5	D	LTR	0.75	34.5	C	LTR	0.97	79.1	E	LTR	0.83	38.3	D
	WB	LTR	0.89	48.7	D	LTR	0.72	29.5	C	LTR	0.95	59.4	E	LTR	0.70	26.0	C
	Overall Intersection	-	**0.69**	**30.6**	**C**	-	**0.68**	**26.0**	**C**	-	**0.69**	**39.3**	**D**	-	**0.77**	**27.0**	**C**
Union Street at Roosevelt Avenue																	
Union Street	NB	TR	0.53	18.5	B	TR	0.48	17.6	B	TR	0.36	15.9	B	TR	0.49	17.8	B
	SB	LT	0.87	28.5	C	LT	0.65	21.3	C	LT	0.71	22.5	C	LT	0.79	24.5	C
		R	0.33	15.7	B	R	0.43	19.8	B	R	0.49	20.8	C	R	0.45	18.8	B
Roosevelt Avenue	EB	LTR	0.67	26.2	C	LTR	0.61	23.8	C	LTR	0.60	22.6	C	LTR	0.75	27.0	C
	WB	LT	0.87	32.8	C	LT	0.48	22.2	C	LT	0.47	22.2	C	LT	0.45	21.6	C
		R	0.78	34.1	C	R	0.43	24.5	C	R	0.64	35.2	D	R	0.69	41.7	D
	Overall Intersection	-	**0.87**	**26.3**	**C**	-	**0.63**	**21.0**	**C**	-	**0.68**	**21.9**	**C**	-	**0.77**	**23.7**	**C**
Parsons Boulevard at Roosevelt Avenue																	
Parsons Boulevard	NB	LTR	1.02	51.6	D	LTR	0.55	21.6	C	LTR	0.72	31.4	C	LTR	0.72	25.8	C
	SB	LTR	0.77	32.4	C	LTR	0.61	22.5	C	LTR	0.67	29.2	C	LTR	0.75	25.5	C
Roosevelt Avenue	EB	LTR	0.44	24.4	C	LTR	0.48	20.7	C	LTR	0.42	24.1	C	LTR	0.64	23.9	C
	WB	LTR	0.99	44.0	D	LTR	0.61	23.9	C	LTR	0.65	29.9	C	LTR	0.72	26.9	C
	Overall Intersection	-	**1.01**	**39.8**	**D**	-	**0.61**	**22.2**	**C**	-	**0.68**	**29.2**	**C**	-	**0.73**	**25.5**	**C**
KISSENA BOULEVARD																	
Main Street at Kissena Boulevard																	
Main Street	NB	L	0.64	27.7	C	L	0.63	29.4	C	L	0.59	27.0	C	L	0.89	53.5	D
		TR	0.65	23.8	C	TR	0.59	21.3	C	TR	0.55	21.5	C	TR	0.65	22.3	C
	SB	L	0.62	36.7	D	L	0.44	19.9	B	L	0.80	47.1	D	L	0.52	21.3	C
		TR	0.36	18.0	B	TR	0.48	18.8	B	TR	0.42	18.7	B	TR	0.53	19.5	B
Kissena Boulevard	WB	T	0.70	36.5	D	T	0.69	25.6	C	T	0.63	34.2	C	T	0.71	25.6	C
	Overall Intersection	-	**0.67**	**26.1**	**C**	-	**0.66**	**21.7**	**C**	-	**0.68**	**27.1**	**C**	-	**0.80**	**24.8**	**C**
SANFORD AVENUE																	
College Point Boulevard at Sanford Avenue																	
College Point Boulevard	NB	L	0.15	9.0	A	L	0.34	12.6	B	L	0.20	10.7	B	L	0.37	14.4	B
		T	0.43	10.9	B	T	0.46	11.2	B	T	0.43	10.9	B	T	0.56	12.4	B
	SB	TR	0.42	10.9	B	TR	0.56	12.5	B	TR	0.64	13.5	B	TR	0.69	14.3	B
Sanford Avenue	WB	L	0.71	40.1	D	L	0.54	33.6	C	L	0.63	37.2	D	L	0.65	37.1	D
		TR	0.52	29.2	C	TR	0.34	26.5	C	TR	0.33	26.4	C	TR	0.47	28.5	C
	Overall Intersection	-	**0.52**	**17.4**	**B**	-	**0.55**	**15.2**	**B**	-	**0.63**	**15.9**	**B**	-	**0.68**	**17.1**	**B**
Union Street at Sanford Avenue																	
Union Street	NB	LTR	0.64	27.8	C	LTR	0.26	19.5	B	LTR	0.26	19.5	B	LTR	0.34	20.7	C
	SB	LTR	0.55	23.3	C	LTR	0.50	22.0	C	LTR	0.63	24.0	C	LTR	0.64	24.4	C
Sanford Avenue	EB	DefL	0.48	21.7	C	DefL	0.33	17.0	B	-	-	-	-	DefL	0.38	18.0	B
		TR	0.27	14.4	B	TR	0.17	13.3	B	LTR	0.24	13.9	B	TR	0.30	14.9	B
	WB	LTR	0.82	25.0	C	LTR	0.80	24.4	C	LTR	0.58	19.4	B	LTR	0.79	24.0	C
	Overall Intersection	-	**0.74**	**23.4**	**C**	-	**0.66**	**21.5**	**C**	-	**0.60**	**20.3**	**C**	-	**0.72**	**22.1**	**C**

TABLE 1
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2012 EXISTING TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue																	
Parsons Boulevard	NB	LTR	1.05	50.0	D	LTR	1.04	50.7	D	LTR	0.82	28.9	C	LTR	0.85	30.3	C
	SB	LTR	0.90	31.2	C	LTR	0.67	23.9	C	LTR	0.73	25.4	C	LTR	0.80	27.2	C
Sanford Avenue	EB	LTR	0.60	22.9	C	LTR	0.47	20.3	C	LTR	0.59	22.6	C	LTR	0.63	23.2	C
	WB	LTR	0.74	26.5	C	LTR	0.72	25.5	C	LTR	0.64	23.9	C	LTR	0.75	26.5	C
Overall Intersection		-	**0.90**	**33.7**	**C**	-	**0.88**	**31.3**	**C**	-	**0.73**	**25.4**	**C**	-	**0.80**	**26.9**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE																	
College Point Boulevard at 32nd Avenue																	
College Point Boulevard	NB	T	0.41	23.5	C	T	0.71	30.4	C	T	0.44	24.4	C	T	0.33	22.9	C
		TR	0.55	27.2	C	TR	0.55	27.0	C	TR	0.57	27.2	C	TR	0.60	27.9	C
	SB	L	0.48	35.9	D	L	0.71	45.5	D	L	0.46	33.8	C	L	0.50	35.1	D
		T	0.47	11.3	B	T	0.39	10.4	B	T	0.36	10.1	B	T	0.33	9.8	A
32nd Avenue	WB	LTR	0.82	40.0	D	LTR	0.74	37.5	D	LTR	0.84	40.3	D	LTR	0.50	31.0	C
Overall Intersection		-	**1.37**	**22.3**	**C**	-	**1.26**	**25.9**	**C**	-	**1.12**	**23.3**	**C**	-	**1.03**	**21.6**	**C**
NORTHERN BOULEVARD SERVICE ROAD																	
College Point Boulevard at Northern Boulevard Service Road																	
College Point Boulevard	NB	TR	0.36	11.2	B	TR	0.43	11.9	B	TR	0.43	11.9	B	TR	0.47	12.3	B
	SB	LT	0.68	16.3	B	LT	0.64	15.4	B	LT	0.65	15.6	B	LT	0.61	14.9	B
Northern Blvd Service Rd	WB	LR	0.67	31.7	C	LR	0.66	31.4	C	LR	0.61	30.1	C	LR	0.57	29.0	C
Overall Intersection		-	**0.68**	**17.3**	**B**	-	**0.65**	**16.8**	**B**	-	**0.64**	**16.5**	**B**	-	**0.59**	**16.1**	**B**
STADIUM ROAD																	
Boat Basin Road at Stadium Road																	
Boat Basin Road	NB	LTR	0.08	7.3	A	LTR	0.07	7.2	A	LTR	0.05	7.1	A	LTR	0.08	7.2	A
	SB	-	-	-	-	DefL	0.26	9.1	A	-	-	-	-	DefL	0.19	8.3	A
		LTR	0.37	9.5	A	TR	0.17	8.0	A	LTR	0.21	8.1	A	TR	0.15	7.8	A
Stadium	WB	LTR	0.22	25.7	C	LTR	0.18	25.2	C	LTR	0.28	26.2	C	LTR	0.26	26.0	C
Overall Intersection		-	**0.32**	**12.7**	**B**	-	**0.23**	**12.4**	**B**	-	**0.24**	**14.7**	**B**	-	**0.21**	**14.3**	**B**
UNSIGNALIZED INTERSECTIONS																	
Willets Point Boulevard at 126th Street																	
126th Street	SB	LT	-	8.0	A	LT	-	8.0	A	LT	-	8.0	A	LT	-	8.3	A
Willets Point Boulevard	WB	LR	-	10.3	B	LR	-	11.0	B	LR	-	12.5	B	LR	-	13.2	B
Overall Intersection		-	-	**9.6**	**A**	-	-	**9.9**	**A**	-	-	**10.7**	**B**	-	-	**12.3**	**B**
Boat Basin Road at Worlds Fair Marina																	
Boat Basin Road	NB	L	-	34.7	D	L	-	18.2	C	L	-	15.6	C	L	-	16.1	C
		R	-	8.7	A	R	-	8.4	A	R	-	8.7	A	R	-	8.6	A
Worlds Fair Marina	WB	LT	-	8.8	A	LT	-	8.2	A	LT	-	7.8	A	LT	-	7.9	A
Overall Intersection		-	-	**9.8**	**A**	-	-	**9.3**	**A**	-	-	**8.9**	**A**	-	-	**9.6**	**A**
Willets Point Boulevard at Northern Boulevard																	
Willets Point Boulevard	NB	TR	-	10.2	B	TR	-	10.5	B	TR	-	9.8	A	TR	-	9.1	A
Overall Intersection		-	-	**10.2**	**B**	-	-	**10.5**	**B**	-	-	**9.8**	**A**	-	-	**9.1**	**A**
Boat Basin Road at Stadium Road / Citifield Entrance 8																	
Citifield Entrance 8	NB	T	-	10.5	B	T	-	11.3	B	T	-	10.6	B	T	-	11.9	B
Boat Basin Road	SB	LT	-	11.3	B	LT	-	11.3	B	LT	-	11.2	B	LT	-	-	-
Stadium Road	EB	LT	-	7.4	A	LT	-	7.4	A	LT	-	7.4	A	LT	-	7.5	A
Overall Intersection		-	-	**8.5**	**A**	-	-	**8.7**	**A**	-	-	**9.1**	**A**	-	-	**7.5**	**A**
Grand Central Parkway Ramp at West Park Loop/Stadium Road																	
Grand Central Parkway Off-Ramp	EB	L	-	11.2	B	L	-	10.1	B	L	-	10.5	B	L	-	11.0	B
		R	-	9.3	A	R	-	8.7	A	R	-	9.3	A	R	-	9.2	A
Overall Intersection		-	-	**10.9**	**B**	-	-	**9.8**	**A**	-	-	**10.0**	**A**	-	-	**10.6**	**B**

Notes
(1): Control delay is measured in seconds per vehicle.
(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

TABLE 2
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2012 EXISTING TRAFFIC LEVELS OF SERVICE - GAME DAY

INTERSECTION & APPROACH		Weekday Pre-Game (5:30 - 6:30 PM) Mvt.	V/C	Control Delay	LOS	Saturday Pre-Game (3:15 - 4:15 PM) Mvt.	V/C	Control Delay	LOS	Saturday Post-Game (7:15 - 8:15 PM) Mvt.	V/C	Control Delay	LOS
SIGNALIZED INTERSECTIONS													
ASTORIA BOULEVARD													
108th Street at Astoria Boulevard													
108th Street	NB	DefL	0.54	44.7	D	DefL	0.37	24.0	C	DefL	0.42	25.0	C
		T	0.24	36.1	D	T	0.16	20.5	C	T	0.18	20.7	C
	SB	LTR	0.29	36.9	D	LTR	0.18	20.7	C	LTR	0.15	20.3	C
Astoria Boulevard	EB	TR	1.00	30.8	C	TR	0.67	25.0	C	TR	0.61	24.0	C
	WB	L	0.70	46.2	D	L	0.69	26.8	C	L	0.79	32.3	C
		TR	0.26	9.0	A	TR	0.26	11.6	B	TR	0.27	11.7	B
Overall Intersection		-	**0.84**	**28.7**	**C**	-	**0.58**	**21.2**	**C**	-	**0.55**	**21.2**	**C**
NORTHERN BOULEVARD													
108th Street at Northern Boulevard (RT. 25A)													
108th Street	NB	LTR	1.04	73.1	E	LTR	1.02	64.5	E	LTR	1.04	75.5	E
	SB	LTR	0.98	62.0	E	LTR	0.92	56.6	E	LTR	0.99	58.7	E
Northern Boulevard (Rt. 25A)	EB	L	0.15	22.9	C	L	0.08	25.7	C	L	0.11	25.9	C
		TR	0.77	12.3	B	TR	0.85	25.4	C	TR	0.83	25.1	C
	WB	L	0.60	35.9	D	L	0.61	35.6	D	L	0.74	40.3	D
		TR	0.93	26.0	C	TR	0.99	31.8	C	TR	0.96	29.6	C
Overall Intersection		-	**0.94**	**25.6**	**C**	-	**0.92**	**34.5**	**C**	-	**0.96**	**35.0**	**C**
114th Street at Northern Boulevard (RT. 25A)													
114th Street	SB	LTR	0.73	54.6	D	LTR	0.58	48.5	D	LTR	0.45	45.2	D
Northern Boulevard (Rt. 25A)	EB	T	0.88	19.7	B	T	0.63	21.5	C	T	0.55	20.1	C
		R	0.57	13.8	B	R	0.70	25.0	C	R	0.57	21.9	C
	WB	DefL	0.68	26.8	C	DefL	0.67	16.9	B	DefL	1.04	45.0	D
		T	0.76	11.5	B	T	0.72	11.8	B	T	1.04	39.1	D
Overall Intersection		-	**1.33**	**18.0**	**B**	-	**1.14**	**18.9**	**B**	-	**1.55**	**34.3**	**C**
126th Street at Northern Boulevard (RT. 25A)													
126th Street	NB	L	0.39	42.7	D	L	0.51	44.4	D	L	1.03	68.3	E
		R	0.36	42.9	D	R	0.30	41.3	D	R	0.59	43.4	D
Northern Boulevard	EB	T	0.27	6.6	A	T	0.17	5.9	A	T	0.17	6.0	A
	WB	T	0.67	12.0	B	T	0.52	9.4	A	T	0.23	6.3	A
Grand Central Parkway Ramp	EB	T	0.47	8.4	A	T	0.35	7.3	A	T	0.38	7.5	A
Van Wyck & Whitestone Expressway Ramp	WB	T	0.74	13.1	B	T	0.69	11.9	B	T	0.59	11.0	B
Overall Intersection		-	**0.66**	**13.7**	**B**	-	**0.65**	**13.9**	**B**	-	**0.69**	**23.3**	**C**
Prince Street at Northern Boulevard (RT. 25A)													
Prince Street	NB	LTR	1.05	74.2	E	LTR	1.03	66.4	E	LTR	1.01	62.7	E
	SB	LTR	0.56	41.5	D	LTR	0.48	37.1	D	LTR	0.38	38.3	D
Northern Boulevard (Rt. 25A)	EB	L	0.92	64.1	E	L	0.95	73.8	E	L	0.85	61.4	E
		T	0.81	27.3	C	T	0.71	25.1	C	T	0.78	26.6	C
	WB	L	0.73	64.3	E	L	0.90	85.3	F	L	0.82	78.5	E
		T	0.82	35.3	D	T	0.85	34.2	C	T	0.72	30.6	C
Northern Boulevard Service Rd.	EB	TR	0.46	22.0	C	TR	0.36	20.2	C	TR	0.31	19.3	B
	WB	TR	0.69	36.0	D	TR	0.66	31.8	C	TR	0.47	27.2	C
Overall Intersection		-	**0.91**	**37.2**	**D**	-	**0.93**	**36.7**	**D**	-	**0.85**	**33.9**	**C**
Main Street at Northern Boulevard (RT. 25A)													
Main Street	NB	L	0.41	34.1	C	L	0.43	34.3	C	L	0.41	34.1	C
		R	0.85	54.0	D	R	0.88	57.5	E	R	0.69	39.1	D
Northern Boulevard (Rt 25A)	EB	T	0.91	29.8	C	T	0.70	27.9	C	T	0.81	30.6	C
		R	0.89	35.6	D	R	0.97	55.5	E	R	0.84	36.9	D
Northern Boulevard (Rt 25A)	WB	L	0.22	27.7	C	L	0.16	26.4	C	L	0.11	25.8	C
		T	0.71	21.3	C	T	0.79	23.1	C	T	0.62	19.5	B
Overall Intersection		-	**0.88**	**29.1**	**C**	-	**0.93**	**31.7**	**C**	-	**0.77**	**28.3**	**C**
Union Street at Northern Boulevard (RT. 25A)													
Union Street	NB	TR	0.59	32.9	C	TR	0.59	32.7	C	TR	0.55	32.0	C
	SB	TR	0.64	33.8	C	TR	0.55	31.9	C	TR	0.62	33.2	C
Northern Boulevard (Rt. 25A)	EB	L	0.60	28.7	C	L	0.65	31.9	C	L	0.68	23.2	C
		TR	0.91	35.3	D	TR	0.90	38.7	D	TR	0.94	39.7	D
	WB	L	0.58	26.8	C	L	0.68	30.7	C	L	0.74	41.7	D
		TR	0.92	40.6	D	TR	0.89	38.3	D	TR	0.77	35.9	D
Overall Intersection		-	**0.78**	**36.0**	**D**	-	**0.77**	**36.3**	**D**	-	**0.81**	**36.1**	**D**
Parsons Boulevard at Northern Boulevard (RT. 25A)													
Parsons Boulevard	NB	L	0.75	60.4	E	L	0.56	43.8	D	L	0.64	48.6	D
		TR	0.55	39.4	D	TR	0.51	38.3	D	TR	0.56	37.5	D
	SB	LTR	1.05	70.3	E	LTR	1.03	64.0	E	LTR	1.04	66.4	E
Northern Boulevard (Rt. 25A)	EB	L	0.46	44.8	D	L	0.34	36.7	D	L	0.37	36.9	D
		TR	0.88	29.2	C	TR	0.98	39.9	D	TR	1.00	42.5	D
	WB	L	0.46	38.0	D	L	0.40	37.4	D	L	0.50	43.4	D
		TR	1.02	44.9	D	TR	0.94	36.7	D	TR	0.99	41.4	D
Overall Intersection		-	**1.03**	**41.1**	**D**	-	**0.93**	**40.8**	**D**	-	**1.02**	**44.3**	**D**
34TH AVENUE													
114th Street at 34th Avenue													
114th Street	SB	L	0.95	54.1	D	L	0.92	47.3	D	L	1.05	70.9	E
		T	0.51	28.3	C	T	0.51	28.1	C	T	0.33	24.8	C
34th Avenue	EB	TR	0.54	13.2	B	TR	0.44	11.9	B	TR	0.40	11.4	B
Overall Intersection		-	**0.68**	**30.7**	**C**	-	**0.60**	**29.4**	**C**	-	**0.64**	**43.3**	**D**
126th Street/GCP Ramp at 34th Avenue													
126th Street	NB	DefL	0.62	52.3	D	DefL	0.89	69.5	E	DefL	0.82	60.2	E
		TR	0.30	34.5	C	TR	0.40	31.9	C	TR	0.63	40.1	D
Northern Boulevard Ramp	SB	LTR	0.65	44.8	D	LTR	0.47	34.6	C	LTR	0.22	34.1	C
GCP Ramp	SB	LTR	0.99	70.6	E	LTR	0.94	57.1	E	LTR	0.77	65.5	E
Shea Road	EB	DefL	0.60	43.4	D	LTR	0.79	52.1	D	DefL	1.05	79.6	E
		TR	0.37	35.9	D	-	-	-	-	TR	0.59	29.1	C
34th Avenue	WB	LTR	0.36	35.7	D	LTR	0.98	64.9	E	LTR	0.36	25.5	C
Overall Intersection		-	**0.74**	**54.2**	**D**	-	**0.93**	**51.3**	**D**	-	**0.93**	**50.5**	**D**

TABLE 2
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2012 EXISTING TRAFFIC LEVELS OF SERVICE - GAME DAY

INTERSECTION & APPROACH		Weekday Pre-Game (5:30 - 6:30 PM) Mvt.	V/C	Control Delay	LOS	Saturday Pre-Game (3:15 - 4:15 PM) Mvt.	V/C	Control Delay	LOS	Saturday Post-Game (7:15 - 8:15 PM) Mvt.	V/C	Control Delay	LOS
ROOSEVELT AVENUE													
108th Street at Roosevelt Avenue													
108th Street	NB	LTR	1.02	66.4	E	LTR	1.04	70.4	E	LTR	1.01	62.3	E
	SB	LTR	1.02	66.1	E	LTR	1.02	65.5	E	LTR	1.04	72.8	E
Roosevelt Avenue	EB	LTR	0.58	6.3	A	LTR	0.63	14.1	B	LTR	0.50	11.8	B
	WB	LTR	0.55	10.7	B	LTR	0.80	15.3	B	LTR	0.75	14.0	B
	Overall Intersection	-	**0.70**	**30.3**	**C**	-	**0.87**	**33.6**	**C**	-	**0.83**	**33.8**	**C**
111th Street at Roosevelt Avenue													
111th Street	NB	LTR	0.99	59.8	E	LTR	1.00	59.1	E	LTR	1.01	61.2	E
Roosevelt Avenue	EB	LTR	0.63	6.7	A	LTR	0.69	15.0	B	LTR	0.57	12.9	B
	WB	LTR	1.00	31.7	C	LTR	0.99	29.2	C	LTR	1.01	32.1	C
	Overall Intersection	-	**1.00**	**27.6**	**C**	-	**0.99**	**29.9**	**C**	-	**1.01**	**33.0**	**C**
114th Street at Roosevelt Avenue													
114th Street	NB	LTR	0.86	53.8	D	LTR	1.03	65.8	E	LTR	0.64	44.4	D
	SB	LTR	1.05	73.6	E	LTR	1.05	70.6	E	LTR	1.05	71.3	E
Roosevelt Avenue	EB	LTR	0.82	10.4	B	LTR	1.00	31.6	C	LTR	0.99	31.3	C
	WB	LTR	0.60	12.5	B	LTR	0.50	11.1	B	LTR	0.68	13.9	B
	Overall Intersection	-	**0.89**	**25.0**	**C**	-	**1.01**	**36.5**	**D**	-	**1.00**	**30.8**	**C**
126th Street at Roosevelt Avenue													
126th Street	NB	LTR	0.52	50.0	D	LTR	0.61	53.4	D	LTR	0.20	37.0	D
	SB	-	-	-	-	-	-	-	-	DefL	1.01	80.9	F
		LTR	1.02	61.4	E	LTR	0.99	55.7	E	TR	0.48	29.6	C
Roosevelt Avenue	EB	DefL	0.75	17.7	B	DefL	0.80	32.3	C	-	-	-	-
		TR	0.60	6.3	A	TR	0.44	10.6	B	LTR	0.47	19.7	B
	WB	LTR	0.52	11.1	B	LTR	0.53	11.2	B	LTR	0.36	17.9	B
	Overall Intersection	-	**0.82**	**24.0**	**C**	-	**0.85**	**26.9**	**C**	-	**0.70**	**35.2**	**D**
College Point Boulevard at Roosevelt Avenue													
College Point Boulevard	NB	L	1.04	94.6	F	L	1.04	80.8	F	L	0.53	30.2	C
		TR	0.60	26.6	C	TR	0.70	23.2	C	TR	0.63	22.0	C
	SB	TR	0.68	38.8	D	TR	0.86	34.0	C	TR	0.56	28.3	C
Roosevelt Avenue	EB	L	0.40	35.3	D	L	0.36	27.0	C	L	0.45	28.3	C
		TR	1.05	59.3	E	TR	1.03	46.9	D	TR	1.05	50.7	D
	WB	L	0.29	44.4	D	L	0.26	33.0	C	L	0.22	32.5	C
		TR	0.41	34.7	C	TR	0.44	26.1	C	TR	0.32	24.2	C
	Overall Intersection	-	**1.04**	**47.1**	**D**	-	**1.03**	**37.9**	**D**	-	**0.91**	**32.8**	**C**
Prince Street at Roosevelt Avenue													
Prince Street	SB	LTR	0.46	29.4	C	LTR	0.67	34.7	C	LTR	0.63	33.4	C
Roosevelt Avenue	EB	-	-	-	-	-	-	-	-	-	-	-	-
		LTR	0.58	20.7	C	LTR	0.46	9.9	A	LTR	0.54	10.9	B
	WB	LTR	0.53	19.8	B	LTR	0.52	11.5	B	LTR	0.49	10.7	B
	Overall Intersection	-	**0.53**	**22.4**	**C**	-	**0.57**	**16.2**	**B**	-	**0.57**	**15.5**	**B**
Main Street at Roosevelt Avenue													
Main Street	NB	T	0.59	22.6	C	T	0.63	23.3	C	T	0.63	23.3	C
	SB	T	0.50	21.0	C	T	0.59	22.8	C	T	0.50	21.4	C
Roosevelt Avenue	EB	LTR	0.91	63.3	E	LTR	0.73	32.5	C	LTR	0.92	44.1	D
	WB	LTR	0.87	53.6	D	LTR	0.75	32.5	C	LTR	0.84	35.7	D
	Overall Intersection	-	**0.72**	**35.8**	**D**	-	**0.69**	**26.5**	**C**	-	**0.78**	**30.3**	**C**
Union Street at Roosevelt Avenue													
Union Street	NB	TR	0.47	17.5	B	TR	0.39	16.3	B	TR	0.39	16.3	B
	SB	LT	0.97	31.6	C	LT	0.73	23.6	C	LT	0.86	28.7	C
		R	0.47	16.9	B	R	0.56	22.1	C	R	0.48	18.4	B
Roosevelt Avenue	EB	LTR	0.90	34.9	C	LTR	0.76	29.5	C	LTR	0.90	34.6	C
	WB	LT	0.72	28.0	C	LT	0.49	22.3	C	LT	0.62	26.2	C
		R	0.49	25.2	C	R	0.58	34.3	C	R	0.68	40.9	D
	Overall Intersection	-	**0.94**	**27.2**	**C**	-	**0.74**	**23.4**	**C**	-	**0.88**	**27.1**	**C**
Parsons Boulevard at Roosevelt Avenue													
Parsons Boulevard	NB	LTR	0.70	31.3	C	LTR	0.61	22.9	C	LTR	0.82	28.4	C
	SB	LTR	0.74	31.4	C	LTR	0.70	24.3	C	LTR	0.72	25.2	C
Roosevelt Avenue	EB	LTR	0.60	28.4	C	LTR	0.38	18.7	B	LTR	0.61	23.1	C
	WB	LTR	0.80	35.3	D	LTR	0.52	21.3	C	LTR	0.63	24.0	C
	Overall Intersection	-	**0.77**	**31.7**	**C**	-	**0.61**	**22.3**	**C**	-	**0.72**	**25.4**	**C**
KISSENA BOULEVARD													
Main Street at Kissena Boulevard													
Main Street	NB	L	0.46	21.9	C	L	0.66	31.3	C	L	0.52	23.9	C
		TR	0.55	21.4	C	TR	0.56	20.6	C	TR	0.63	21.8	C
	SB	L	0.83	48.8	D	L	0.49	20.7	C	L	0.42	19.3	B
		TR	0.35	17.8	B	TR	0.50	19.1	B	TR	0.45	18.4	B
Kissena Boulevard	WB	T	0.69	36.2	D	T	0.62	23.5	C	T	0.62	23.4	C
	Overall Intersection	-	**0.67**	**27.5**	**C**	-	**0.64**	**21.5**	**C**	-	**0.62**	**20.8**	**C**
SANFORD AVENUE													
College Point Boulevard at Sanford Avenue													
College Point Boulevard	NB	L	0.27	11.5	B	L	0.32	12.3	B	L	0.15	9.9	A
		T	0.61	13.2	B	T	0.67	14.1	B	T	0.43	10.8	B
	SB	TR	0.64	13.5	B	TR	0.66	13.8	B	TR	0.65	13.6	B
Sanford Avenue	WB	L	0.69	39.7	D	L	0.82	48.0	D	L	0.54	33.2	C
		TR	0.43	27.8	C	TR	0.47	28.4	C	TR	0.31	26.1	C
	Overall Intersection	-	**0.65**	**16.9**	**B**	-	**0.72**	**18.6**	**B**	-	**0.61**	**15.3**	**B**
Union Street at Sanford Avenue													
Union Street	NB	LTR	0.33	20.6	C	LTR	0.39	22.0	C	LTR	0.37	21.2	C
	SB	LTR	0.61	23.8	C	LTR	0.81	27.9	C	LTR	0.68	25.2	C
Sanford Avenue	EB	-	-	-	-	DefL	0.45	19.7	B	-	-	-	-
		LTR	0.24	13.8	B	TR	0.27	14.4	B	LTR	0.19	13.3	B
	WB	LTR	0.80	24.5	C	LTR	0.68	21.2	C	LTR	0.63	20.3	C
	Overall Intersection	-	**0.71**	**21.9**	**C**	-	**0.74**	**23.2**	**C**	-	**0.65**	**21.3**	**C**

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2012 EXISTING TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue													
Parsons Boulevard	NB	LTR	0.95	34.3	C	LTR	0.78	27.4	C	LTR	0.85	29.7	C
	SB	LTR	0.66	23.6	C	LTR	0.69	24.4	C	LTR	0.70	24.5	C
Sanford Avenue	EB	LTR	0.53	21.4	C	LTR	0.54	21.2	C	LTR	0.70	25.1	C
	WB	LTR	0.63	23.4	C	LTR	0.73	25.9	C	LTR	0.69	25.2	C
Overall Intersection		-	**0.79**	**26.4**	**C**	-	**0.75**	**24.9**	**C**	-	**0.77**	**26.2**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE													
College Point Boulevard at 32nd Avenue													
College Point Boulevard	NB	T	0.37	23.4	C	T	0.33	22.9	C	T	0.41	23.5	C
		TR	0.20	21.3	C	TR	0.47	24.3	C	TR	0.27	22.1	C
	SB	L	0.43	32.8	C	L	0.55	36.9	D	L	0.26	27.2	C
		T	0.34	10.0	A	T	0.38	10.3	B	T	0.23	9.0	A
32nd Avenue	WB	LTR	0.71	36.0	D	LTR	0.44	29.6	C	LTR	0.29	26.6	C
Overall Intersection		-	**1.08**	**20.8**	**C**	-	**1.02**	**21.0**	**C**	-	**0.99**	**19.4**	**B**
NORTHERN BOULEVARD SERVICE ROAD													
College Point Boulevard at Northern Boulevard Service Road													
College Point Boulevard	NB	TR	0.42	11.8	B	TR	0.47	12.4	B	TR	0.44	12.0	B
	SB	LT	0.69	16.2	B	LT	0.73	17.1	B	LT	0.41	12.0	B
Northern Blvd Service Rd	WB	LR	0.62	30.2	C	LR	0.62	29.8	C	LR	0.47	27.1	C
Overall Intersection		-	**0.66**	**16.8**	**B**	-	**0.69**	**17.2**	**B**	-	**0.45**	**14.4**	**B**
STADIUM ROAD													
Boat Basin Road at Stadium Road													
Boat Basin Road	NB	-	-	-	-	-	-	-	-	L	1.01	44.6	D
Stadium		LTR	0.51	43.0	D	LTR	0.47	38.8	D	TR	0.77	13.2	B
	SB	LTR	0.85	31.5	C	LTR	0.90	38.0	D	LTR	0.15	6.2	A
Stadium Road	WB	LTR	0.83	30.8	C	LTR	0.51	24.5	C	LTR	0.65	34.8	C
Overall Intersection		-	**0.79**	**32.1**	**C**	-	**0.67**	**34.1**	**C**	-	**0.92**	**25.3**	**C**
UNSIGNALIZED INTERSECTIONS													
Willets Point Boulevard at 126th Street													
126th Street	SB	LT	-	8.0	A	LT	-	8.7	A	LT	-	7.9	A
Willets Point Boulevard	WB	LR	-	11.8	B	LR	-	10.5	B	LR	-	9.5	A
Overall Intersection		-	-	**11.8**	**B**	-	-	**10.5**	**B**	-	-	**8.6**	**A**
Boat Basin Road at Worlds Fair Marina													
Boat Basin Road	NB	L	-	41.1	E	L	-	32.8	D	L	-	63.2	F
		R	-	8.6	A	R	-	8.7	A	R	-	12.7	B
Worlds Fair Marina	WB	LT	-	11.5	B	LT	-	10.6	B	LT	-	7.7	A
Overall Intersection		-	-	**12.4**	**B**	-	-	**11.3**	**B**	-	-	**35.3**	**E**
Willets Point Boulevard at Northern Boulevard													
Willets Point Boulevard	NB	TR	-	9.5	A	TR	-	9.1	A	TR	-	9.0	A
Overall Intersection		-	-	**9.5**	**A**	-	-	**9.1**	**A**	-	-	**9.0**	**A**
Boat Basin Road at Stadium Road / Citifield Entrance 8													
Citifield Entrance 8	NB	-	-	-	-	-	-	-	-	-	-	-	-
Boat Basin Road	SB	LT	-	8.3	A	LT	-	7.7	A	-	-	-	-
Stadium Road	EB	LT	-	27.2	D	LT	-	52.7	F	-	-	-	-
		TR	-	29.9	D	TR	-	27.6	D	LT	-	55.2	F
Citifield Entrance 9	WB	R	-	10.2	B	R	-	9.3	A	R	-	47.2	E
Overall Intersection		-	-	**27.8**	**D**	-	-	**37.3**	**E**	-	-	**54.1**	**F**
Grand Central Parkway Ramp at West Park Loop/Stadium Road													
Grand Central Parkway Off-Ramp	EB	L	-	28.0	D	L	-	28.1	D	L	-	41.3	E
		R	-	9.5	A	R	-	9.1	A	R	-	20.3	C
Overall Intersection		-	-	**25.8**	**D**	-	-	**26.3**	**D**	-	-	**33.7**	**D**

Notes
(1): Control delay is measured in seconds per vehicle.
(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

TABLE 3
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
SIGNALIZED INTERSECTIONS																	
ASTORIA BOULEVARD																	
108th Street at Astoria Boulevard																	
108th Street	NB	DefL	0.74	56.7	E	DefL	0.47	26.5	C	DefL	0.56	45.8	D	DefL	0.50	27.1	C
		T	0.22	35.7	D	T	0.13	20.1	C	T	0.21	35.6	D	T	0.20	21.0	C
	SB	LTR	0.35	38.3	D	LTR	0.17	20.6	C	LTR	0.38	38.9	D	LTR	0.25	21.6	C
Astoria Boulevard	EB	TR	0.59	25.4	C	TR	0.82	28.6	C	TR	0.88	26.4	C	TR	0.92	31.8	C
	WB	L	0.55	14.3	B	L	0.71	29.8	C	L	0.71	45.3	D	L	0.54	23.2	C
		TR	0.76	7.8	A	TR	0.33	12.3	B	TR	0.33	9.7	A	TR	0.35	12.5	B
Overall Intersection		-	**0.76**	**17.4**	**B**	-	**0.69**	**23.3**	**C**	-	**0.78**	**25.2**	**C**	-	**0.73**	**24.6**	**C**
NORTHERN BOULEVARD																	
108th Street at Northern Boulevard (RT. 25A)																	
108th Street	NB	LTR	1.10	100.2	F	LTR	1.15	119.4	F	LTR	1.12	107.1	F	LTR	1.09	97.2	F
	SB	LTR	0.96	77.2	E	LTR	0.90	65.7	E	LTR	1.09	102.2	F	LTR	0.89	63.5	E
Northern Boulevard (Rt. 25A)	EB	L	0.07	20.8	C	L	0.08	22.9	C	L	0.15	33.0	C	L	0.17	37.8	D
		TR	0.74	20.3	C	TR	0.86	27.6	C	TR	0.82	13.5	B	TR	0.92	30.4	C
	WB	L	0.42	20.3	C	L	0.69	42.9	D	L	0.65	40.5	D	L	0.69	41.3	D
		TR	1.02	30.5	C	TR	0.99	42.5	D	TR	1.12	81.4	F	TR	1.16	101.1	F
Overall Intersection		-	**0.91**	**34.2**	**C**	-	**0.98**	**45.0**	**D**	-	**1.05**	**52.4**	**D**	-	**1.06**	**69.5**	**E**
114th Street at Northern Boulevard (RT. 25A)																	
114th Street	SB	LTR	0.46	47.5	D	LTR	0.38	44.2	D	LTR	0.38	45.6	D	LTR	0.36	43.4	D
Northern Boulevard (Rt. 25A)	EB	T	0.86	39.9	D	T	0.79	26.5	C	T	1.12	74.4	E	T	0.70	23.3	C
		R	0.73	37.7	D	R	0.45	19.2	B	R	0.82	17.1	B	R	0.58	22.2	C
	WB	DefL	0.48	13.6	B	DefL	0.49	15.8	B	DefL	0.85	55.6	E	DefL	0.68	17.8	B
		T	1.16	89.8	F	T	0.73	12.4	B	T	0.90	17.0	B	T	0.97	23.5	C
Overall Intersection		-	**1.30**	**67.8**	**E**	-	**1.16**	**19.4**	**B**	-	**1.53**	**41.6**	**D**	-	**1.29**	**23.6**	**C**
126th Street at Northern Boulevard (RT. 25A)																	
126th Street	NB	L	0.28	41.1	D	L	0.45	43.8	D	L	0.42	43.1	D	L	0.43	43.4	D
		R	0.27	41.2	D	R	0.32	42.0	D	R	0.27	41.1	D	R	0.34	42.2	D
Northern Boulevard	EB	T	0.22	6.3	A	T	0.32	7.0	A	T	0.36	7.3	A	T	0.29	6.8	A
	WB	T	0.64	10.6	B	T	0.33	7.1	A	T	0.39	7.6	A	T	0.30	6.9	A
Grand Central Parkway Ramp	EB	T	0.43	8.1	A	T	0.41	7.8	A	T	0.47	8.4	A	T	0.44	8.0	A
Van Wyck & Whitestone Expressway Ramp	WB	T	1.09	101.3	F	T	0.75	15.9	B	T	0.88	23.0	C	T	0.73	14.7	B
Overall Intersection		-	**0.91**	**38.1**	**D**	-	**0.68**	**13.8**	**B**	-	**0.77**	**15.1**	**B**	-	**0.66**	**13.6**	**B**
Prince Street at Northern Boulevard (RT. 25A)																	
Prince Street	NB	LTR	1.13	124.0	F	LTR	1.13	107.5	F	LTR	1.17	122.7	F	LTR	1.10	91.6	F
	SB	LTR	0.78	52.5	D	LTR	0.52	41.0	D	LTR	0.51	41.4	D	LTR	0.45	36.6	D
Northern Boulevard (Rt. 25A)	EB	L	0.94	89.0	F	L	0.87	69.8	E	L	0.60	45.4	D	L	0.65	49.1	D
		T	0.79	22.0	C	T	0.92	34.0	C	T	0.95	35.7	D	T	1.04	56.8	E
	WB	L	0.94	88.4	F	L	0.89	88.0	F	L	0.79	70.6	E	L	0.80	63.5	E
		T	1.13	85.4	F	T	1.11	92.6	F	T	1.12	98.3	F	T	1.14	102.8	F
Northern Boulevard Service Rd.	EB	TR	0.44	16.5	B	TR	0.60	26.0	C	TR	0.64	27.1	C	TR	0.61	25.5	C
	WB	TR	0.65	18.8	B	TR	0.69	34.2	C	TR	0.65	34.8	C	TR	0.73	34.3	C
Overall Intersection		-	**1.10**	**57.2**	**E**	-	**1.07**	**61.2**	**E**	-	**1.00**	**62.0**	**E**	-	**1.02**	**69.7**	**E**
Main Street at Northern Boulevard (RT. 25A)																	
Main Street	NB	L	0.76	43.1	D	L	0.97	62.8	E	L	0.95	59.2	E	L	0.92	54.6	D
		R	0.83	52.1	D	R	0.66	38.7	D	R	0.95	71.2	E	R	0.87	58.7	E
Northern Boulevard (Rt 25A)	EB	T	0.92	37.9	D	T	0.95	41.3	D	T	1.05	59.7	E	T	0.94	37.8	D
		R	1.14	113.1	F	R	1.25	157.1	F	R	1.16	115.7	F	R	1.34	192.6	F
Northern Boulevard (Rt 25A)	WB	L	0.16	26.4	C	L	0.10	25.6	C	L	0.16	26.7	C	L	0.08	25.1	C
		T	1.03	34.9	C	T	0.74	22.3	C	T	0.75	22.5	C	T	0.92	28.1	C
Overall Intersection		-	**0.99**	**45.0**	**D**	-	**1.00**	**54.3**	**D**	-	**1.06**	**54.5**	**D**	-	**1.12**	**56.8**	**E**
Union Street at Northern Boulevard (RT. 25A)																	
Union Street	NB	TR	0.66	34.6	C	TR	0.76	38.1	D	TR	0.76	37.8	D	TR	0.75	37.3	D
	SB	TR	0.87	41.0	D	TR	0.54	32.1	C	TR	0.81	38.7	D	TR	0.63	33.9	C
Northern Boulevard (Rt. 25A)	EB	L	0.94	61.6	E	L	0.53	21.3	C	L	0.75	41.8	D	L	0.71	32.5	C
		TR	1.20	131.0	F	TR	1.35	198.2	F	TR	1.11	87.6	F	TR	1.43	229.9	F
	WB	L	1.00	71.7	E	L	1.16	136.0	F	L	0.84	47.5	D	L	0.85	45.5	D
		TR	0.94	37.3	D	TR	0.81	36.7	D	TR	0.90	39.9	D	TR	1.00	49.3	D
Overall Intersection		-	**1.05**	**68.1**	**E**	-	**1.37**	**104.5**	**F**	-	**0.97**	**59.2**	**E**	-	**1.08**	**114.1**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)																	
Parsons Boulevard	NB	L	0.91	81.5	F	L	0.70	54.6	D	L	0.81	65.4	E	L	0.81	63.9	E
		TR	0.55	39.5	D	TR	0.51	38.4	D	TR	0.49	35.0	D	TR	0.58	40.3	D
	SB	LTR	0.79	45.4	D	LTR	1.11	96.7	F	LTR	1.09	86.3	F	LTR	1.10	89.9	F
Northern Boulevard (Rt. 25A)	EB	L	0.52	44.7	D	L	0.78	56.1	E	L	0.46	46.0	D	L	0.49	46.7	D
		TR	1.01	53.4	D	TR	1.02	57.4	E	TR	0.94	34.5	C	TR	1.06	65.4	E
	WB	L	0.42	35.3	D	L	0.34	34.3	C	L	0.39	39.9	D	L	0.48	43.2	D
		TR	1.10	75.1	E	TR	1.14	100.2	F	TR	1.07	67.5	E	TR	1.14	96.3	F
Overall Intersection		-	**1.00**	**62.0**	**E**	-	**1.12**	**75.5**	**E**	-	**1.07**	**52.2**	**D**	-	**1.07**	**76.9**	**E**
34TH AVENUE																	
114th Street at 34th Avenue																	
114th Street	SB	L	0.82	37.5	D	L	0.82	41.7	D	L	0.98	56.6	E	L	0.96	57.2	E
		T	0.31	24.5	C	T	0.22	23.9	C	T	0.39	25.9	C	T	0.33	25.2	C
34th Avenue	EB	TR	0.44	12.0	B	TR	0.39	11.3	B	TR	0.37	11.1	B	TR	0.56	13.5	B
Overall Intersection		-	**0.57**	**23.5**	**C**	-	**0.54**	**26.0**	**C**	-	**0.58**	**34.6**	**C**	-	**0.70**	**31.5**	**C**
126th Street/GCP Ramp at 34th Avenue																	
126th Street	NB	-	-	-	-	-	-	-	-	DefL	0.35	23.5	C	-	-	-	-
		LTR	0.17	19.9	B	LTR	0.25	20.8	C	TR	0.27	21.1	C	LTR	0.25	20.8	C
Northern Boulevard Ramp	SB	LTR	0.31	22.3	C	LTR	0.37	23.5	C	LTR	0.27	21.6	C	LTR	0.35	23.0	C
GCP Ramp	SB	LTR	0.81	64.0	E	LTR	0.88	72.2	E	LTR	0.74	58.6	E	LTR	0.80	62.9	E
Shea Road	EB	LTR	0.46	43.0	D	LTR	0.54	44.5	D	LTR	0.43	42.4	D	LTR	0.61	46.1	D
34th Avenue	WB	LTR	0.63	52.9	D	LTR	0.63	52.4	D	LTR	0.95	86.9	F	LTR	0.79	64.3	E
Overall Intersection		-	**0.51**	**39.8**	**D**	-	**0.55**	**40.8**	**D**	-	**0.59**	**41.8**	**D**	-	**0.57**	**39.7**	**D**

TABLE 3
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS
ROOSEVELT AVENUE																	
108th Street at Roosevelt Avenue																	
108th Street	NB	LTR	0.99	70.3	E	LTR	1.05	90.7	F	LTR	1.06	85.6	F	LTR	1.16	119.5	F
	SB	LTR	1.05	83.8	F	LTR	1.19	132.5	F	LTR	1.15	114.9	F	LTR	1.11	100.5	F
Roosevelt Avenue	EB	LTR	0.67	15.6	B	LTR	0.74	18.2	B	LTR	0.72	9.3	A	LTR	0.69	15.9	B
	WB	LTR	0.80	9.7	A	LTR	0.83	21.8	C	LTR	0.82	17.1	B	LTR	0.76	14.5	B
	Overall Intersection	-	**0.87**	**32.5**	**C**	-	**0.92**	**49.7**	**D**	-	**0.91**	**43.2**	**D**	-	**0.87**	**48.1**	**D**
111th Street at Roosevelt Avenue																	
111th Street	NB	LTR	0.97	63.1	E	LTR	0.71	49.8	D	LTR	0.83	54.4	D	LTR	1.03	69.7	E
Roosevelt Avenue	EB	LTR	0.66	15.1	B	LTR	0.71	16.2	B	LTR	0.77	10.2	B	LTR	0.83	21.6	C
	WB	LTR	0.91	16.0	B	LTR	0.85	23.7	C	LTR	1.20	113.5	F	LTR	1.17	100.6	F
	Overall Intersection	-	**0.92**	**24.9**	**C**	-	**0.81**	**24.4**	**C**	-	**1.10**	**67.6**	**E**	-	**1.13**	**65.1**	**E**
114th Street at Roosevelt Avenue																	
114th Street	NB	LTR	1.00	66.8	E	LTR	0.68	49.6	D	LTR	0.95	57.8	E	LTR	0.99	64.4	E
	SB	LTR	1.07	90.0	F	LTR	0.66	51.1	D	LTR	1.05	77.6	E	LTR	1.06	80.1	F
Roosevelt Avenue	EB	LTR	0.80	21.5	C	LTR	0.85	25.2	C	LTR	0.89	17.4	B	LTR	1.15	93.9	F
	WB	LTR	0.55	5.3	A	LTR	0.46	10.5	B	LTR	0.72	15.0	B	LTR	0.67	13.9	B
	Overall Intersection	-	**0.88**	**27.7**	**C**	-	**0.80**	**23.5**	**C**	-	**0.94**	**27.6**	**C**	-	**1.12**	**51.4**	**D**
126th Street at Roosevelt Avenue																	
126th Street	NB	LTR	0.21	36.9	D	LTR	0.87	62.0	E	LTR	0.64	52.2	D	LTR	0.35	40.1	D
	SB	DefL	1.20	164.2	F	DefL	1.17	159.0	F	DefL	1.01	95.7	F	DefL	1.08	116.7	F
		TR	0.65	51.6	D	TR	0.61	50.6	D	TR	0.64	47.1	D	TR	0.52	43.4	D
Roosevelt Avenue	EB	LTR	0.55	12.2	B	LTR	0.50	11.3	B	LTR	0.68	7.5	A	LTR	0.66	14.3	B
	WB	LTR	0.61	5.9	A	LTR	0.49	11.0	B	LTR	0.59	12.4	B	LTR	0.47	10.6	B
	Overall Intersection	-	**0.75**	**32.9**	**C**	-	**0.67**	**35.2**	**D**	-	**0.77**	**26.0**	**C**	-	**0.77**	**30.8**	**C**
College Point Boulevard at Roosevelt Avenue																	
College Point Boulevard	NB	L	1.38	230.9	F	L	1.34	204.5	F	L	1.22	171.2	F	L	1.27	172.5	F
		TR	0.72	27.0	C	TR	0.86	29.7	C	TR	0.74	30.5	C	TR	0.91	32.0	C
	SB	TR	0.84	42.5	D	TR	1.18	119.8	F	TR	1.30	181.6	F	TR	0.99	50.4	D
Roosevelt Avenue	EB	L	0.44	39.9	D	L	0.55	30.2	C	L	0.47	37.0	D	L	0.56	20.7	C
		TR	0.96	55.8	E	TR	1.23	130.9	F	TR	1.18	115.0	F	TR	1.21	120.9	F
	WB	L	0.22	45.2	D	L	0.27	33.4	C	L	0.24	43.6	D	L	0.33	34.2	C
		TR	0.67	44.0	D	TR	0.57	30.1	C	TR	0.44	35.7	D	TR	0.48	26.9	C
	Overall Intersection	-	**1.07**	**65.2**	**E**	-	**1.33**	**91.2**	**F**	-	**1.29**	**111.6**	**F**	-	**1.24**	**64.2**	**E**
Prince Street at Roosevelt Avenue																	
Prince Street	SB	LTR	0.50	30.7	C	LTR	0.83	45.0	D	LTR	0.58	32.6	C	LTR	0.94	54.2	D
Roosevelt Avenue	EB	DefL	1.26	165.4	F	DefL	0.93	34.5	C	DefL	1.07	85.6	F	DefL	0.78	19.1	B
		TR	0.57	22.7	C	TR	0.66	13.9	B	TR	0.67	24.6	C	TR	0.73	15.2	B
	WB	LTR	0.88	32.0	C	LTR	0.52	11.9	B	LTR	0.59	20.5	C	LTR	0.56	12.4	B
	Overall Intersection	-	**0.94**	**63.3**	**E**	-	**0.90**	**25.4**	**C**	-	**0.86**	**40.3**	**D**	-	**0.83**	**24.1**	**C**
Main Street at Roosevelt Avenue																	
Main Street	NB	T	0.58	21.9	C	T	0.65	24.0	C	T	0.50	20.8	C	T	0.74	25.8	C
	SB	T	0.42	19.2	B	T	0.49	21.4	C	T	0.52	21.5	C	T	0.63	23.4	C
Roosevelt Avenue	EB	LTR	0.66	40.3	D	LTR	0.87	45.6	D	LTR	1.12	122.4	F	LTR	0.96	57.3	E
	WB	LTR	0.99	67.5	E	LTR	0.89	41.2	D	LTR	1.09	98.0	F	LTR	0.83	30.6	C
	Overall Intersection	-	**0.76**	**37.0**	**D**	-	**0.77**	**31.5**	**C**	-	**0.76**	**57.5**	**E**	-	**0.85**	**32.4**	**C**
Union Street at Roosevelt Avenue																	
Union Street	NB	TR	0.58	19.6	B	TR	0.57	19.2	B	TR	0.40	16.5	B	TR	0.55	18.8	B
	SB	LT	1.04	59.4	E	LT	0.96	46.3	D	LT	0.88	32.8	C	LT	1.02	56.1	E
		R	0.83	33.6	C	R	3.00+	1000.0+	F	R	2.48	705.0	F	R	2.75	822.2	F
Roosevelt Avenue	EB	LTR	1.35	196.4	F	LTR	1.99	480.0	F	LTR	1.80	393.4	F	LTR	2.28	607.1	F
	WB	LT	0.97	44.8	D	LT	0.61	25.4	C	LT	0.55	24.2	C	LT	0.54	23.4	C
		R	1.00	68.9	E	R	0.84	61.5	E	R	0.96	86.2	F	R	1.20	173.0	F
	Overall Intersection	-	**1.18**	**67.9**	**E**	-	**3.00+**	**477.8**	**F**	-	**2.17**	**208.1**	**F**	-	**2.54**	**300.0**	**F**
Parsons Boulevard at Roosevelt Avenue																	
Parsons Boulevard	NB	LTR	1.09	78.0	E	LTR	0.63	23.7	C	LTR	0.82	37.6	D	LTR	0.83	32.2	C
	SB	LTR	0.79	33.6	C	LTR	0.63	23.0	C	LTR	0.69	29.9	C	LTR	0.77	26.5	C
Roosevelt Avenue	EB	LTR	0.48	25.5	C	LTR	0.57	22.8	C	LTR	0.49	25.7	C	LTR	0.73	27.4	C
	WB	LTR	1.12	90.5	F	LTR	0.75	29.4	C	LTR	0.74	33.9	C	LTR	0.84	34.3	C
	Overall Intersection	-	**1.11**	**61.8**	**E**	-	**0.69**	**24.8**	**C**	-	**0.78**	**32.3**	**C**	-	**0.84**	**29.9**	**C**
KISSENA BOULEVARD																	
Main Street at Kissena Boulevard																	
Main Street	NB	L	0.71	31.6	C	L	0.82	45.4	D	L	0.74	36.2	D	L	1.12	114.7	F
		TR	0.68	24.6	C	TR	0.62	21.9	C	TR	0.57	22.1	C	TR	0.67	22.9	C
	SB	L	0.63	37.5	D	L	0.45	20.2	C	L	0.82	49.5	D	L	0.53	21.6	C
		TR	0.38	18.2	B	TR	0.50	19.2	B	TR	0.45	19.2	B	TR	0.56	19.9	B
Kissena Boulevard	WB	T	0.72	37.5	D	T	0.71	26.3	C	T	0.64	34.9	C	T	0.73	26.4	C
	Overall Intersection	-	**0.71**	**27.1**	**C**	-	**0.76**	**23.8**	**C**	-	**0.78**	**28.7**	**C**	-	**0.93**	**32.3**	**C**
SANFORD AVENUE																	
College Point Boulevard at Sanford Avenue																	
College Point Boulevard	NB	L	0.20	10.1	B	L	0.53	21.4	C	L	0.51	30.5	C	L	0.57	25.8	C
		T	0.67	14.7	B	T	0.65	14.1	B	T	0.59	13.0	B	T	0.72	15.4	B
	SB	TR	0.57	13.0	B	TR	0.75	16.4	B	TR	0.96	29.4	C	TR	0.83	18.3	B
Sanford Avenue	WB	L	0.77	43.9	D	L	0.56	34.3	C	L	0.75	44.9	D	L	0.68	38.5	D
		TR	0.54	29.7	C	TR	0.36	26.9	C	TR	0.35	26.7	C	TR	0.51	29.1	C
	Overall Intersection	-	**0.70**	**18.7**	**B**	-	**0.69**	**17.7**	**B**	-	**0.89**	**25.1**	**C**	-	**0.78**	**19.9**	**B**
Union Street at Sanford Avenue																	
Union Street	NB	LTR	0.68	29.3	C	LTR	0.33	20.5	C	LTR	0.29	20.0	C	LTR	0.38	21.4	C
	SB	LTR	0.59	24.2	C	LTR	0.59	23.8	C	LTR	0.70	25.9	C	LTR	0.72	26.7	C
Sanford Avenue	EB	DefL	0.55	24.8	C	DefL	0.40	18.8	B	-	-	-	-	DefL	0.46	20.5	C
		TR	0.36	15.7	B	TR	0.20	13.6	B	LTR	0.31	14.6	B	TR	0.34	15.4	B
	WB	LTR	0.86	27.6	C	LTR	0.85	27.3	C	LTR	0.66	21.6	C	LTR	0.85	27.4	C
	Overall Intersection	-	**0.78**	**24.9**	**C**	-	**0.74**	**23.4**	**C**	-	**0.68**	**21.8**	**C**	-	**0.79**	**24.3**	**C**

TABLE 3
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue																	
Parsons Boulevard	NB	LTR	1.08	61.9	E	LTR	1.10	74.4	E	LTR	0.86	31.2	C	LTR	0.88	33.4	C
	SB	LTR	0.93	34.1	C	LTR	0.69	24.7	C	LTR	0.75	26.2	C	LTR	0.82	28.4	C
Sanford Avenue	EB	LTR	0.71	26.6	C	LTR	0.55	21.9	C	LTR	0.68	25.3	C	LTR	0.71	25.9	C
	WB	LTR	0.80	29.7	C	LTR	0.84	32.2	C	LTR	0.77	28.9	C	LTR	0.88	35.1	D
Overall Intersection		-	**0.95**	**38.8**	**D**	-	**0.98**	**39.8**	**D**	-	**0.81**	**28.0**	**C**	-	**0.88**	**30.7**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE																	
College Point Boulevard at 32nd Avenue																	
College Point Boulevard	NB	T	0.43	23.7	C	T	0.71	30.1	C	T	0.49	25.1	C	T	0.35	23.1	C
		TR	0.69	31.2	C	TR	0.79	35.3	D	TR	0.91	44.7	D	TR	0.77	33.5	C
	SB	L	0.49	36.3	D	L	0.73	47.0	D	L	0.47	34.3	C	L	0.51	35.7	D
		T	0.58	12.8	B	T	0.48	11.5	B	T	0.42	10.8	B	T	0.40	10.6	B
32nd Avenue	WB	LTR	0.84	42.1	D	LTR	0.76	38.5	D	LTR	0.87	42.4	D	LTR	0.52	31.5	C
Overall Intersection		-	**1.38**	**23.4**	**C**	-	**1.28**	**27.4**	**C**	-	**1.14**	**28.2**	**C**	-	**1.04**	**23.0**	**C**
NORTHERN BOULEVARD SERVICE ROAD																	
College Point Boulevard at Northern Boulevard Service Road																	
College Point Boulevard	NB	TR	0.41	11.7	B	TR	0.51	12.9	B	TR	0.54	13.3	B	TR	0.53	13.1	B
	SB	LT	0.85	22.3	C	LT	0.83	21.6	C	LT	0.82	21.4	C	LT	0.76	19.1	B
Northern Blvd Service Rd	WB	LR	0.77	35.8	D	LR	0.77	35.8	D	LR	0.71	33.6	C	LR	0.68	32.0	C
Overall Intersection		-	**0.82**	**21.0**	**C**	-	**0.81**	**20.5**	**C**	-	**0.78**	**19.8**	**B**	-	**0.73**	**18.6**	**B**
STADIUM ROAD																	
Boat Basin Road at Stadium Road																	
Boat Basin Road	NB	LTR	0.08	7.3	A	LTR	0.07	7.2	A	LTR	0.05	7.1	A	LTR	0.08	7.2	A
	SB	-	-	-	-	DefL	0.27	9.2	A	-	-	-	-	DefL	0.20	8.3	A
		LTR	0.38	9.6	A	TR	0.17	8.0	A	LTR	0.22	8.2	A	TR	0.15	7.8	A
Stadium Road	WB	LTR	0.23	25.7	C	LTR	0.18	25.2	C	LTR	0.29	26.3	C	LTR	0.27	26.1	C
Overall Intersection		-	**0.33**	**12.8**	**B**	-	**0.24**	**12.4**	**B**	-	**0.24**	**14.7**	**B**	-	**0.22**	**14.3**	**B**
UNSIGNALIZED INTERSECTIONS																	
Willets Point Boulevard at 126th Street																	
126th Street	SB	LT	-	8.1	A	LT	-	8.3	A	LT	-	8.3	A	LT	-	8.5	A
Willets Point Boulevard	WB	LR	-	11.1	B	LR	-	12.1	B	LR	-	14.7	B	LR	-	15.2	C
Overall Intersection		-	-	**10.2**	**B**	-	-	**10.7**	**B**	-	-	**12.1**	**B**	-	-	**14.0**	**B**
Boat Basin Road at Worlds Fair Marina																	
Boat Basin Road	NB	L	-	37.4	E	L	-	18.9	C	L	-	16.2	C	L	-	16.7	C
		R	-	8.7	A	R	-	8.4	A	R	-	8.8	A	R	-	8.6	A
Worlds Fair Marina	WB	LT	-	8.8	A	LT	-	8.2	A	LT	-	7.8	A	LT	-	7.9	A
Overall Intersection		-	-	**9.9**	**A**	-	-	**9.4**	**A**	-	-	**9.0**	**A**	-	-	**9.7**	**A**
Willets Point Boulevard at Northern Boulevard																	
Willets Point Boulevard	NB	TR	-	10.3	B	TR	-	10.6	B	TR	-	9.8	A	TR	-	9.2	A
Overall Intersection		-	-	**10.3**	**B**	-	-	**10.6**	**B**	-	-	**9.8**	**A**	-	-	**9.2**	**A**
Boat Basin Road at Stadium Road / Citifield Entrance 8																	
Citifield Entrance 8	NB	T	-	10.5	B	T	-	11.3	B	T	-	10.7	B	T	-	12.0	B
Boat Basin Road	SB	LT	-	11.3	B	LT	-	11.3	B	LT	-	11.3	B	LT	-	-	-
Stadium Road	EB	LT	-	7.4	A	LT	-	7.4	A	LT	-	7.4	A	LT	-	7.5	A
Overall Intersection		-	-	**8.5**	**A**	-	-	**8.6**	**A**	-	-	**9.2**	**A**	-	-	**7.5**	**A**
Grand Central Parkway Ramp at West Park Loop/Stadium Road																	
Grand Central Parkway Off-Ramp	EB	L	-	11.3	B	L	-	10.7	B	L	-	10.6	B	L	-	11.1	B
		R	-	9.3	A	R	-	9.2	A	R	-	9.4	A	R	-	9.3	A
Overall Intersection		-	-	**10.8**	**B**	-	-	**10.2**	**B**	-	-	**10.0**	**A**	-	-	**10.6**	**B**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 4
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A NO ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
SIGNALIZED INTERSECTIONS													
ASTORIA BOULEVARD													
108th Street at Astoria Boulevard													
108th Street	NB	DefL	0.65	50.2	D	DefL	0.45	25.7	C	DefL	0.52	27.3	C
		T	0.27	36.7	D	T	0.19	20.9	C	T	0.21	21.2	C
	SB	LTR	0.34	37.8	D	LTR	0.22	21.4	C	LTR	0.19	20.8	C
Astoria Boulevard	EB	TR	1.04	46.9	D	TR	0.74	26.3	C	TR	0.67	25.0	C
	WB	L	0.73	49.2	D	L	0.76	33.5	C	L	0.88	44.3	D
		TR	0.28	9.2	A	TR	0.29	11.9	B	TR	0.30	12.0	B
Overall Intersection		-	**0.90**	**40.2**	**D**	-	**0.65**	**22.5**	**C**	-	**0.67**	**23.2**	**C**
NORTHERN BOULEVARD													
108th Street at Northern Boulevard (RT. 25A)													
108th Street	NB	LTR	1.12	106.6	F	LTR	1.11	99.6	F	LTR	1.14	115.6	F
	SB	LTR	1.09	95.6	F	LTR	1.04	84.0	F	LTR	1.13	109.5	F
Northern Boulevard (Rt. 25A)	EB	L	0.18	30.1	C	L	0.09	34.1	C	L	0.14	35.1	D
		TR	0.84	13.8	B	TR	0.95	32.8	C	TR	0.94	32.3	C
	WB	L	0.71	44.0	D	L	0.79	45.4	D	L	0.95	59.5	E
		TR	1.04	48.7	D	TR	1.14	90.5	F	TR	1.11	78.7	E
Overall Intersection		-	**1.01**	**39.3**	**D**	-	**1.08**	**67.4**	**E**	-	**1.10**	**66.3**	**E**
114th Street at Northern Boulevard (RT. 25A)													
114th Street	SB	LTR	0.75	55.4	E	LTR	0.60	49.0	D	LTR	0.46	45.6	D
Northern Boulevard (Rt. 25A)	EB	T	0.98	28.3	C	T	0.74	24.2	C	T	0.65	22.2	C
		R	0.62	14.6	B	R	0.77	27.9	C	R	0.65	24.2	C
	WB	DefL	0.78	42.8	D	DefL	0.79	31.7	C	DefL	1.22	125.9	F
		T	0.85	14.2	B	T	0.83	15.0	B	T	1.17	96.3	F
Overall Intersection		-	**1.47**	**23.1**	**C**	-	**1.28**	**22.4**	**C**	-	**1.82**	**74.3**	**E**
126th Street at Northern Boulevard (RT. 25A)													
126th Street	NB	L	0.46	43.8	D	L	0.61	46.5	D	L	1.14	112.8	F
		R	0.38	43.3	D	R	0.32	41.7	D	R	0.63	43.9	D
Northern Boulevard	EB	T	0.32	7.0	A	T	0.22	6.3	A	T	0.23	6.3	A
	WB	T	0.79	15.7	B	T	0.67	12.3	B	T	0.31	6.9	A
Grand Central Parkway Ramp	EB	T	0.57	9.6	A	T	0.46	8.2	A	T	0.48	8.4	A
Van Wyck & Whitestone Expressway Ramp	WB	T	0.77	13.9	B	T	0.72	12.5	B	T	0.62	11.6	B
Overall Intersection		-	**0.72**	**14.9**	**B**	-	**0.69**	**14.8**	**B**	-	**0.74**	**31.4**	**C**
Prince Street at Northern Boulevard (RT. 25A)													
Prince Street	NB	LTR	1.10	92.3	F	LTR	1.08	85.5	F	LTR	1.10	93.5	F
	SB	LTR	0.58	42.0	D	LTR	0.50	37.4	D	LTR	0.40	38.5	D
Northern Boulevard (Rt. 25A)	EB	L	0.95	68.2	E	L	0.97	78.9	E	L	0.87	63.3	E
		T	1.02	48.9	D	T	0.95	36.7	D	T	1.01	45.3	D
	WB	L	0.77	67.3	E	L	0.95	94.7	F	L	0.88	86.1	F
		T	1.08	81.6	F	T	1.11	90.1	F	T	0.97	45.8	D
Northern Boulevard Service Rd.	EB	TR	0.58	24.8	C	TR	0.50	22.9	C	TR	0.44	21.7	C
	WB	TR	0.77	40.6	D	TR	0.73	34.7	C	TR	0.53	28.7	C
Overall Intersection		-	**1.05**	**60.6**	**E**	-	**1.07**	**60.3**	**E**	-	**0.98**	**47.5**	**D**
Main Street at Northern Boulevard (RT. 25A)													
Main Street	NB	L	0.89	51.4	D	L	0.85	47.3	D	L	0.84	47.2	D
		R	0.88	58.6	E	R	0.92	64.0	E	R	0.72	40.8	D
Northern Boulevard (Rt 25A)	EB	T	1.12	85.5	F	T	0.94	38.3	D	T	1.03	56.7	E
		R	1.20	124.0	F	R	1.31	177.6	F	R	1.15	112.5	F
Northern Boulevard (Rt 25A)	WB	L	0.22	27.8	C	L	0.16	26.5	C	L	0.11	25.9	C
		T	0.76	22.6	C	T	0.86	25.6	C	T	0.68	20.8	C
Overall Intersection		-	**1.05**	**63.8**	**E**	-	**1.13**	**53.4**	**D**	-	**0.95**	**50.1**	**D**
Union Street at Northern Boulevard (RT. 25A)													
Union Street	NB	TR	0.68	35.3	D	TR	0.68	35.1	D	TR	0.65	34.4	C
	SB	TR	0.68	34.8	C	TR	0.59	32.8	C	TR	0.66	34.3	C
Northern Boulevard (Rt. 25A)	EB	L	0.62	30.4	C	L	0.68	33.9	C	L	0.72	31.5	C
		TR	1.15	104.2	F	TR	1.25	150.1	F	TR	1.21	134.7	F
	WB	L	0.78	40.0	D	L	0.96	63.8	E	L	0.98	75.5	E
		TR	0.97	48.8	D	TR	0.96	43.2	D	TR	0.83	38.0	D
Overall Intersection		-	**0.93**	**67.9**	**E**	-	**0.97**	**80.4**	**F**	-	**0.92**	**76.0**	**E**
Parsons Boulevard at Northern Boulevard (RT. 25A)													
Parsons Boulevard	NB	L	0.85	75.0	E	L	0.66	49.3	D	L	0.72	54.5	D
		TR	0.57	39.9	D	TR	0.53	38.7	D	TR	0.58	38.0	D
	SB	LTR	1.15	109.0	F	LTR	1.10	91.0	F	LTR	1.10	88.8	F
Northern Boulevard (Rt. 25A)	EB	L	0.51	47.1	D	L	0.41	42.8	D	L	0.44	42.9	D
		TR	0.95	33.6	C	TR	1.10	83.3	F	TR	1.13	91.5	F
	WB	L	0.47	41.4	D	L	0.44	43.6	D	L	0.51	45.7	D
		TR	1.10	81.4	F	TR	1.04	59.1	E	TR	1.10	79.8	E
Overall Intersection		-	**1.11**	**60.0**	**E**	-	**1.08**	**68.1**	**E**	-	**1.08**	**78.9**	**E**
34TH AVENUE													
114th Street at 34th Avenue													
114th Street	SB	L	1.03	72.5	E	L	1.01	66.0	E	L	1.15	106.1	F
		T	0.53	28.5	C	T	0.53	28.4	C	T	0.34	24.9	C
34th Avenue	EB	TR	0.55	13.5	B	TR	0.45	12.0	B	TR	0.41	11.6	B
Overall Intersection		-	**0.72**	**38.2**	**D**	-	**0.65**	**37.8**	**D**	-	**0.69**	**62.4**	**E**
126th Street/GCP Ramp at 34th Avenue													
126th Street	NB	DefL	0.69	59.2	E	DefL	1.34	227.6	F	-	-	-	-
		TR	0.35	35.3	D	TR	0.57	40.1	D	LTR	0.44	19.8	B
Northern Boulevard Ramp	SB	LTR	0.72	48.1	D	LTR	0.63	45.1	D	LTR	0.16	16.7	B
GCP Ramp	SB	LTR	1.27	179.6	F	LTR	1.26	171.3	F	LTR	0.96	92.7	F
Shea Road	EB	DefL	0.52	35.7	D	-	-	-	-	DefL	3.00+	1000.0+	F
		TR	0.32	30.5	C	LTR	0.45	32.3	C	TR	1.80	420.2	F
34th Avenue	WB	LTR	0.32	30.4	C	LTR	0.45	31.7	C	LTR	0.86	79.0	E
Overall Intersection		-	**0.79**	**102.0**	**F**	-	**0.98**	**110.2**	**F**	-	**1.22**	**289.6**	**F**

TABLE 4
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A NO ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE													
108th Street at Roosevelt Avenue													
108th Street	NB	LTR	1.11	100.8	F	LTR	1.14	111.7	F	LTR	1.12	104.0	F
	SB	LTR	1.11	101.2	F	LTR	1.14	109.3	F	LTR	1.16	120.9	F
Roosevelt Avenue	EB	LTR	0.69	8.1	A	LTR	0.76	18.3	B	LTR	0.62	14.4	B
	WB	LTR	0.64	12.0	B	LTR	0.97	25.1	C	LTR	0.91	18.7	B
	Overall Intersection	-	**0.81**	**42.4**	**D**	-	**1.02**	**50.9**	**D**	-	**0.97**	**50.5**	**D**
111th Street at Roosevelt Avenue													
111th Street	NB	LTR	1.02	67.5	E	LTR	1.03	67.8	E	LTR	1.03	69.2	E
Roosevelt Avenue	EB	LTR	0.74	8.9	A	LTR	0.84	21.1	C	LTR	0.72	16.8	B
	WB	LTR	1.15	91.2	F	LTR	1.18	101.2	F	LTR	1.19	107.1	F
	Overall Intersection	-	**1.12**	**55.0**	**E**	-	**1.13**	**63.4**	**E**	-	**1.15**	**69.8**	**E**
114th Street at Roosevelt Avenue													
114th Street	NB	LTR	0.89	57.0	E	LTR	1.06	75.7	E	LTR	0.66	45.2	D
	SB	LTR	1.07	83.6	F	LTR	1.08	84.0	F	LTR	1.08	82.8	F
Roosevelt Avenue	EB	LTR	0.95	20.5	C	LTR	1.20	110.9	F	LTR	1.24	129.7	F
	WB	LTR	0.67	13.9	B	LTR	0.58	12.3	B	LTR	0.77	16.3	B
	Overall Intersection	-	**0.99**	**29.5**	**C**	-	**1.16**	**64.9**	**E**	-	**1.19**	**58.2**	**E**
126th Street at Roosevelt Avenue													
126th Street	NB	LTR	0.60	56.7	E	LTR	0.73	66.4	E	LTR	0.20	37.0	D
	SB	-	-	-	-	-	-	-	-	DefL	1.22	153.7	F
		LTR	1.14	108.5	F	LTR	1.12	101.8	F	TR	0.50	29.9	C
Roosevelt Avenue	EB	DefL	0.96	48.6	D	DefL	1.13	116.6	F	-	-	-	-
		TR	0.69	7.7	A	TR	0.54	12.2	B	LTR	0.60	22.5	C
	WB	LTR	0.60	12.4	B	LTR	0.65	13.2	B	LTR	0.49	20.0	B
	Overall Intersection	-	**1.01**	**40.6**	**D**	-	**1.13**	**47.4**	**D**	-	**0.87**	**52.7**	**D**
College Point Boulevard at Roosevelt Avenue													
College Point Boulevard	NB	L	1.26	177.2	F	L	1.29	177.8	F	L	1.00	81.3	F
		TR	0.68	28.5	C	TR	0.81	26.7	C	TR	0.76	25.3	C
	SB	TR	0.87	46.2	D	TR	1.19	122.2	F	TR	0.87	38.7	D
Roosevelt Avenue	EB	L	0.49	37.1	D	L	0.48	28.8	C	L	0.57	30.3	C
		TR	1.22	132.0	F	TR	1.21	122.4	F	TR	1.21	118.3	F
	WB	L	0.31	44.8	D	L	0.28	33.3	C	L	0.24	32.7	C
		TR	0.48	36.2	D	TR	0.54	28.0	C	TR	0.41	25.7	C
	Overall Intersection	-	**1.20**	**75.5**	**E**	-	**1.34**	**89.7**	**F**	-	**1.14**	**56.8**	**E**
Prince Street at Roosevelt Avenue													
Prince Street	SB	LTR	0.51	30.7	C	LTR	0.79	40.5	D	LTR	0.70	36.2	D
Roosevelt Avenue	EB	DefL	0.78	30.9	C	DefL	0.76	17.7	B	DefL	0.76	17.9	B
		TR	0.78	28.0	C	TR	0.63	12.8	B	TR	0.81	17.3	B
	WB	LTR	0.59	21.2	C	LTR	0.61	13.0	B	LTR	0.59	12.1	B
	Overall Intersection	-	**0.67**	**27.2**	**C**	-	**0.77**	**19.9**	**B**	-	**0.77**	**19.6**	**B**
Main Street at Roosevelt Avenue													
Main Street	NB	T	0.62	23.2	C	T	0.66	23.9	C	T	0.66	23.9	C
	SB	T	0.52	21.5	C	T	0.61	23.2	C	T	0.52	21.6	C
Roosevelt Avenue	EB	LTR	1.02	86.3	F	LTR	0.83	39.3	D	LTR	0.99	59.2	E
	WB	LTR	0.96	66.5	E	LTR	0.85	39.5	D	LTR	0.95	48.7	D
	Overall Intersection	-	**0.78**	**43.8**	**D**	-	**0.75**	**29.8**	**C**	-	**0.83**	**37.3**	**D**
Union Street at Roosevelt Avenue													
Union Street	NB	TR	0.53	18.6	B	TR	0.45	17.2	B	TR	0.44	17.1	B
	SB	LT	1.23	128.1	F	LT	0.97	47.8	D	LT	1.17	109.2	F
		R	1.87	417.7	F	R	2.58	746.9	F	R	1.85	417.1	F
Roosevelt Avenue	EB	LTR	2.26	595.0	F	LTR	1.89	433.8	F	LTR	1.92	446.6	F
	WB	LT	0.79	31.5	C	LT	0.56	24.1	C	LT	0.71	29.8	C
		R	0.73	39.4	D	R	1.10	141.9	F	R	1.23	180.9	F
	Overall Intersection	-	**2.04**	**224.3**	**F**	-	**2.26**	**238.1**	**F**	-	**1.88**	**205.4**	**F**
Parsons Boulevard at Roosevelt Avenue													
Parsons Boulevard	NB	LTR	0.78	35.4	D	LTR	0.71	26.4	C	LTR	0.91	36.6	D
	SB	LTR	0.76	32.5	C	LTR	0.72	25.2	C	LTR	0.74	25.9	C
Roosevelt Avenue	EB	LTR	0.67	30.7	C	LTR	0.44	19.7	B	LTR	0.69	25.6	C
	WB	LTR	0.90	43.2	D	LTR	0.61	23.6	C	LTR	0.73	27.3	C
	Overall Intersection	-	**0.84**	**35.6**	**D**	-	**0.67**	**24.2**	**C**	-	**0.82**	**29.2**	**C**
KISSENA BOULEVARD													
Main Street at Kissena Boulevard													
Main Street	NB	L	0.71	34.5	C	L	0.84	48.5	D	L	0.66	29.8	C
		TR	0.57	21.9	C	TR	0.58	21.1	C	TR	0.65	22.4	C
	SB	L	0.85	51.6	D	L	0.50	21.0	C	L	0.43	19.5	B
		TR	0.49	19.9	B	TR	0.52	19.4	B	TR	0.47	18.7	B
Kissena Boulevard	WB	T	0.71	37.1	D	T	0.64	24.0	C	T	0.64	23.9	C
	Overall Intersection	-	**0.77**	**29.1**	**C**	-	**0.74**	**23.6**	**C**	-	**0.65**	**21.7**	**C**
SANFORD AVENUE													
College Point Boulevard at Sanford Avenue													
College Point Boulevard	NB	L	0.36	14.2	B	L	0.48	19.3	B	L	0.23	12.5	B
		T	0.73	15.6	B	T	0.80	17.4	B	T	0.55	12.4	B
	SB	TR	0.73	15.5	B	TR	0.80	17.4	B	TR	0.78	16.7	B
Sanford Avenue	WB	L	0.79	46.9	D	L	0.85	51.8	D	L	0.56	34.0	C
		TR	0.46	28.3	C	TR	0.50	29.0	C	TR	0.33	26.4	C
	Overall Intersection	-	**0.75**	**19.2**	**B**	-	**0.82**	**21.3**	**C**	-	**0.71**	**17.1**	**B**
Union Street at Sanford Avenue													
Union Street	NB	LTR	0.37	21.3	C	LTR	0.45	23.3	C	LTR	0.41	21.9	C
	SB	LTR	0.68	25.4	C	LTR	0.90	32.6	C	LTR	0.79	28.6	C
Sanford Avenue	EB	-	-	-	-	DefL	0.55	23.2	C	-	-	-	-
		LTR	0.28	14.2	B	TR	0.32	15.0	B	LTR	0.23	13.7	B
	WB	LTR	0.88	29.1	C	LTR	0.73	22.8	C	LTR	0.68	21.7	C
	Overall Intersection	-	**0.79**	**24.2**	**C**	-	**0.80**	**26.0**	**C**	-	**0.73**	**23.3**	**C**

TABLE 4
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A NO ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue													
Parsons Boulevard	NB	LTR	0.98	39.7	D	LTR	0.82	29.6	C	LTR	0.89	32.7	C
	SB	LTR	0.68	24.2	C	LTR	0.71	25.1	C	LTR	0.72	25.2	C
Sanford Avenue	EB	LTR	0.60	23.1	C	LTR	0.61	22.9	C	LTR	0.79	28.6	C
	WB	LTR	0.74	27.3	C	LTR	0.83	31.3	C	LTR	0.79	30.0	C
Overall Intersection		**-**	**0.86**	**29.3**	**C**	**-**	**0.82**	**27.4**	**C**	**-**	**0.84**	**29.1**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE													
College Point Boulevard at 32nd Avenue													
College Point Boulevard	NB	T	0.38	23.6	C	T	0.35	23.2	C	T	0.43	23.8	C
		TR	0.26	22.0	C	TR	0.57	25.8	C	TR	0.34	22.8	C
	SB	L	0.44	33.2	C	L	0.57	37.6	D	L	0.27	27.3	C
		T	0.40	10.5	B	T	0.44	11.0	B	T	0.29	9.5	A
32nd Avenue	WB	LTR	0.72	36.8	D	LTR	0.45	29.8	C	LTR	0.29	26.7	C
Overall Intersection		**-**	**1.09**	**20.9**	**C**	**-**	**1.03**	**21.7**	**C**	**-**	**0.85**	**19.4**	**B**
NORTHERN BOULEVARD SERVICE ROAD													
College Point Boulevard at Northern Boulevard Service Road													
College Point Boulevard	NB	TR	0.48	12.5	B	TR	0.53	13.2	B	TR	0.50	12.7	B
	SB	LT	0.81	20.2	C	LT	0.88	23.8	C	LT	0.53	13.6	B
Northern Blvd Service Rd	WB	LR	0.70	33.1	C	LR	0.70	32.3	C	LR	0.55	28.7	C
Overall Intersection		**-**	**0.77**	**19.2**	**B**	**-**	**0.81**	**20.7**	**C**	**-**	**0.53**	**15.6**	**B**
STADIUM ROAD													
Boat Basin Road at Stadium Road													
Boat Basin Road	NB	-	-	-	-	-	-	-	-	L	1.76	375.0	F
		LTR	0.52	43.3	D	LTR	0.66	48.6	D	TR	1.38	202.4	F
	SB	LTR	0.87	33.0	C	LTR	0.76	25.0	C	LTR	0.29	20.0	C
Stadium Road	WB	LTR	0.85	31.7	C	LTR	0.93	35.6	D	LTR	0.30	13.6	B
Overall Intersection		**-**	**0.82**	**33.2**	**C**	**-**	**0.80**	**31.3**	**C**	**-**	**0.94**	**221.9**	**F**
UNSIGNALIZED INTERSECTIONS													
Willets Point Boulevard at 126th Street													
126th Street	SB	LT	-	8.1	A	LT	-	8.8	A	LT	-	8.0	A
Willets Point Boulevard	WB	LR	-	11.9	B	LR	-	10.5	B	LR	-	9.8	A
Overall Intersection		**-**	**-**	**11.9**	**B**	**-**	**-**	**10.7**	**B**	**-**	**-**	**9.8**	**A**
Boat Basin Road at Worlds Fair Marina													
Boat Basin Road	NB	L	-	45.9	E	L	-	36.1	E	L	-	79.7	F
		R	-	8.6	A	R	-	8.7	A	R	-	12.9	B
Worlds Fair Marina	WB	LT	-	11.8	B	LT	-	10.8	B	LT	-	7.7	A
Overall Intersection		**-**	**-**	**12.8**	**B**	**-**	**-**	**11.6**	**B**	**-**	**-**	**43.0**	**E**
Willets Point Boulevard at Northern Boulevard													
Willets Point Boulevard	NB	TR	-	9.5	A	TR	-	9.1	A	TR	-	9.1	A
Overall Intersection		**-**	**-**	**9.5**	**A**	**-**	**-**	**9.1**	**A**	**-**	**-**	**9.1**	**A**
Boat Basin Road at Stadium Road / Citifield Entrance 8													
Citifield Entrance 8	NB	-	-	-	-	-	-	-	-	-	-	-	-
Boat Basin Road	SB	LT	-	8.3	A	LT	-	7.7	A	-	-	-	-
Stadium Road	EB	LT	-	28.9	D	LT	-	62.2	F	LT	-	64.2	F
		TR	-	27.8	D	TR	-	30.1	D	-	-	-	-
Citifield Entrance 9	WB	R	-	10.3	B	R	-	9.3	A	R	-	50.9	F
Overall Intersection		**-**	**-**	**27.2**	**D**	**-**	**-**	**42.5**	**E**	**-**	**-**	**62.4**	**F**
Grand Central Parkway Ramp at West Park Loop/Stadium Road													
Grand Central Parkway Off-Ramp	EB	L	-	30.9	D	L	-	30.8	D	L	-	46.3	E
		R	-	9.6	A	R	-	9.1	A	R	-	21.5	C
Overall Intersection		**-**	**-**	**28.3**	**D**	**-**	**-**	**28.5**	**D**	**-**	**-**	**36.9**	**E**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 5
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**
SIGNALIZED INTERSECTIONS																	
ASTORIA BOULEVARD																	
108th Street at Astoria Boulevard																	
108th Street	NB	DefL	0.76	58.3	E	DefL	0.48	26.8	C	DefL	0.57	46.6	D	DefL	0.51	27.4	C
		T	0.22	35.8	D	T	0.13	20.1	C	T	0.22	35.7	D	T	0.20	21.1	C
	SB	LTR	0.36	38.5	D	LTR	0.18	20.7	C	LTR	0.40	39.4	D	LTR	0.25	21.7	C
Astoria Boulevard	EB	TR	0.60	25.7	C	TR	0.84	29.3	C	TR	0.91	27.3	C	TR	0.94	33.6	C
	WB	L	0.57	14.9	B	L	0.74	32.4	C	L	0.72	47.0	D	L	0.56	23.9	C
		TR	0.78	8.1	A	TR	0.34	12.4	B	TR	0.34	9.8	A	TR	0.36	12.6	B
Overall Intersection		-	**0.78**	**17.8**	**B**	-	**0.70**	**23.9**	**C**	-	**0.81**	**25.9**	**C**	-	**0.75**	**25.6**	**C**
NORTHERN BOULEVARD																	
108th Street at Northern Boulevard (RT. 25A)																	
108th Street	NB	LTR	1.14	113.7	F	LTR	1.20	139.0	F	LTR	1.17	129.2	F	LTR	1.12	109.4	F
	SB	LTR	0.98	81.6	F	LTR	0.93	70.1	E	LTR	1.13	116.0	F	LTR	0.92	67.4	E
Northern Boulevard (Rt. 25A)	EB	L	0.08	22.6	C	L	0.08	23.9	C	L	0.15	34.4	C	L	0.18	39.5	D
		TR	0.76	20.8	C	TR	0.88	28.8	C	TR	0.84	14.1	B	TR	0.94	32.6	C
	WB	L	0.44	21.5	C	L	0.72	45.5	D	L	0.67	42.2	D	L	0.71	42.9	D
		TR	1.05	39.0	D	TR	1.02	47.9	D	TR	1.15	92.0	F	TR	1.19	113.2	F
Overall Intersection		-	**0.94**	**40.3**	**D**	-	**1.01**	**49.7**	**D**	-	**1.08**	**59.1**	**E**	-	**1.09**	**76.9**	**E**
114th Street at Northern Boulevard (RT. 25A)																	
114th Street	SB	LTR	0.47	47.8	D	LTR	0.40	44.5	D	LTR	0.39	45.8	D	LTR	0.36	43.6	D
Northern Boulevard (Rt. 25A)	EB	T	0.87	41.1	D	T	0.81	27.1	C	T	1.15	85.9	F	T	0.71	23.7	C
		R	0.74	38.5	D	R	0.46	19.4	B	R	0.84	17.6	B	R	0.59	22.5	C
	WB	DefL	0.50	15.4	B	DefL	0.51	16.9	B	DefL	0.87	58.5	E	DefL	0.71	20.6	C
		T	1.19	102.1	F	T	0.75	12.8	B	T	0.92	18.5	B	T	0.99	27.7	C
Overall Intersection		-	**1.31**	**75.5**	**E**	-	**1.18**	**20.0**	**B**	-	**1.56**	**46.9**	**D**	-	**1.31**	**26.1**	**C**
126th Street at Northern Boulevard (RT. 25A)																	
126th Street	NB	L	0.28	41.1	D	L	0.46	44.0	D	L	0.42	43.2	D	L	0.44	43.6	D
		R	0.27	41.3	D	R	0.32	42.1	D	R	0.28	41.2	D	R	0.35	42.4	D
Northern Boulevard	EB	T	0.22	6.3	A	T	0.33	7.1	A	T	0.36	7.3	A	T	0.30	6.8	A
	WB	T	0.66	10.9	B	T	0.33	7.1	A	T	0.40	7.7	A	T	0.31	6.9	A
Grand Central Parkway Ramp	EB	T	0.44	8.1	A	T	0.42	7.8	A	T	0.48	8.5	A	T	0.45	8.1	A
Van Wyck & Whitestone Expressway Ramp	WB	T	1.12	111.2	F	T	0.77	16.7	B	T	0.90	25.2	C	T	0.75	15.3	B
Overall Intersection		-	**0.93**	**41.1**	**D**	-	**0.70**	**14.0**	**B**	-	**0.79**	**15.7**	**B**	-	**0.68**	**13.8**	**B**
Prince Street at Northern Boulevard (RT. 25A)																	
Prince Street	NB	LTR	1.15	132.8	F	LTR	1.19	129.9	F	LTR	1.23	148.9	F	LTR	1.13	105.2	F
	SB	LTR	0.80	53.5	D	LTR	0.54	41.3	D	LTR	0.53	41.7	D	LTR	0.47	36.9	D
Northern Boulevard (Rt. 25A)	EB	L	0.96	94.8	F	L	0.89	72.8	E	L	0.62	45.8	D	L	0.66	49.6	D
		T	0.81	22.5	C	T	0.93	35.6	D	T	0.97	38.1	D	T	1.06	64.0	E
	WB	L	0.96	92.6	F	L	0.90	91.0	F	L	0.81	72.6	E	L	0.82	65.3	E
		T	1.16	96.2	F	T	1.13	101.0	F	T	1.14	106.9	F	T	1.16	112.3	F
Northern Boulevard Service Rd.	EB	TR	0.45	16.7	B	TR	0.62	26.4	C	TR	0.66	27.5	C	TR	0.62	25.8	C
	WB	TR	0.67	19.1	B	TR	0.71	35.1	D	TR	0.66	35.4	D	TR	0.75	35.0	D
Overall Intersection		-	**1.12**	**62.5**	**E**	-	**1.10**	**66.1**	**E**	-	**1.03**	**67.1**	**E**	-	**1.04**	**76.4**	**E**
Main Street at Northern Boulevard (RT. 25A)																	
Main Street	NB	L	0.77	43.7	D	L	0.98	64.9	E	L	0.96	61.0	E	L	0.93	56.1	E
		R	0.85	55.0	D	R	0.68	39.6	D	R	0.97	76.1	E	R	0.89	62.7	E
Northern Boulevard (Rt 25A)	EB	T	0.94	39.8	D	T	0.97	44.1	D	T	1.07	67.4	E	T	0.96	39.9	D
		R	1.17	124.0	F	R	1.28	168.4	F	R	1.19	127.1	F	R	1.38	209.6	F
Northern Boulevard (Rt 25A)	WB	L	0.17	26.4	C	L	0.10	25.7	C	L	0.17	26.8	C	L	0.08	25.2	C
		T	1.05	44.3	D	T	0.76	22.8	C	T	0.77	23.0	C	T	0.94	29.8	C
Overall Intersection		-	**1.01**	**50.8**	**D**	-	**1.02**	**57.3**	**E**	-	**1.08**	**59.3**	**E**	-	**1.16**	**60.5**	**E**
Union Street at Northern Boulevard (RT. 25A)																	
Union Street	NB	TR	0.67	35.0	C	TR	0.78	38.8	D	TR	0.78	38.5	D	TR	0.76	37.9	D
	SB	TR	0.89	42.3	D	TR	0.56	32.4	C	TR	0.82	39.5	D	TR	0.65	34.4	C
Northern Boulevard (Rt. 25A)	EB	L	0.96	65.4	E	L	0.55	22.0	C	L	0.77	43.4	D	L	0.73	33.0	C
		TR	1.23	141.8	F	TR	1.38	209.8	F	TR	1.13	97.5	F	TR	1.45	242.3	F
	WB	L	1.02	78.5	E	L	1.18	142.7	F	L	0.86	49.4	D	L	0.86	46.6	D
		TR	0.96	39.5	D	TR	0.83	37.5	D	TR	0.93	41.4	D	TR	1.03	56.1	E
Overall Intersection		-	**1.12**	**72.8**	**E**	-	**1.42**	**109.6**	**F**	-	**0.98**	**63.9**	**E**	-	**1.10**	**120.9**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)																	
Parsons Boulevard	NB	L	0.96	92.2	F	L	0.72	57.4	E	L	0.84	70.0	E	L	0.84	68.1	E
		TR	0.56	39.8	D	TR	0.52	38.8	D	TR	0.50	35.3	D	TR	0.60	40.8	D
	SB	LTR	0.82	47.6	D	LTR	1.16	118.2	F	LTR	1.12	98.5	F	LTR	1.13	102.6	F
Northern Boulevard (Rt. 25A)	EB	L	0.53	45.4	D	L	0.80	57.9	E	L	0.47	46.5	D	L	0.50	47.3	D
		TR	1.03	60.9	E	TR	1.04	64.4	E	TR	0.97	37.2	D	TR	1.08	75.0	E
	WB	L	0.44	36.7	D	L	0.36	35.7	D	L	0.40	40.6	D	L	0.49	44.0	D
		TR	1.12	86.5	F	TR	1.17	113.2	F	TR	1.09	78.3	E	TR	1.16	107.8	F
Overall Intersection		-	**1.02**	**69.9**	**E**	-	**1.19**	**85.2**	**F**	-	**1.09**	**58.3**	**E**	-	**1.09**	**86.1**	**F**
34TH AVENUE																	
114th Street at 34th Avenue																	
114th Street	SB	L	0.84	38.8	D	L	0.84	43.2	D	L	1.00	62.0	E	L	0.98	62.0	E
		T	0.31	24.6	C	T	0.23	24.0	C	T	0.40	26.1	C	T	0.34	25.3	C
34th Avenue	EB	TR	0.45	12.1	B	TR	0.40	11.4	B	TR	0.38	11.2	B	TR	0.57	13.7	B
Overall Intersection		-	**0.59**	**24.1**	**C**	-	**0.55**	**26.6**	**C**	-	**0.60**	**37.1**	**D**	-	**0.71**	**33.5**	**C**
126th Street/GCP Ramp at 34th Avenue																	
126th Street	NB	-	-	-	-	-	-	-	-	DefL	0.36	23.8	C	-	-	-	-
		LTR	0.17	19.9	B	LTR	0.25	20.9	C	TR	0.27	21.2	C	LTR	0.26	20.9	C
Northern Boulevard Ramp	SB	LTR	0.32	22.4	C	LTR	0.38	23.7	C	LTR	0.28	21.7	C	LTR	0.36	23.1	C
GCP Ramp	SB	LTR	0.82	65.2	E	LTR	0.89	74.3	E	LTR	0.76	59.9	E	LTR	0.81	64.6	E
Shea Road	EB	LTR	0.47	43.1	D	LTR	0.56	45.0	D	LTR	0.44	42.6	D	LTR	0.63	46.6	D
34th Avenue	WB	LTR	0.64	53.4	D	LTR	0.66	54.6	D	LTR	0.99	96.6	F	LTR	0.81	66.8	E
Overall Intersection		-	**0.52**	**40.2**	**D**	-	**0.57**	**41.6**	**D**	-	**0.61**	**43.7**	**D**	-	**0.58**	**40.5**	**D**

TABLE 5
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE																	
108th Street at Roosevelt Avenue																	
108th Street	NB	LTR	1.03	81.3	F	LTR	1.08	100.1	F	LTR	1.11	103.1	F	LTR	1.19	134.9	F
	SB	LTR	1.10	100.9	F	LTR	1.23	150.3	F	LTR	1.18	128.7	F	LTR	1.16	118.8	F
Roosevelt Avenue	EB	LTR	0.69	16.3	B	LTR	0.75	18.8	B	LTR	0.74	9.9	A	LTR	0.70	16.4	B
	WB	LTR	0.82	10.6	B	LTR	0.84	22.8	C	LTR	0.83	17.7	B	LTR	0.78	15.0	B
	Overall Intersection	-	**0.90**	**37.4**	**D**	-	**0.95**	**54.8**	**D**	-	**0.93**	**48.9**	**D**	-	**0.89**	**54.3**	**D**
111th Street at Roosevelt Avenue																	
111th Street	NB	LTR	1.00	69.6	E	LTR	0.72	50.9	D	LTR	0.86	56.9	E	LTR	1.05	77.4	E
Roosevelt Avenue	EB	LTR	0.67	15.4	B	LTR	0.73	16.7	B	LTR	0.79	10.8	B	LTR	0.85	22.9	C
	WB	LTR	0.93	18.7	B	LTR	0.87	25.3	C	LTR	1.24	129.8	F	LTR	1.21	118.3	F
	Overall Intersection	-	**0.95**	**27.5**	**C**	-	**0.83**	**25.5**	**C**	-	**1.13**	**76.2**	**E**	-	**1.17**	**74.9**	**E**
114th Street at Roosevelt Avenue																	
114th Street	NB	LTR	1.03	76.1	E	LTR	0.70	50.7	D	LTR	0.98	63.6	E	LTR	1.02	72.1	E
	SB	LTR	1.12	111.0	F	LTR	0.68	52.8	D	LTR	1.08	87.8	F	LTR	1.09	91.5	F
Roosevelt Avenue	EB	LTR	0.82	22.7	C	LTR	0.88	28.5	C	LTR	0.91	20.4	C	LTR	1.20	115.0	F
	WB	LTR	0.57	5.4	A	LTR	0.47	10.6	B	LTR	0.74	15.5	B	LTR	0.69	14.3	B
	Overall Intersection	-	**0.91**	**31.6**	**C**	-	**0.83**	**25.0**	**C**	-	**0.96**	**30.5**	**C**	-	**1.17**	**60.0**	**E**
126th Street at Roosevelt Avenue																	
126th Street	NB	LTR	0.22	37.1	D	LTR	0.90	65.1	E	LTR	0.67	54.4	D	LTR	0.35	40.3	D
	SB	DefL	1.22	173.6	F	DefL	1.21	171.5	F	DefL	1.03	99.7	F	DefL	1.10	125.2	F
		TR	0.67	52.5	D	TR	0.63	51.1	D	TR	0.65	47.4	D	TR	0.53	43.8	D
Roosevelt Avenue	EB	LTR	0.56	12.5	B	LTR	0.52	11.6	B	LTR	0.69	7.9	A	LTR	0.68	14.8	B
	WB	LTR	0.62	6.1	A	LTR	0.50	11.1	B	LTR	0.60	12.7	B	LTR	0.48	10.8	B
	Overall Intersection	-	**0.77**	**34.2**	**C**	-	**0.69**	**37.1**	**D**	-	**0.79**	**26.8**	**C**	-	**0.79**	**32.2**	**C**
College Point Boulevard at Roosevelt Avenue																	
College Point Boulevard	NB	L	1.41	244.3	F	L	1.35	212.5	F	L	1.24	174.8	F	L	1.29	181.9	F
		TR	0.73	27.4	C	TR	0.88	31.0	C	TR	0.75	31.1	C	TR	0.93	34.4	C
	SB	TR	0.85	43.4	D	TR	1.20	128.1	F	TR	1.32	190.5	F	TR	1.01	55.4	E
Roosevelt Avenue	EB	L	0.44	40.0	D	L	0.56	30.4	C	L	0.48	37.1	D	L	0.57	20.8	C
		TR	0.98	60.1	E	TR	1.26	143.8	F	TR	1.21	128.8	F	TR	1.24	132.8	F
	WB	L	0.22	45.2	D	L	0.28	33.5	C	L	0.25	43.7	D	L	0.34	34.3	C
		TR	0.68	44.5	D	TR	0.58	30.4	C	TR	0.45	35.9	D	TR	0.49	27.0	C
	Overall Intersection	-	**1.10**	**67.8**	**E**	-	**1.29**	**97.0**	**F**	-	**1.32**	**117.5**	**F**	-	**1.26**	**69.1**	**E**
Prince Street at Roosevelt Avenue																	
Prince Street	SB	LTR	0.52	31.0	C	LTR	0.86	47.3	D	LTR	0.60	33.2	C	LTR	0.96	58.3	E
Roosevelt Avenue	EB	DefL	1.28	175.3	F	DefL	0.95	37.2	D	DefL	1.09	94.6	F	DefL	0.79	19.8	B
		TR	0.59	23.1	C	TR	0.67	14.3	B	TR	0.69	25.3	C	TR	0.75	15.7	B
	WB	LTR	0.90	33.9	C	LTR	0.53	12.0	B	LTR	0.60	20.7	C	LTR	0.57	12.6	B
	Overall Intersection	-	**0.96**	**66.2**	**E**	-	**0.92**	**26.7**	**C**	-	**0.88**	**42.8**	**D**	-	**0.85**	**25.4**	**C**
Main Street at Roosevelt Avenue																	
Main Street	NB	T	0.60	22.3	C	T	0.67	24.4	C	T	0.51	21.1	C	T	0.76	26.4	C
	SB	T	0.43	19.4	B	T	0.51	21.6	C	T	0.54	21.7	C	T	0.64	23.8	C
Roosevelt Avenue	EB	LTR	0.68	41.1	D	LTR	0.89	47.9	D	LTR	1.16	138.8	F	LTR	0.98	60.2	E
	WB	LTR	1.03	77.0	E	LTR	0.91	43.5	D	LTR	1.12	106.2	F	LTR	0.85	31.4	C
	Overall Intersection	-	**0.78**	**40.0**	**D**	-	**0.79**	**32.7**	**C**	-	**0.79**	**62.6**	**E**	-	**0.87**	**33.4**	**C**
Union Street at Roosevelt Avenue																	
Union Street	NB	TR	0.60	20.0	B	TR	0.58	19.4	B	TR	0.42	16.7	B	TR	0.56	19.2	B
	SB	LT	1.09	75.8	E	LT	0.99	52.8	D	LT	0.92	36.8	D	LT	1.07	71.4	E
		R	0.85	35.3	D	R	3.00+	1000.0+	F	R	2.58	751.0	F	R	2.83	856.2	F
Roosevelt Avenue	EB	LTR	1.40	220.7	F	LTR	2.04	503.2	F	LTR	1.84	408.5	F	LTR	2.33	630.2	F
	WB	LT	1.00	51.1	D	LT	0.62	25.8	C	LT	0.56	24.4	C	LT	0.55	23.8	C
		R	1.04	78.8	E	R	0.87	66.4	E	R	0.99	93.9	F	R	1.26	194.6	F
	Overall Intersection	-	**1.23**	**77.9**	**E**	-	**3.00+**	**492.0**	**F**	-	**2.23**	**218.6**	**F**	-	**2.60**	**313.8**	**F**
Parsons Boulevard at Roosevelt Avenue																	
Parsons Boulevard	NB	LTR	1.14	96.6	F	LTR	0.65	24.6	C	LTR	0.85	40.0	D	LTR	0.86	34.8	C
	SB	LTR	0.81	34.6	C	LTR	0.65	23.6	C	LTR	0.71	30.6	C	LTR	0.79	27.2	C
Roosevelt Avenue	EB	LTR	0.49	25.8	C	LTR	0.59	23.2	C	LTR	0.50	26.0	C	LTR	0.75	28.3	C
	WB	LTR	1.15	104.6	F	LTR	0.77	30.3	C	LTR	0.75	34.5	C	LTR	0.87	37.2	D
	Overall Intersection	-	**1.14**	**71.4**	**E**	-	**0.71**	**25.5**	**C**	-	**0.80**	**33.4**	**C**	-	**0.87**	**31.6**	**C**
KISSENA BOULEVARD																	
Main Street at Kissena Boulevard																	
Main Street	NB	L	0.75	34.0	C	L	0.86	51.1	D	L	0.77	38.8	D	L	1.18	136.5	F
		TR	0.69	25.1	C	TR	0.63	22.2	C	TR	0.58	22.4	C	TR	0.69	23.4	C
	SB	L	0.65	38.3	D	L	0.46	20.4	C	L	0.84	51.7	D	L	0.55	21.9	C
		TR	0.39	18.3	B	TR	0.52	19.4	B	TR	0.46	19.3	B	TR	0.57	20.2	C
Kissena Boulevard	WB	T	0.73	38.3	D	T	0.72	27.1	C	T	0.66	35.5	D	T	0.75	27.2	C
	Overall Intersection	-	**0.74**	**27.8**	**C**	-	**0.79**	**24.7**	**C**	-	**0.80**	**29.6**	**C**	-	**0.97**	**35.0**	**D**
SANFORD AVENUE																	
College Point Boulevard at Sanford Avenue																	
College Point Boulevard	NB	L	0.21	10.2	B	L	0.56	23.6	C	L	0.52	31.5	C	L	0.63	31.0	C
		T	0.68	14.9	B	T	0.66	14.4	B	T	0.60	13.2	B	T	0.74	15.8	B
	SB	TR	0.59	13.2	B	TR	0.76	16.8	B	TR	0.98	32.5	C	TR	0.85	19.2	B
Sanford Avenue	WB	L	0.79	45.6	D	L	0.57	34.8	C	L	0.77	46.6	D	L	0.69	39.1	D
		TR	0.55	30.0	C	TR	0.37	27.0	C	TR	0.36	26.8	C	TR	0.52	29.4	C
	Overall Intersection	-	**0.72**	**19.1**	**B**	-	**0.70**	**18.1**	**B**	-	**0.91**	**26.9**	**C**	-	**0.80**	**20.5**	**C**
Union Street at Sanford Avenue																	
Union Street	NB	LTR	0.70	30.1	C	LTR	0.34	20.8	C	LTR	0.30	20.1	C	LTR	0.39	21.8	C
	SB	LTR	0.61	24.7	C	LTR	0.61	24.2	C	LTR	0.73	26.6	C	LTR	0.74	27.4	C
Sanford Avenue	EB	DefL	0.57	25.6	C	DefL	0.42	19.5	B	-	-	-	-	DefL	0.48	21.2	C
		TR	0.37	15.8	B	TR	0.21	13.7	B	LTR	0.32	14.7	B	TR	0.35	15.5	B
	WB	LTR	0.88	29.1	C	LTR	0.88	29.3	C	LTR	0.68	22.2	C	LTR	0.87	28.8	C
	Overall Intersection	-	**0.80**	**25.7**	**C**	-	**0.76**	**24.4**	**C**	-	**0.70**	**22.3**	**C**	-	**0.81**	**25.1**	**C**

TABLE 5
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue																	
Parsons Boulevard	NB	LTR	1.10	73.7	E	LTR	1.15	94.1	F	LTR	0.89	33.8	C	LTR	0.92	37.8	D
	SB	LTR	0.96	38.1	D	LTR	0.71	25.1	C	LTR	0.77	27.2	C	LTR	0.85	29.6	C
Sanford Avenue	EB	LTR	0.72	27.2	C	LTR	0.56	22.2	C	LTR	0.70	26.0	C	LTR	0.73	26.6	C
	WB	LTR	0.82	31.0	C	LTR	0.87	34.4	C	LTR	0.78	29.7	C	LTR	0.91	38.6	D
Overall Intersection		**-**	**0.97**	**43.6**	**D**	**-**	**1.01**	**46.0**	**D**	**-**	**0.84**	**29.3**	**C**	**-**	**0.92**	**33.1**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE																	
College Point Boulevard at 32nd Avenue																	
College Point Boulevard	NB	T	0.44	23.8	C	T	0.71	30.0	C	T	0.50	25.2	C	T	0.36	23.2	C
		TR	0.71	31.7	C	TR	0.80	36.0	D	TR	0.93	46.9	D	TR	0.79	34.4	C
	SB	L	0.51	36.8	D	L	0.75	48.2	D	L	0.49	34.8	C	L	0.52	36.1	D
		T	0.59	12.9	B	T	0.49	11.6	B	T	0.43	10.9	B	T	0.41	10.7	B
32nd Avenue	WB	LTR	0.87	44.3	D	LTR	0.78	39.6	D	LTR	0.89	44.7	D	LTR	0.54	31.9	C
Overall Intersection		**-**	**1.40**	**23.9**	**C**	**-**	**1.29**	**27.8**	**C**	**-**	**1.15**	**29.1**	**C**	**-**	**1.05**	**23.3**	**C**
NORTHERN BOULEVARD SERVICE ROAD																	
College Point Boulevard at Northern Boulevard Service Road																	
College Point Boulevard	NB	TR	0.42	11.8	B	TR	0.53	13.1	B	TR	0.56	13.5	B	TR	0.54	13.3	B
	SB	LT	0.87	23.9	C	LT	0.86	23.5	C	LT	0.86	23.4	C	LT	0.79	20.2	C
Northern Blvd Service Rd	WB	LR	0.79	36.8	D	LR	0.79	37.0	D	LR	0.73	34.2	C	LR	0.69	32.5	C
Overall Intersection		**-**	**0.84**	**22.0**	**C**	**-**	**0.83**	**21.6**	**C**	**-**	**0.81**	**20.7**	**C**	**-**	**0.75**	**19.2**	**B**
STADIUM ROAD																	
Boat Basin Road at Stadium Road																	
Boat Basin Road	NB	LTR	0.09	7.3	A	LTR	0.07	7.2	A	LTR	0.05	7.1	A	LTR	0.08	7.2	A
	SB	-	-	-	-	DefL	0.27	9.2	A	-	-	-	-	DefL	0.20	8.4	A
		LTR	0.39	9.7	A	TR	0.18	8.1	A	LTR	0.23	8.2	A	TR	0.16	7.9	A
Stadium Road	WB	LTR	0.24	25.8	C	LTR	0.19	25.2	C	LTR	0.30	26.4	C	LTR	0.28	26.2	C
Overall Intersection		**-**	**0.34**	**12.8**	**B**	**-**	**0.25**	**12.5**	**B**	**-**	**0.25**	**14.8**	**B**	**-**	**0.23**	**14.4**	**B**
UNSIGNALIZED INTERSECTIONS																	
Willets Point Boulevard at 126th Street																	
126th Street	SB	LT	-	8.2	A	LT	-	8.3	A	LT	-	8.3	A	LT	-	8.5	A
Willets Point Boulevard	WB	LR	-	11.1	B	LR	-	12.2	B	LR	-	14.9	B	LR	-	15.4	C
Overall Intersection		**-**	**-**	**10.2**	**B**	**-**	**-**	**10.7**	**B**	**-**	**-**	**12.2**	**B**	**-**	**-**	**14.1**	**B**
Boat Basin Road at Worlds Fair Marina																	
Boat Basin Road	NB	L	-	40.2	E	L	-	19.5	C	L	-	16.6	C	L	-	17.2	C
		R	-	8.7	A	R	-	8.5	A	R	-	8.8	A	R	-	8.6	A
Worlds Fair Marina	WB	LT	-	8.9	A	LT	-	8.2	A	LT	-	7.8	A	LT	-	7.9	A
Overall Intersection		**-**	**-**	**10.2**	**B**	**-**	**-**	**9.4**	**A**	**-**	**-**	**9.1**	**A**	**-**	**-**	**9.9**	**A**
Willets Point Boulevard at Northern Boulevard																	
Willets Point Boulevard	NB	TR	-	10.3	B	TR	-	10.6	B	TR	-	9.9	A	TR	-	9.2	A
Overall Intersection		**-**	**-**	**10.3**	**B**	**-**	**-**	**10.6**	**B**	**-**	**-**	**9.9**	**A**	**-**	**-**	**9.2**	**A**
Boat Basin Road at Stadium Road / Citifield Entrance 8																	
Citifield Entrance 8	NB	T	-	10.5	B	T	-	11.4	B	T	-	10.7	B	T	-	12.1	B
Boat Basin Road	SB	LT	-	11.3	B	LT	-	11.4	B	LT	-	11.3	B				
Stadium Road	EB	LT	-	7.4	A	LT	-	7.4	A	LT	-	7.4	A	LT	-	7.5	A
Overall Intersection		**-**	**-**	**8.5**	**A**	**-**	**-**	**8.6**	**A**	**-**	**-**	**9.1**	**A**	**-**	**-**	**7.5**	**A**
Grand Central Parkway Ramp at West Park Loop/Stadium Road																	
Grand Central Parkway Off-Ramp	EB	L	-	11.4	B	L	-	10.7	B	L	-	10.7	B	L	-	11.2	B
		R	-	9.4	A	R	-	9.2	A	R	-	9.4	A	R	-	9.3	A
Overall Intersection		**-**	**-**	**10.9**	**B**	**-**	**-**	**10.2**	**B**	**-**	**-**	**10.0**	**A**	**-**	**-**	**10.7**	**B**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 6
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B NO ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
SIGNALIZED INTERSECTIONS													
ASTORIA BOULEVARD													
108th Street at Astoria Boulevard													
108th Street	NB	DefL	0.67	51.7	D	DefL	0.46	25.9	C	DefL	0.53	27.6	C
		T	0.28	36.8	D	T	0.20	21.0	C	T	0.21	21.2	C
	SB	LTR	0.35	38.0	D	LTR	0.22	21.4	C	LTR	0.19	20.9	C
Astoria Boulevard	EB	TR	1.07	58.1	E	TR	0.75	26.8	C	TR	0.68	25.4	C
	WB	L	0.74	51.1	D	L	0.79	37.1	D	L	0.92	51.3	D
		TR	0.28	9.3	A	TR	0.29	11.9	B	TR	0.30	12.0	B
Overall Intersection		-	**0.92**	**48.0**	**D**	-	**0.66**	**23.1**	**C**	-	**0.72**	**24.1**	**C**
NORTHERN BOULEVARD													
108th Street at Northern Boulevard (RT. 25A)													
108th Street	NB	LTR	1.17	125.0	F	LTR	1.15	117.0	F	LTR	1.18	132.0	F
	SB	LTR	1.12	108.4	F	LTR	1.08	96.6	F	LTR	1.18	129.8	F
Northern Boulevard (Rt. 25A)	EB	L	0.19	32.3	C	L	0.09	35.8	D	L	0.14	36.5	D
		TR	0.86	14.4	B	TR	0.97	36.3	D	TR	0.97	35.5	D
	WB	L	0.73	45.9	D	L	0.83	47.7	D	L	0.99	68.6	E
		TR	1.07	58.3	E	TR	1.16	101.9	F	TR	1.13	89.5	F
Overall Intersection		-	**1.04**	**45.2**	**D**	-	**1.11**	**76.0**	**E**	-	**1.13**	**75.4**	**E**
114th Street at Northern Boulevard (RT. 25A)													
114th Street	SB	LTR	0.77	56.7	E	LTR	0.62	49.6	D	LTR	0.47	45.9	D
Northern Boulevard (Rt. 25A)	EB	T	1.00	33.3	C	T	0.76	24.7	C	T	0.67	22.6	C
		R	0.63	14.9	B	R	0.79	28.8	C	R	0.66	24.6	C
	WB	DefL	0.82	48.9	D	DefL	0.82	36.4	D	DefL	1.27	149.3	F
		T	0.87	15.1	B	T	0.85	15.8	B	T	1.20	108.6	F
Overall Intersection		-	**1.51**	**25.7**	**C**	-	**1.31**	**23.4**	**C**	-	**1.91**	**83.5**	**F**
126th Street at Northern Boulevard (RT. 25A)													
126th Street	NB	L	0.47	44.0	D	L	0.62	46.9	D	L	1.17	124.2	F
		R	0.39	43.6	D	R	0.33	41.9	D	R	0.65	44.2	D
Northern Boulevard	EB	T	0.33	7.0	A	T	0.23	6.3	A	T	0.23	6.3	A
	WB	T	0.81	16.5	B	T	0.68	12.6	B	T	0.31	6.9	A
Grand Central Parkway Ramp	EB	T	0.58	9.8	A	T	0.47	8.3	A	T	0.49	8.5	A
Van Wyck & Whitestone Expressway Ramp	WB	T	0.79	14.5	B	T	0.74	12.9	B	T	0.64	11.9	B
Overall Intersection		-	**0.73**	**15.3**	**B**	-	**0.71**	**15.1**	**B**	-	**0.76**	**33.7**	**C**
Prince Street at Northern Boulevard (RT. 25A)													
Prince Street	NB	LTR	1.12	102.0	F	LTR	1.11	98.7	F	LTR	1.13	109.9	F
	SB	LTR	0.59	42.3	D	LTR	0.51	37.7	D	LTR	0.41	38.7	D
Northern Boulevard (Rt. 25A)	EB	L	0.97	73.3	E	L	1.00	84.9	F	L	0.89	66.0	E
		T	1.04	55.8	E	T	0.97	39.4	D	T	1.03	51.1	D
	WB	L	0.78	69.0	E	L	0.97	99.7	F	L	0.90	89.7	F
		T	1.10	89.8	F	T	1.13	99.3	F	T	0.98	49.4	D
Northern Boulevard Service Rd.	EB	TR	0.59	25.1	C	TR	0.51	23.1	C	TR	0.45	21.8	C
	WB	TR	0.79	41.6	D	TR	0.75	35.5	D	TR	0.54	29.1	C
Overall Intersection		-	**1.08**	**66.7**	**E**	-	**1.10**	**65.6**	**E**	-	**1.04**	**52.1**	**D**
Main Street at Northern Boulevard (RT. 25A)													
Main Street	NB	L	0.90	52.7	D	L	0.86	48.1	D	L	0.85	47.9	D
		R	0.91	62.7	E	R	0.95	68.8	E	R	0.74	42.2	D
Northern Boulevard (Rt 25A)	EB	T	1.14	95.9	F	T	0.96	40.5	D	T	1.05	64.2	E
		R	1.23	137.5	F	R	1.34	192.7	F	R	1.18	124.2	F
Northern Boulevard (Rt 25A)	WB	L	0.23	28.0	C	L	0.16	26.6	C	L	0.12	25.9	C
		T	0.78	23.2	C	T	0.88	26.6	C	T	0.70	21.1	C
Overall Intersection		-	**1.07**	**69.8**	**E**	-	**1.16**	**56.6**	**E**	-	**0.98**	**54.6**	**D**
Union Street at Northern Boulevard (RT. 25A)													
Union Street	NB	TR	0.70	35.8	D	TR	0.69	35.6	D	TR	0.66	34.8	C
	SB	TR	0.69	35.3	D	TR	0.60	33.1	C	TR	0.68	34.8	C
Northern Boulevard (Rt. 25A)	EB	L	0.64	31.6	C	L	0.69	34.9	C	L	0.74	34.3	C
		TR	1.18	115.2	F	TR	1.27	160.6	F	TR	1.24	145.9	F
	WB	L	0.79	41.1	D	L	0.98	67.7	E	L	1.00	69.1	E
		TR	1.00	63.2	E	TR	0.98	46.9	D	TR	0.85	38.9	D
Overall Intersection		-	**0.95**	**76.7**	**E**	-	**0.99**	**85.5**	**F**	-	**0.97**	**80.4**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)													
Parsons Boulevard	NB	L	0.88	79.4	E	L	0.68	50.8	D	L	0.74	57.2	E
		TR	0.58	40.4	D	TR	0.54	39.1	D	TR	0.59	38.4	D
	SB	LTR	1.18	122.9	F	LTR	1.13	103.0	F	LTR	1.13	100.4	F
Northern Boulevard (Rt. 25A)	EB	L	0.52	47.7	D	L	0.41	43.3	D	L	0.45	43.5	D
		TR	0.97	36.6	D	TR	1.13	94.5	F	TR	1.15	102.7	F
	WB	L	0.49	42.0	D	L	0.44	44.2	D	L	0.52	46.2	D
		TR	1.13	93.1	F	TR	1.07	68.9	E	TR	1.12	91.0	F
Overall Intersection		-	**1.13**	**66.9**	**E**	-	**1.10**	**77.1**	**E**	-	**1.09**	**88.3**	**F**
34TH AVENUE													
114th Street at 34th Avenue													
114th Street	SB	L	1.05	79.9	E	L	1.03	72.3	E	L	1.17	117.3	F
		T	0.54	28.9	C	T	0.54	28.6	C	T	0.35	25.1	C
34th Avenue	EB	TR	0.57	13.7	B	TR	0.46	12.2	B	TR	0.42	11.7	B
Overall Intersection		-	**0.74**	**41.0**	**D**	-	**0.66**	**40.5**	**D**	-	**0.70**	**68.2**	**E**
126th Street/GCP Ramp at 34th Avenue													
126th Street	NB	DefL	0.82	78.7	E	DefL	1.20	168.9	F	DefL	0.89	69.2	E
		TR	0.38	37.3	D	TR	0.53	37.1	D	TR	0.68	39.5	D
Northern Boulevard Ramp	SB	LTR	0.78	54.5	D	LTR	0.59	41.1	D	LTR	0.26	32.5	C
GCP Ramp	SB	LTR	1.35	212.5	F	LTR	1.47	267.9	F	LTR	0.65	47.7	D
Shea Road	EB	DefL	0.50	32.9	C	-	-	-	-	DefL	1.83	419.6	F
		TR	0.31	28.2	C	LTR	0.45	31.6	C	TR	0.97	70.0	E
34th Avenue	WB	LTR	0.30	28.0	C	LTR	0.44	31.0	C	LTR	0.56	40.3	D
Overall Intersection		-	**0.82**	**118.2**	**F**	-	**0.98**	**141.1**	**F**	-	**1.17**	**125.9**	**F**

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CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B NO ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE													
108th Street at Roosevelt Avenue													
108th Street	NB	LTR	1.16	119.5	F	LTR	1.18	127.3	F	LTR	1.16	118.2	F
	SB	LTR	1.17	126.6	F	LTR	1.17	125.8	F	LTR	1.21	140.7	F
Roosevelt Avenue	EB	LTR	0.71	8.4	A	LTR	0.78	19.4	B	LTR	0.64	14.9	B
	WB	LTR	0.66	12.3	B	LTR	1.00	31.3	C	LTR	0.92	19.7	B
	Overall Intersection	-	**0.83**	**50.6**	**D**	-	**1.05**	**58.8**	**E**	-	**0.99**	**57.1**	**E**
111th Street at Roosevelt Avenue													
111th Street	NB	LTR	1.05	77.5	E	LTR	1.06	76.7	E	LTR	1.06	78.8	E
Roosevelt Avenue	EB	LTR	0.76	9.4	A	LTR	0.86	22.9	C	LTR	0.74	17.8	B
	WB	LTR	1.19	108.0	F	LTR	1.22	120.1	F	LTR	1.23	124.7	F
	Overall Intersection	-	**1.15**	**64.3**	**E**	-	**1.17**	**73.7**	**E**	-	**1.18**	**80.2**	**F**
114th Street at Roosevelt Avenue													
114th Street	NB	LTR	0.91	59.6	E	LTR	1.09	89.3	F	LTR	0.67	45.8	D
	SB	LTR	1.10	94.4	F	LTR	1.11	96.2	F	LTR	1.11	95.2	F
Roosevelt Avenue	EB	LTR	0.99	26.8	C	LTR	1.24	130.9	F	LTR	1.29	154.7	F
	WB	LTR	0.69	14.3	B	LTR	0.60	12.6	B	LTR	0.79	17.0	B
	Overall Intersection	-	**1.02**	**33.4**	**C**	-	**1.20**	**75.4**	**E**	-	**1.24**	**66.8**	**E**
126th Street at Roosevelt Avenue													
126th Street	NB	LTR	0.64	60.2	E	LTR	0.83	80.5	F	LTR	0.22	37.4	D
	SB	-	-	-	-	-	-	-	-	DefL	1.25	163.9	F
		LTR	1.17	122.0	F	LTR	1.15	114.7	F	TR	0.51	30.2	C
Roosevelt Avenue	EB	DefL	1.02	64.4	E	DefL	1.19	138.6	F	-	-	-	-
		TR	0.71	8.0	A	TR	0.55	12.4	B	LTR	0.61	22.8	C
	WB	LTR	0.62	12.8	B	LTR	0.66	13.6	B	LTR	0.50	20.1	C
	Overall Intersection	-	**1.06**	**45.7**	**D**	-	**1.18**	**53.5**	**D**	-	**0.89**	**55.2**	**E**
College Point Boulevard at Roosevelt Avenue													
College Point Boulevard	NB	L	1.29	188.9	F	L	1.32	190.6	F	L	1.04	91.6	F
		TR	0.69	29.0	C	TR	0.83	27.7	C	TR	0.78	26.0	C
	SB	TR	0.89	47.6	D	TR	1.22	132.3	F	TR	0.89	39.8	D
Roosevelt Avenue	EB	L	0.50	37.4	D	L	0.49	28.9	C	L	0.58	30.5	C
		TR	1.26	147.7	F	TR	1.24	132.9	F	TR	1.24	129.6	F
	WB	L	0.31	44.9	D	L	0.28	33.4	C	L	0.24	32.8	C
		TR	0.48	36.4	D	TR	0.55	28.3	C	TR	0.42	25.8	C
	Overall Intersection	-	**1.21**	**80.6**	**F**	-	**1.37**	**96.2**	**F**	-	**1.14**	**60.9**	**E**
Prince Street at Roosevelt Avenue													
Prince Street	SB	LTR	0.52	31.0	C	LTR	0.80	41.4	D	LTR	0.72	37.1	D
Roosevelt Avenue	EB	DefL	0.81	32.4	C	DefL	0.77	18.3	B	DefL	0.77	18.7	B
		TR	0.80	29.0	C	TR	0.65	13.1	B	TR	0.83	18.2	B
	WB	LTR	0.61	21.5	C	LTR	0.61	13.2	B	LTR	0.60	12.3	B
	Overall Intersection	-	**0.69**	**27.9**	**C**	-	**0.78**	**20.3**	**C**	-	**0.79**	**20.3**	**C**
Main Street at Roosevelt Avenue													
Main Street	NB	T	0.63	23.6	C	T	0.67	24.3	C	T	0.67	24.3	C
	SB	T	0.53	21.7	C	T	0.63	23.5	C	T	0.53	21.9	C
Roosevelt Avenue	EB	LTR	1.04	91.5	F	LTR	0.85	40.8	D	LTR	1.02	66.1	E
	WB	LTR	0.99	74.7	E	LTR	0.87	42.0	D	LTR	0.97	51.7	D
	Overall Intersection	-	**0.79**	**46.7**	**D**	-	**0.77**	**30.8**	**C**	-	**0.85**	**39.8**	**D**
Union Street at Roosevelt Avenue													
Union Street	NB	TR	0.54	18.8	B	TR	0.46	17.3	B	TR	0.45	17.3	B
	SB	LT	1.27	146.5	F	LT	1.01	55.9	E	LT	1.21	127.2	F
		R	1.91	437.2	F	R	2.65	781.7	F	R	1.90	439.9	F
Roosevelt Avenue	EB	LTR	2.32	624.7	F	LTR	1.93	450.8	F	LTR	1.97	469.0	F
	WB	LT	0.81	33.0	C	LT	0.57	24.3	C	LT	0.74	31.0	C
		R	0.76	42.2	D	R	1.17	166.8	F	R	1.29	206.4	F
	Overall Intersection	-	**2.10**	**237.7**	**F**	-	**2.31**	**249.7**	**F**	-	**1.93**	**219.2**	**F**
Parsons Boulevard at Roosevelt Avenue													
Parsons Boulevard	NB	LTR	0.81	37.3	D	LTR	0.73	27.4	C	LTR	0.95	41.6	D
	SB	LTR	0.78	33.3	C	LTR	0.74	25.8	C	LTR	0.77	26.9	C
Roosevelt Avenue	EB	LTR	0.69	31.8	C	LTR	0.46	20.0	B	LTR	0.71	26.3	C
	WB	LTR	0.92	47.0	D	LTR	0.63	24.2	C	LTR	0.74	28.1	C
	Overall Intersection	-	**0.87**	**37.4**	**D**	-	**0.68**	**24.9**	**C**	-	**0.84**	**31.1**	**C**
KISSENA BOULEVARD													
Main Street at Kissena Boulevard													
Main Street	NB	L	0.74	37.6	D	L	0.89	56.5	E	L	0.68	31.6	C
		TR	0.59	22.2	C	TR	0.60	21.4	C	TR	0.67	22.8	C
	SB	L	0.87	54.4	D	L	0.52	21.3	C	L	0.44	19.7	B
		TR	0.50	20.1	C	TR	0.54	19.6	B	TR	0.48	18.8	B
Kissena Boulevard	WB	T	0.73	38.0	D	T	0.66	24.5	C	T	0.65	24.4	C
	Overall Intersection	-	**0.80**	**30.1**	**C**	-	**0.77**	**24.6**	**C**	-	**0.67**	**22.1**	**C**
SANFORD AVENUE													
College Point Boulevard at Sanford Avenue													
College Point Boulevard	NB	L	0.38	15.1	B	L	0.52	21.8	C	L	0.24	12.9	B
		T	0.75	16.0	B	T	0.82	18.0	B	T	0.56	12.6	B
	SB	TR	0.75	15.9	B	TR	0.82	18.0	B	TR	0.80	17.2	B
Sanford Avenue	WB	L	0.81	49.2	D	L	0.87	54.6	D	L	0.58	34.6	C
		TR	0.47	28.5	C	TR	0.51	29.2	C	TR	0.34	26.5	C
	Overall Intersection	-	**0.77**	**19.7**	**B**	-	**0.84**	**22.1**	**C**	-	**0.73**	**17.5**	**B**
Union Street at Sanford Avenue													
Union Street	NB	LTR	0.39	21.7	C	LTR	0.46	23.6	C	LTR	0.42	22.2	C
	SB	LTR	0.70	25.9	C	LTR	0.92	35.0	C	LTR	0.81	29.6	C
Sanford Avenue	EB	-	-	-	-	DefL	0.57	24.1	C	-	-	-	-
		LTR	0.29	14.3	B	TR	0.33	15.1	B	LTR	0.24	13.7	B
	WB	LTR	0.90	31.4	C	LTR	0.74	23.5	C	LTR	0.70	22.3	C
	Overall Intersection	-	**0.81**	**25.2**	**C**	-	**0.82**	**27.3**	**C**	-	**0.75**	**23.8**	**C**

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		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue													
Parsons Boulevard	NB	LTR	1.03	51.7	D	LTR	0.85	31.7	C	LTR	0.92	35.9	D
	SB	LTR	0.70	25.0	C	LTR	0.73	25.8	C	LTR	0.74	26.1	C
Sanford Avenue	EB	LTR	0.61	23.6	C	LTR	0.63	23.4	C	LTR	0.81	29.8	C
	WB	LTR	0.76	28.3	C	LTR	0.85	33.0	C	LTR	0.82	31.5	C
Overall Intersection		**-**	**0.89**	**33.2**	**C**	**-**	**0.85**	**28.6**	**C**	**-**	**0.87**	**30.8**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE													
College Point Boulevard at 32nd Avenue													
College Point Boulevard	NB	T	0.39	23.7	C	T	0.36	23.3	C	T	0.44	24.0	C
		TR	0.27	22.0	C	TR	0.59	26.1	C	TR	0.35	22.9	C
	SB	L	0.45	33.5	C	L	0.58	38.1	D	L	0.28	27.7	C
		T	0.41	10.6	B	T	0.45	11.1	B	T	0.30	9.6	A
32nd Avenue	WB	LTR	0.74	37.8	D	LTR	0.46	30.1	C	LTR	0.30	26.8	C
Overall Intersection		**-**	**1.10**	**21.1**	**C**	**-**	**1.04**	**21.9**	**C**	**-**	**0.86**	**19.5**	**B**
NORTHERN BOULEVARD SERVICE ROAD													
College Point Boulevard at Northern Boulevard Service Road													
College Point Boulevard	NB	TR	0.49	12.6	B	TR	0.55	13.3	B	TR	0.51	12.8	B
	SB	LT	0.84	21.6	C	LT	0.91	26.5	C	LT	0.55	14.0	B
Northern Blvd Service Rd	WB	LR	0.72	33.7	C	LR	0.71	32.9	C	LR	0.56	29.0	C
Overall Intersection		**-**	**0.80**	**19.9**	**B**	**-**	**0.84**	**22.0**	**C**	**-**	**0.55**	**15.8**	**B**
STADIUM ROAD													
Boat Basin Road at Stadium Road													
Boat Basin Road	NB	-	-	-	-	-	-	-	-	L	1.82	401.9	F
		LTR	0.54	43.8	D	LTR	0.49	49.3	D	TR	1.42	218.7	F
	SB	LTR	0.89	34.7	C	LTR	0.67	33.0	C	LTR	0.30	20.1	C
Stadium Road	WB	LTR	0.87	32.6	C	LTR	0.87	29.2	C	LTR	0.31	13.7	B
Overall Intersection		**-**	**0.84**	**34.5**	**C**	**-**	**0.83**	**32.9**	**C**	**-**	**0.97**	**238.6**	**F**
UNSIGNALIZED INTERSECTIONS													
Willets Point Boulevard at 126th Street													
126th Street	SB	LT	-	8.1	A	LT	-	8.8	A	LT	-	8.0	A
Willets Point Boulevard	WB	LR	-	12.0	B	LR	-	10.6	B	LR	-	9.9	A
Overall Intersection		**-**	**-**	**12.0**	**B**	**-**	**-**	**10.6**	**B**	**-**	**-**	**9.9**	**A**
Boat Basin Road at Worlds Fair Marina													
Boat Basin Road	NB	L	-	52.2	F	L	-	39.3	E	L	-	95.0	F
		R	-	8.6	A	R	-	8.7	A	R	-	13.2	B
Worlds Fair Marina	WB	LT	-	12.2	B	LT	-	11.1	B	LT	-	7.7	A
Overall Intersection		**-**	**-**	**13.4**	**B**	**-**	**-**	**12.0**	**B**	**-**	**-**	**50.1**	**F**
Willets Point Boulevard at Northern Boulevard													
Willets Point Boulevard	NB	TR	-	9.5	A	TR	-	9.2	A	TR	-	9.1	A
Overall Intersection		**-**	**-**	**9.5**	**A**	**-**	**-**	**9.2**	**A**	**-**	**-**	**9.1**	**A**
Boat Basin Road at Stadium Road / Citifield Entrance 8													
Citifield Entrance 8	NB	-	-	-	-	-	-	-	-	-	-	-	-
Boat Basin Road	SB	LT	-	8.4	A	LT	-	7.8	A				
Stadium Road	EB	LT	-	30.7	D	LT	-	81.8	F	LT	-	77.2	F
		TR	-	29.9	D	TR	-	37.8	E				
Citifield Entrance 9	WB	R	-	10.3	B	R	-	9.3	A	R	-	55.4	F
Overall Intersection		**-**	**-**	**29.7**	**D**	**-**	**-**	**55.3**	**F**	**-**	**-**	**74.3**	**F**
Grand Central Parkway Ramp at West Park Loop/Stadium Road													
Grand Central Parkway Off-Ramp	EB	L	-	34.1	D	L	-	34.2	D	L	-	51.0	F
		R	-	9.6	A	R	-	9.1	A	R	-	22.5	C
Overall Intersection		**-**	**-**	**31.1**	**D**	**-**	**-**	**31.5**	**D**	**-**	**-**	**40.1**	**E**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 7
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
SIGNALIZED INTERSECTIONS																	
ASTORIA BOULEVARD																	
108th Street at Astoria Boulevard																	
108th Street	NB	DefL	0.77	59.3	E	DefL	0.48	26.9	C	DefL	0.58	47.0	D	DefL	0.52	27.6	C
		T	0.22	35.8	D	T	0.13	20.1	C	T	0.22	35.7	D	T	0.21	21.1	C
	SB	LTR	0.36	38.5	D	LTR	0.18	20.7	C	LTR	0.40	39.4	D	LTR	0.26	21.7	C
Astoria Boulevard	EB	TR	0.61	25.8	C	TR	0.84	29.6	C	TR	0.91	27.7	C	TR	0.95	34.5	C
	WB	L	0.58	15.3	B	L	0.75	33.5	C	L	0.73	48.0	D	L	0.57	24.3	C
		TR	0.79	8.2	A	TR	0.34	12.4	B	TR	0.34	9.8	A	TR	0.37	12.6	B
Overall Intersection		-	**0.78**	**18.0**	**B**	-	**0.71**	**24.2**	**C**	-	**0.81**	**26.3**	**C**	-	**0.75**	**26.1**	**C**
NORTHERN BOULEVARD																	
108th Street at Northern Boulevard (RT. 25A)																	
108th Street	NB	LTR	1.17	125.6	F	LTR	1.21	144.5	F	LTR	1.19	134.6	F	LTR	1.13	112.4	F
	SB	LTR	1.00	85.5	F	LTR	0.94	71.9	E	LTR	1.15	124.9	F	LTR	0.94	70.3	E
Northern Boulevard (Rt. 25A)	EB	L	0.08	23.2	C	L	0.08	24.3	C	L	0.15	35.0	C	L	0.18	40.1	D
		TR	0.77	21.0	C	TR	0.89	29.3	C	TR	0.85	14.3	B	TR	0.95	33.6	C
	WB	L	0.45	22.1	C	L	0.73	46.6	D	L	0.67	42.9	D	L	0.72	43.4	D
		TR	1.06	43.2	D	TR	1.03	50.7	D	TR	1.16	97.1	F	TR	1.20	118.1	F
Overall Intersection		-	**0.95**	**43.8**	**D**	-	**1.02**	**51.7**	**D**	-	**1.09**	**62.1**	**E**	-	**1.11**	**79.9**	**E**
114th Street at Northern Boulevard (RT. 25A)																	
114th Street	SB	LTR	0.48	47.9	D	LTR	0.40	44.5	D	LTR	0.40	46.1	D	LTR	0.38	43.8	D
Northern Boulevard (Rt. 25A)	EB	T	0.88	41.7	D	T	0.82	27.5	C	T	1.16	90.5	F	T	0.72	23.9	C
		R	0.75	38.9	D	R	0.46	19.5	B	R	0.85	17.8	B	R	0.60	22.7	C
	WB	DefL	0.50	16.0	B	DefL	0.52	17.5	B	DefL	0.88	52.4	D	DefL	0.73	22.1	C
		T	1.20	107.2	F	T	0.75	13.0	B	T	0.93	19.2	B	T	1.00	30.1	C
Overall Intersection		-	**1.32**	**78.8**	**E**	-	**1.19**	**20.2**	**C**	-	**1.58**	**48.7**	**D**	-	**1.33**	**27.5**	**C**
126th Street at Northern Boulevard (RT. 25A)																	
126th Street	NB	L	0.28	41.2	D	L	0.46	44.1	D	L	0.43	43.3	D	L	0.45	43.6	D
		R	0.27	41.3	D	R	0.33	42.2	D	R	0.28	41.2	D	R	0.35	42.4	D
Northern Boulevard	EB	T	0.22	6.3	A	T	0.33	7.1	A	T	0.37	7.3	A	T	0.30	6.9	A
	WB	T	0.66	11.0	B	T	0.33	7.1	A	T	0.41	7.7	A	T	0.31	6.9	A
Grand Central Parkway Ramp	EB	T	0.44	8.2	A	T	0.42	7.9	A	T	0.48	8.5	A	T	0.45	8.2	A
Van Wyck & Whitestone Expressway Ramp	WB	T	1.13	115.7	F	T	0.78	17.0	B	T	0.91	26.2	C	T	0.75	15.6	B
Overall Intersection		-	**0.94**	**42.5**	**D**	-	**0.71**	**14.1**	**B**	-	**0.80**	**16.0**	**B**	-	**0.68**	**13.9**	**B**
Prince Street at Northern Boulevard (RT. 25A)																	
Prince Street	NB	LTR	1.17	140.0	F	LTR	1.21	141.8	F	LTR	1.25	159.4	F	LTR	1.14	108.9	F
	SB	LTR	0.81	54.1	D	LTR	0.54	41.4	D	LTR	0.53	41.8	D	LTR	0.47	36.9	D
Northern Boulevard (Rt. 25A)	EB	L	0.97	96.9	F	L	0.90	73.8	E	L	0.62	46.0	D	L	0.67	49.9	D
		T	0.82	22.8	C	T	0.94	36.3	D	T	0.97	39.4	D	T	1.07	67.0	E
	WB	L	0.96	94.1	F	L	0.91	93.1	F	L	0.82	73.7	E	L	0.83	66.0	E
		T	1.17	100.6	F	T	1.14	104.5	F	T	1.15	110.5	F	T	1.17	116.5	F
Northern Boulevard Service Rd.	EB	TR	0.45	16.7	B	TR	0.62	26.5	C	TR	0.66	27.6	C	TR	0.63	26.0	C
	WB	TR	0.67	19.3	B	TR	0.71	35.3	D	TR	0.67	35.7	D	TR	0.76	35.4	D
Overall Intersection		-	**1.13**	**64.9**	**E**	-	**1.11**	**68.3**	**E**	-	**1.05**	**69.4**	**E**	-	**1.05**	**79.2**	**E**
Main Street at Northern Boulevard (RT. 25A)																	
Main Street	NB	L	0.78	43.8	D	L	0.98	66.1	E	L	0.97	62.1	E	L	0.94	56.9	E
		R	0.86	56.1	E	R	0.69	40.0	D	R	0.99	79.7	E	R	0.90	63.9	E
Northern Boulevard (Rt 25A)	EB	T	0.95	40.7	D	T	0.98	45.5	D	T	1.08	70.7	E	T	0.96	40.9	D
		R	1.18	128.3	F	R	1.29	173.4	F	R	1.20	132.4	F	R	1.40	216.1	F
Northern Boulevard (Rt 25A)	WB	L	0.17	26.5	C	L	0.11	25.7	C	L	0.17	26.9	C	L	0.08	25.2	C
		T	1.06	48.5	D	T	0.77	23.0	C	T	0.78	23.2	C	T	0.95	30.6	C
Overall Intersection		-	**1.02**	**53.3**	**D**	-	**1.03**	**58.7**	**E**	-	**1.10**	**61.5**	**E**	-	**1.17**	**62.1**	**E**
Union Street at Northern Boulevard (RT. 25A)																	
Union Street	NB	TR	0.68	35.2	D	TR	0.79	39.1	D	TR	0.79	38.9	D	TR	0.77	38.2	D
	SB	TR	0.90	43.3	D	TR	0.56	32.5	C	TR	0.83	39.9	D	TR	0.66	34.6	C
Northern Boulevard (Rt. 25A)	EB	L	0.97	68.6	E	L	0.55	22.2	C	L	0.78	44.3	D	L	0.74	33.5	C
		TR	1.24	145.7	F	TR	1.39	214.5	F	TR	1.14	101.5	F	TR	1.47	247.2	F
	WB	L	1.03	79.7	E	L	1.19	146.1	F	L	0.86	50.4	D	L	0.87	47.0	D
		TR	0.97	40.7	D	TR	0.84	37.8	D	TR	0.94	42.2	D	TR	1.04	59.6	E
Overall Intersection		-	**1.13**	**74.6**	**E**	-	**1.44**	**111.6**	**F**	-	**0.99**	**65.9**	**E**	-	**1.10**	**123.8**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)																	
Parsons Boulevard	NB	L	0.97	95.3	F	L	0.74	59.0	E	L	0.86	72.5	E	L	0.86	70.4	E
		TR	0.57	39.9	D	TR	0.53	39.0	D	TR	0.50	35.4	D	TR	0.61	41.1	D
	SB	LTR	0.83	48.1	D	LTR	1.19	127.7	F	LTR	1.13	100.8	F	LTR	1.14	108.0	F
Northern Boulevard (Rt. 25A)	EB	L	0.54	45.6	D	L	0.80	58.0	E	L	0.48	46.8	D	L	0.51	47.6	D
		TR	1.04	64.3	E	TR	1.06	68.8	E	TR	0.98	38.8	D	TR	1.09	79.2	E
	WB	L	0.44	37.1	D	L	0.36	36.3	D	L	0.40	40.8	D	L	0.50	44.2	D
		TR	1.13	91.8	F	TR	1.19	118.2	F	TR	1.10	82.2	F	TR	1.18	113.1	F
Overall Intersection		-	**1.03**	**73.4**	**E**	-	**1.20**	**89.6**	**F**	-	**1.09**	**60.6**	**E**	-	**1.10**	**90.3**	**F**
34TH AVENUE																	
114th Street at 34th Avenue																	
114th Street	SB	L	0.85	39.3	D	L	0.84	43.9	D	L	1.01	64.3	E	L	0.99	63.9	E
		T	0.32	24.6	C	T	0.23	24.0	C	T	0.41	26.1	C	T	0.35	25.4	C
34th Avenue	EB	TR	0.46	12.2	B	TR	0.40	11.5	B	TR	0.38	11.3	B	TR	0.58	13.8	B
Overall Intersection		-	**0.59**	**24.3**	**C**	-	**0.56**	**26.9**	**C**	-	**0.60**	**38.2**	**D**	-	**0.72**	**34.3**	**C**
126th Street/GCP Ramp at 34th Avenue																	
126th Street	NB	-	-	-	-	-	-	-	-	DefL	0.36	23.9	C	-	-	-	-
		LTR	0.17	19.9	B	LTR	0.26	20.9	C	TR	0.27	21.2	C	LTR	0.26	20.9	C
Northern Boulevard Ramp	SB	LTR	0.33	22.5	C	LTR	0.39	23.7	C	LTR	0.28	21.7	C	LTR	0.37	23.3	C
GCP Ramp	SB	LTR	0.83	66.1	E	LTR	0.90	75.7	E	LTR	0.76	60.2	E	LTR	0.82	65.2	E
Shea Road	EB	LTR	0.48	43.4	D	LTR	0.57	45.1	D	LTR	0.45	42.8	D	LTR	0.64	46.9	D
34th Avenue	WB	LTR	0.67	55.9	E	LTR	0.67	54.9	D	LTR	1.00	99.0	F	LTR	0.82	68.5	E
Overall Intersection		-	**0.53**	**40.7**	**D**	-	**0.58**	**42.0**	**D**	-	**0.62**	**44.1**	**D**	-	**0.59**	**40.8**	**D**

TABLE 7
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE																	
108th Street at Roosevelt Avenue																	
108th Street	NB	LTR	1.04	83.4	F	LTR	1.11	109.2	F	LTR	1.13	113.2	F	LTR	1.22	145.5	F
	SB	LTR	1.12	108.7	F	LTR	1.24	157.6	F	LTR	1.20	138.5	F	LTR	1.17	125.0	F
Roosevelt Avenue	EB	LTR	0.69	16.3	B	LTR	0.76	19.3	B	LTR	0.75	10.1	B	LTR	0.71	16.8	B
	WB	LTR	0.83	10.8	B	LTR	0.85	23.9	C	LTR	0.84	18.3	B	LTR	0.79	15.1	B
	Overall Intersection	-	**0.91**	**39.2**	**D**	-	**0.96**	**58.0**	**E**	-	**0.94**	**52.6**	**D**	-	**0.90**	**57.5**	**E**
111th Street at Roosevelt Avenue																	
111th Street	NB	LTR	1.02	73.8	E	LTR	0.73	51.2	D	LTR	0.86	57.2	E	LTR	1.06	81.0	F
Roosevelt Avenue	EB	LTR	0.67	15.6	B	LTR	0.73	16.9	B	LTR	0.79	11.1	B	LTR	0.86	23.7	C
	WB	LTR	0.94	20.2	C	LTR	0.88	26.2	C	LTR	1.25	133.7	F	LTR	1.23	124.6	F
	Overall Intersection	-	**0.96**	**29.2**	**C**	-	**0.84**	**26.1**	**C**	-	**1.14**	**78.3**	**E**	-	**1.18**	**78.6**	**E**
114th Street at Roosevelt Avenue																	
114th Street	NB	LTR	1.04	79.3	E	LTR	0.71	51.1	D	LTR	0.99	64.9	E	LTR	1.03	74.0	E
	SB	LTR	1.15	121.3	F	LTR	0.70	53.9	D	LTR	1.09	91.4	F	LTR	1.11	96.6	F
Roosevelt Avenue	EB	LTR	0.83	23.4	C	LTR	0.89	29.9	C	LTR	0.93	22.7	C	LTR	1.22	124.1	F
	WB	LTR	0.57	5.5	A	LTR	0.48	10.7	B	LTR	0.74	15.7	B	LTR	0.69	14.4	B
	Overall Intersection	-	**0.92**	**33.3**	**C**	-	**0.84**	**25.6**	**C**	-	**0.98**	**31.7**	**C**	-	**1.19**	**63.6**	**E**
126th Street at Roosevelt Avenue																	
126th Street	NB	LTR	0.22	37.1	D	LTR	0.91	67.9	E	LTR	0.68	55.0	D	LTR	0.37	40.7	D
	SB	DefL	1.23	175.4	F	DefL	1.22	176.1	F	DefL	1.03	100.7	F	DefL	1.11	127.6	F
		TR	0.67	52.7	D	TR	0.63	51.4	D	TR	0.66	48.0	D	TR	0.53	44.0	D
Roosevelt Avenue	EB	LTR	0.57	12.6	B	LTR	0.53	11.6	B	LTR	0.70	8.0	A	LTR	0.68	15.0	B
	WB	LTR	0.63	6.2	A	LTR	0.51	11.2	B	LTR	0.60	12.7	B	LTR	0.49	10.8	B
	Overall Intersection	-	**0.77**	**34.5**	**C**	-	**0.69**	**37.9**	**D**	-	**0.79**	**27.1**	**C**	-	**0.80**	**32.6**	**C**
College Point Boulevard at Roosevelt Avenue																	
College Point Boulevard	NB	L	1.43	252.6	F	L	1.37	217.4	F	L	1.25	176.0	F	L	1.30	185.0	F
		TR	0.74	27.7	C	TR	0.89	31.5	C	TR	0.76	31.3	C	TR	0.94	35.6	D
	SB	TR	0.86	43.8	D	TR	1.20	129.9	F	TR	1.33	193.8	F	TR	1.02	57.0	E
Roosevelt Avenue	EB	L	0.44	40.0	D	L	0.56	30.4	C	L	0.48	37.2	D	L	0.57	20.9	C
		TR	0.99	61.8	E	TR	1.27	148.2	F	TR	1.22	133.8	F	TR	1.25	138.1	F
	WB	L	0.23	45.3	D	L	0.28	33.5	C	L	0.25	43.7	D	L	0.34	34.4	C
		TR	0.69	44.8	D	TR	0.58	30.6	C	TR	0.45	35.9	D	TR	0.49	27.1	C
	Overall Intersection	-	**1.10**	**69.3**	**E**	-	**1.29**	**98.9**	**F**	-	**1.33**	**119.6**	**F**	-	**1.26**	**71.0**	**E**
Prince Street at Roosevelt Avenue																	
Prince Street	SB	LTR	0.52	31.1	C	LTR	0.86	47.9	D	LTR	0.61	33.3	C	LTR	0.97	60.6	E
Roosevelt Avenue	EB	DefL	1.30	180.6	F	DefL	0.96	38.2	D	DefL	1.10	97.0	F	DefL	0.80	20.3	C
		TR	0.59	23.3	C	TR	0.68	14.4	B	TR	0.69	25.4	C	TR	0.75	15.9	B
	WB	LTR	0.91	34.7	C	LTR	0.54	12.1	B	LTR	0.61	20.9	C	LTR	0.58	12.8	B
	Overall Intersection	-	**0.96**	**67.7**	**E**	-	**0.93**	**27.1**	**C**	-	**0.89**	**43.4**	**D**	-	**0.86**	**26.1**	**C**
Main Street at Roosevelt Avenue																	
Main Street	NB	T	0.60	22.4	C	T	0.67	24.6	C	T	0.51	21.2	C	T	0.77	26.7	C
	SB	T	0.44	19.5	B	T	0.51	21.7	C	T	0.54	21.8	C	T	0.65	23.9	C
Roosevelt Avenue	EB	LTR	0.69	41.3	D	LTR	0.91	50.2	D	LTR	1.17	142.6	F	LTR	0.99	64.0	E
	WB	LTR	1.04	78.8	E	LTR	0.92	45.8	D	LTR	1.13	112.7	F	LTR	0.85	31.7	C
	Overall Intersection	-	**0.78**	**40.6**	**D**	-	**0.80**	**33.7**	**C**	-	**0.80**	**64.9**	**E**	-	**0.88**	**34.4**	**C**
Union Street at Roosevelt Avenue																	
Union Street	NB	TR	0.61	20.1	C	TR	0.58	19.5	B	TR	0.42	16.8	B	TR	0.57	19.2	B
	SB	LT	1.10	80.0	E	LT	1.01	59.5	E	LT	0.93	37.9	D	LT	1.08	75.2	E
		R	0.85	35.8	D	R	3.00+	1000.0+	F	R	2.61	765.5	F	R	2.83	856.2	F
Roosevelt Avenue	EB	LTR	1.43	231.1	F	LTR	2.05	505.0	F	LTR	1.86	416.9	F	LTR	2.35	641.1	F
	WB	LT	1.01	53.8	D	LT	0.62	25.9	C	LT	0.57	24.6	C	LT	0.55	23.9	C
		R	1.05	82.6	F	R	0.89	70.5	E	R	1.01	100.0	F	R	1.30	212.7	F
	Overall Intersection	-	**1.25**	**81.5**	**F**	-	**3.00+**	**495.9**	**F**	-	**2.26**	**222.6**	**F**	-	**2.61**	**317.7**	**F**
Parsons Boulevard at Roosevelt Avenue																	
Parsons Boulevard	NB	LTR	1.15	104.8	F	LTR	0.66	24.8	C	LTR	0.86	41.1	D	LTR	0.88	36.2	D
	SB	LTR	0.82	35.1	D	LTR	0.66	23.8	C	LTR	0.71	30.8	C	LTR	0.79	27.6	C
Roosevelt Avenue	EB	LTR	0.50	26.0	C	LTR	0.59	23.3	C	LTR	0.50	26.1	C	LTR	0.76	28.8	C
	WB	LTR	1.17	112.5	F	LTR	0.77	30.6	C	LTR	0.76	35.2	D	LTR	0.88	37.9	D
	Overall Intersection	-	**1.16**	**76.1**	**E**	-	**0.72**	**25.7**	**C**	-	**0.81**	**34.0**	**C**	-	**0.88**	**32.4**	**C**
KISSENA BOULEVARD																	
Main Street at Kissena Boulevard																	
Main Street	NB	L	0.75	34.6	C	L	0.88	54.1	D	L	0.78	40.5	D	L	1.21	147.6	F
		TR	0.70	25.4	C	TR	0.64	22.5	C	TR	0.59	22.6	C	TR	0.70	23.6	C
	SB	L	0.66	38.7	D	L	0.47	20.5	C	L	0.85	52.7	D	L	0.55	22.1	C
		TR	0.39	18.4	B	TR	0.52	19.5	B	TR	0.46	19.4	B	TR	0.58	20.3	C
Kissena Boulevard	WB	T	0.74	38.9	D	T	0.73	27.4	C	T	0.67	35.8	D	T	0.76	27.4	C
	Overall Intersection	-	**0.75**	**28.1**	**C**	-	**0.80**	**25.2**	**C**	-	**0.81**	**30.0**	**C**	-	**0.98**	**36.3**	**D**
SANFORD AVENUE																	
College Point Boulevard at Sanford Avenue																	
College Point Boulevard	NB	L	0.22	10.4	B	L	0.57	24.1	C	L	0.54	32.5	C	L	0.64	32.2	C
		T	0.69	15.0	B	T	0.67	14.5	B	T	0.61	13.3	B	T	0.74	15.9	B
	SB	TR	0.59	13.2	B	TR	0.77	16.9	B	TR	0.99	33.9	C	TR	0.86	19.5	B
Sanford Avenue	WB	L	0.79	46.2	D	L	0.57	35.0	C	L	0.78	47.6	D	L	0.71	39.9	D
		TR	0.56	30.1	C	TR	0.38	27.1	C	TR	0.37	26.9	C	TR	0.52	29.5	C
	Overall Intersection	-	**0.72**	**19.3**	**B**	-	**0.70**	**18.2**	**B**	-	**0.92**	**27.8**	**C**	-	**0.81**	**20.8**	**C**
Union Street at Sanford Avenue																	
Union Street	NB	LTR	0.71	31.0	C	LTR	0.34	20.8	C	LTR	0.31	20.3	C	LTR	0.40	21.8	C
	SB	LTR	0.62	24.8	C	LTR	0.61	24.3	C	LTR	0.73	26.8	C	LTR	0.75	27.7	C
Sanford Avenue	EB	DefL	0.58	26.4	C	DefL	0.43	19.7	B	-	-	-	-	DefL	0.49	21.6	C
		TR	0.37	15.8	B	TR	0.21	13.7	B	LTR	0.32	14.7	B	TR	0.36	15.6	B
	WB	LTR	0.90	30.1	C	LTR	0.89	29.7	C	LTR	0.68	22.4	C	LTR	0.89	29.9	C
	Overall Intersection	-	**0.81**	**26.3**	**C**	-	**0.76**	**24.6**	**C**	-	**0.71**	**22.4**	**C**	-	**0.83**	**25.7**	**C**

TABLE 7
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 NO ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue																	
Parsons Boulevard	NB	LTR	1.12	79.7	E	LTR	1.17	102.6	F	LTR	0.90	35.5	D	LTR	0.94	40.0	D
	SB	LTR	0.97	39.3	D	LTR	0.72	25.4	C	LTR	0.78	27.5	C	LTR	0.85	30.1	C
Sanford Avenue	EB	LTR	0.73	27.5	C	LTR	0.56	22.3	C	LTR	0.71	26.3	C	LTR	0.74	26.9	C
	WB	LTR	0.83	31.7	C	LTR	0.87	34.7	C	LTR	0.79	30.0	C	LTR	0.91	39.1	D
Overall Intersection		**-**	**0.98**	**45.8**	**D**	**-**	**1.02**	**48.5**	**D**	**-**	**0.85**	**30.0**	**C**	**-**	**0.93**	**34.0**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE																	
College Point Boulevard at 32nd Avenue																	
College Point Boulevard	NB	T	0.44	23.9	C	T	0.71	29.9	C	T	0.50	25.3	C	T	0.36	23.3	C
		TR	0.71	31.8	C	TR	0.81	36.4	D	TR	0.93	47.3	D	TR	0.79	34.6	C
	SB	L	0.52	37.2	D	L	0.75	48.8	D	L	0.49	34.9	C	L	0.53	36.4	D
		T	0.60	13.0	B	T	0.50	11.7	B	T	0.44	10.9	B	T	0.42	10.7	B
32nd Avenue	WB	LTR	0.88	44.9	D	LTR	0.79	40.6	D	LTR	0.90	45.6	D	LTR	0.54	32.0	C
Overall Intersection		**-**	**1.41**	**24.0**	**C**	**-**	**1.30**	**28.1**	**C**	**-**	**1.16**	**29.4**	**C**	**-**	**1.05**	**23.4**	**C**
NORTHERN BOULEVARD SERVICE ROAD																	
College Point Boulevard at Northern Boulevard Service Road																	
College Point Boulevard	NB	TR	0.42	11.8	B	TR	0.53	13.2	B	TR	0.56	13.6	B	TR	0.55	13.3	B
	SB	LT	0.89	25.0	C	LT	0.87	24.4	C	LT	0.87	24.2	C	LT	0.80	20.8	C
Northern Blvd Service Rd	WB	LR	0.79	37.0	D	LR	0.79	37.3	D	LR	0.74	34.7	C	LR	0.69	32.7	C
Overall Intersection		**-**	**0.85**	**22.6**	**C**	**-**	**0.84**	**22.0**	**C**	**-**	**0.82**	**21.1**	**C**	**-**	**0.76**	**19.5**	**B**
STADIUM ROAD																	
Boat Basin Road at Stadium Road																	
Boat Basin Road	NB	LTR	0.09	7.3	A	LTR	0.07	7.2	A	LTR	0.05	7.1	A	LTR	0.08	7.2	A
	SB	-	-	-	-	DefL	0.28	9.3	A	-	-	-	-	DefL	0.20	8.4	A
		LTR	0.39	9.8	A	TR	0.18	8.1	A	LTR	0.23	8.2	A	TR	0.16	7.9	A
Stadium Road	WB	LTR	0.24	25.8	C	LTR	0.19	25.3	C	LTR	0.30	26.4	C	LTR	0.28	26.2	C
Overall Intersection		**-**	**0.34**	**12.8**	**B**	**-**	**0.25**	**12.5**	**B**	**-**	**0.25**	**14.8**	**B**	**-**	**0.23**	**14.4**	**B**
UNSIGNALIZED INTERSECTIONS																	
Willets Point Boulevard at 126th Street																	
126th Street	SB	LT	-	8.2	A	LT	-	8.3	A	LT	-	8.4	A	LT	-	8.5	A
Willets Point Boulevard	WB	LR	-	11.2	B	LR	-	12.3	B	LR	-	15.0	B	LR	-	15.6	C
Overall Intersection		**-**	**-**	**10.3**	**B**	**-**	**-**	**10.7**	**B**	**-**	**-**	**12.4**	**B**	**-**	**-**	**14.3**	**B**
Boat Basin Road at Worlds Fair Marina																	
Boat Basin Road	NB	L	-	41.2	E	L	-	19.7	C	L	-	16.7	C	L	-	17.4	C
		R	-	8.7	A	R	-	8.5	A	R	-	8.8	A	R	-	8.6	A
Worlds Fair Marina	WB	LT	-	8.9	A	LT	-	8.2	A	LT	-	7.8	A	LT	-	8.0	A
Overall Intersection		**-**	**-**	**10.2**	**B**	**-**	**-**	**9.5**	**A**	**-**	**-**	**9.1**	**A**	**-**	**-**	**10.0**	**A**
Willets Point Boulevard at Northern Boulevard																	
Willets Point Boulevard	NB	TR	-	10.3	B	TR	-	10.6	B	TR	-	9.9	A	TR	-	9.2	A
Overall Intersection		**-**	**-**	**10.3**	**B**	**-**	**-**	**10.6**	**B**	**-**	**-**	**9.9**	**A**	**-**	**-**	**9.2**	**A**
Boat Basin Road at Stadium Road / Citifield Entrance 8																	
Citifield Entrance 8	NB	T	-	10.5	B	T	-	11.4	B	T	-	10.7	B	T	-	12.1	B
Boat Basin Road	SB	LT	-	11.4	B	LT	-	11.4	B	LT	-	11.4	B				
Stadium Road	EB	LT	-	7.4	A	LT	-	7.5	A	LT	-	7.4	A	LT	-	7.5	A
Overall Intersection		**-**	**-**	**8.5**	**A**	**-**	**-**	**8.8**	**A**	**-**	**-**	**9.2**	**A**	**-**	**-**	**7.5**	**A**
Grand Central Parkway Ramp at West Park Loop/Stadium Road																	
Grand Central Parkway Off-Ramp	EB	L	-	11.5	B	L	-	10.8	B	L	-	10.7	B	L	-	11.2	B
		R	-	9.4	A	R	-	9.2	A	R	-	9.4	A	R	-	9.3	A
Overall Intersection		**-**	**-**	**10.9**	**B**	**-**	**-**	**10.3**	**B**	**-**	**-**	**10.0**	**A**	**-**	**-**	**10.7**	**B**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 8
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 NO ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**
SIGNALIZED INTERSECTIONS													
ASTORIA BOULEVARD													
108th Street at Astoria Boulevard													
108th Street	NB	DefL	0.67	51.9	D	DefL	0.46	25.9	C	DefL	0.53	27.8	C
		T	0.28	36.8	D	T	0.20	21.0	C	T	0.22	21.3	C
	SB	LTR	0.35	38.1	D	LTR	0.23	21.4	C	LTR	0.19	20.9	C
Astoria Boulevard	EB	TR	1.08	62.7	E	TR	0.76	27.0	C	TR	0.69	25.5	C
	WB	L	0.75	49.2	D	L	0.81	39.4	D	L	0.93	54.4	D
		TR	0.29	9.3	A	TR	0.30	12.0	B	TR	0.31	12.1	B
Overall Intersection		-	**0.93**	**51.1**	**D**	-	**0.66**	**23.4**	**C**	-	**0.73**	**24.5**	**C**
NORTHERN BOULEVARD													
108th Street at Northern Boulevard (RT. 25A)													
108th Street	NB	LTR	1.18	128.9	F	LTR	1.16	121.8	F	LTR	1.19	135.2	F
	SB	LTR	1.14	115.9	F	LTR	1.09	101.6	F	LTR	1.19	134.3	F
Northern Boulevard (Rt. 25A)	EB	L	0.19	32.9	C	L	0.09	36.4	D	L	0.14	37.1	D
		TR	0.87	14.7	B	TR	0.98	38.1	D	TR	0.97	36.9	D
	WB	L	0.74	46.8	D	L	0.84	48.6	D	L	1.01	73.8	E
		TR	1.08	62.9	E	TR	1.17	106.4	F	TR	1.15	94.1	F
Overall Intersection		-	**1.07**	**47.8**	**D**	-	**1.12**	**79.4**	**E**	-	**1.14**	**78.8**	**E**
114th Street at Northern Boulevard (RT. 25A)													
114th Street	SB	LTR	0.78	57.6	E	LTR	0.62	49.9	D	LTR	0.48	46.0	D
Northern Boulevard (Rt. 25A)	EB	T	1.01	35.8	D	T	0.76	24.9	C	T	0.67	22.7	C
		R	0.64	14.9	B	R	0.80	29.3	C	R	0.67	24.9	C
	WB	DefL	0.84	51.2	D	DefL	0.84	39.0	D	DefL	1.29	159.4	F
		T	0.87	15.5	B	T	0.86	16.1	B	T	1.21	113.3	F
Overall Intersection		-	**1.52**	**26.9**	**C**	-	**1.32**	**23.8**	**C**	-	**1.95**	**87.2**	**F**
126th Street at Northern Boulevard (RT. 25A)													
126th Street	NB	L	0.47	44.1	D	L	0.63	47.0	D	L	1.18	129.3	F
		R	0.40	43.6	D	R	0.33	41.9	D	R	0.66	44.3	D
Northern Boulevard	EB	T	0.33	7.0	A	T	0.23	6.3	A	T	0.23	6.4	A
	WB	T	0.82	16.8	B	T	0.68	12.7	B	T	0.32	6.9	A
Grand Central Parkway Ramp	EB	T	0.58	9.9	A	T	0.47	8.4	A	T	0.49	8.6	A
Van Wyck & Whitestone Expressway Ramp	WB	T	0.80	14.8	B	T	0.74	13.1	B	T	0.64	12.1	B
Overall Intersection		-	**0.74**	**15.5**	**B**	-	**0.72**	**15.2**	**B**	-	**0.76**	**34.8**	**C**
Prince Street at Northern Boulevard (RT. 25A)													
Prince Street	NB	LTR	1.13	107.6	F	LTR	1.12	101.5	F	LTR	1.15	115.1	F
	SB	LTR	0.60	42.5	D	LTR	0.51	37.8	D	LTR	0.41	38.7	D
Northern Boulevard (Rt. 25A)	EB	L	0.98	75.2	E	L	1.01	87.7	F	L	0.91	67.7	E
		T	1.05	58.9	E	T	0.98	40.8	D	T	1.03	53.8	D
	WB	L	0.79	69.4	E	L	0.98	102.3	F	L	0.90	90.6	F
		T	1.11	93.3	F	T	1.14	103.1	F	T	0.99	51.1	D
Northern Boulevard Service Rd.	EB	TR	0.59	25.2	C	TR	0.51	23.2	C	TR	0.45	21.9	C
	WB	TR	0.80	42.3	D	TR	0.76	35.9	D	TR	0.55	29.3	C
Overall Intersection		-	**1.09**	**69.4**	**E**	-	**1.11**	**67.8**	**E**	-	**1.05**	**54.1**	**D**
Main Street at Northern Boulevard (RT. 25A)													
Main Street	NB	L	0.91	53.1	D	T	0.87	48.5	D	T	0.86	48.2	D
		R	0.92	64.7	E	R	0.96	71.5	E	R	0.75	42.6	D
Northern Boulevard (Rt 25A)	EB	T	1.15	99.8	F	T	0.96	41.6	D	T	1.06	67.3	E
		R	1.24	143.2	F	R	1.36	200.0	F	R	1.20	131.0	F
Northern Boulevard (Rt 25A)	WB	L	0.23	28.0	C	L	0.17	26.6	C	L	0.12	26.0	C
		T	0.79	23.4	C	T	0.89	27.0	C	T	0.71	21.3	C
Overall Intersection		-	**1.08**	**72.1**	**E**	-	**1.17**	**58.2**	**E**	-	**0.99**	**56.7**	**E**
Union Street at Northern Boulevard (RT. 25A)													
Union Street	NB	TR	0.70	36.0	D	TR	0.70	35.8	D	TR	0.67	34.9	C
	SB	TR	0.70	35.5	D	TR	0.61	33.3	C	TR	0.68	35.0	C
Northern Boulevard (Rt. 25A)	EB	L	0.64	31.9	C	L	0.70	35.5	D	L	0.75	35.7	D
		TR	1.19	119.7	F	TR	1.28	165.0	F	TR	1.25	149.8	F
	WB	L	0.80	41.8	D	L	0.99	69.8	E	L	1.01	69.8	E
		TR	1.01	65.7	E	TR	0.99	48.6	D	TR	0.86	39.4	D
Overall Intersection		-	**0.95**	**79.4**	**E**	-	**0.95**	**87.7**	**F**	-	**0.98**	**82.1**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)													
Parsons Boulevard	NB	L	0.90	84.4	F	L	0.69	51.0	D	L	0.76	58.2	E
		TR	0.59	40.4	D	TR	0.54	39.2	D	TR	0.60	38.6	D
	SB	LTR	1.19	129.2	F	LTR	1.14	107.6	F	LTR	1.13	104.3	F
Northern Boulevard (Rt. 25A)	EB	L	0.53	48.0	D	L	0.42	43.5	D	L	0.46	43.7	D
		TR	0.98	38.3	D	TR	1.14	99.2	F	TR	1.16	107.4	F
	WB	L	0.49	42.2	D	L	0.45	44.5	D	L	0.52	46.4	D
		TR	1.14	97.8	F	TR	1.08	72.9	E	TR	1.14	96.4	F
Overall Intersection		-	**1.14**	**69.9**	**E**	-	**1.11**	**80.7**	**F**	-	**1.10**	**92.4**	**F**
34TH AVENUE													
114th Street at 34th Avenue													
114th Street	SB	L	1.06	83.8	F	L	1.04	74.5	E	L	1.18	121.6	F
		T	0.55	29.0	C	T	0.55	28.8	C	T	0.36	25.1	C
34th Avenue	EB	TR	0.57	13.8	B	TR	0.46	12.3	B	TR	0.43	11.8	B
Overall Intersection		-	**0.74**	**42.6**	**D**	-	**0.67**	**41.5**	**D**	-	**0.71**	**70.5**	**E**
126th Street/GCP Ramp at 34th Avenue													
126th Street	NB	DefL	0.74	64.0	E	DefL	1.03	104.7	F	-	-	-	-
		TR	0.36	35.5	D	TR	0.48	33.4	C	LTR	0.58	29.3	C
Northern Boulevard Ramp	SB	LTR	0.74	49.8	D	LTR	0.54	36.6	D	LTR	0.20	24.2	C
GCP Ramp	SB	LTR	1.47	266.5	F	LTR	2.09	545.7	F	LTR	0.94	87.3	F
Shea Road	EB	DefL	0.50	33.0	C	-	-	-	-	DefL	1.98	488.9	F
		TR	0.31	28.3	C	LTR	0.41	28.4	F	TR	1.07	99.8	F
34th Avenue	WB	LTR	0.30	28.1	C	LTR	0.41	28.0	F	LTR	0.60	43.4	D
Overall Intersection		-	**0.82**	**140.5**	**F**	-	**0.97**	**241.8**	**F**	-	**1.15**	**141.6**	**F**

TABLE 8
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 NO ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE													
108th Street at Roosevelt Avenue													
108th Street	NB	LTR	1.18	128.0	F	LTR	1.20	137.9	F	LTR	1.18	129.9	F
	SB	LTR	1.19	132.8	F	LTR	1.20	136.6	F	LTR	1.22	146.9	F
Roosevelt Avenue	EB	LTR	0.71	8.6	A	LTR	0.79	19.6	B	LTR	0.65	15.1	B
	WB	LTR	0.67	12.4	B	LTR	1.01	33.5	C	LTR	0.94	20.4	C
	Overall Intersection	-	**0.84**	**53.3**	**D**	-	**1.07**	**63.3**	**E**	-	**1.01**	**60.5**	**E**
111th Street at Roosevelt Avenue													
111th Street	NB	LTR	1.05	78.7	E	LTR	1.07	80.2	F	LTR	1.08	85.9	F
Roosevelt Avenue	EB	LTR	0.77	9.7	A	LTR	0.87	23.3	C	LTR	0.75	17.9	B
	WB	LTR	1.21	115.3	F	LTR	1.23	126.6	F	LTR	1.24	130.2	F
	Overall Intersection	-	**1.17**	**67.8**	**E**	-	**1.19**	**77.3**	**E**	-	**1.20**	**84.4**	**F**
114th Street at Roosevelt Avenue													
114th Street	NB	LTR	0.91	60.5	E	LTR	1.10	94.5	F	LTR	0.69	46.6	D
	SB	LTR	1.12	100.8	F	LTR	1.12	100.4	F	LTR	1.11	97.5	F
Roosevelt Avenue	EB	LTR	1.00	31.0	C	LTR	1.26	137.8	F	LTR	1.33	170.5	F
	WB	LTR	0.69	14.5	B	LTR	0.61	12.7	B	LTR	0.80	17.4	B
	Overall Intersection	-	**1.04**	**35.8**	**D**	-	**1.22**	**79.1**	**E**	-	**1.26**	**71.4**	**E**
126th Street at Roosevelt Avenue													
126th Street	NB	LTR	0.66	61.7	E	LTR	0.84	83.3	F	LTR	0.22	37.4	D
	SB	-	-	-	-	-	-	-	-	DefL	1.25	167.0	F
		LTR	1.18	126.0	F	LTR	1.16	119.6	F	TR	0.52	30.4	C
Roosevelt Avenue	EB	DefL	1.04	70.9	E	DefL	1.22	150.9	F	-	-	-	-
		TR	0.71	8.1	A	TR	0.56	12.5	B	LTR	0.62	23.0	C
	WB	LTR	0.63	12.9	B	LTR	0.67	13.7	B	LTR	0.51	20.2	C
	Overall Intersection	-	**1.08**	**47.4**	**D**	-	**1.21**	**56.0**	**E**	-	**0.89**	**56.0**	**E**
College Point Boulevard at Roosevelt Avenue													
College Point Boulevard	NB	L	1.30	194.3	F	L	1.33	195.3	F	L	1.05	93.9	F
		TR	0.70	29.2	C	TR	0.84	28.1	C	TR	0.78	26.3	C
	SB	TR	0.90	48.2	D	TR	1.23	136.8	F	TR	0.89	40.4	D
Roosevelt Avenue	EB	L	0.50	37.4	D	L	0.50	29.0	C	L	0.59	30.5	C
		TR	1.27	153.5	F	TR	1.25	140.1	F	TR	1.25	134.7	F
	WB	L	0.31	45.0	D	L	0.29	33.5	C	L	0.25	32.9	C
		TR	0.49	36.5	D	TR	0.55	28.4	C	TR	0.42	25.8	C
	Overall Intersection	-	**1.23**	**82.7**	**F**	-	**1.38**	**99.4**	**F**	-	**1.14**	**62.6**	**E**
Prince Street at Roosevelt Avenue													
Prince Street	SB	LTR	0.53	31.2	C	LTR	0.81	42.3	D	LTR	0.73	37.4	D
Roosevelt Avenue	EB	DefL	0.82	33.2	C	DefL	0.78	18.6	B	DefL	0.78	19.0	B
		TR	0.81	29.4	C	TR	0.66	13.2	B	TR	0.84	18.7	B
	WB	LTR	0.61	21.6	C	LTR	0.63	13.4	B	LTR	0.60	12.4	B
	Overall Intersection	-	**0.70**	**28.3**	**C**	-	**0.79**	**20.7**	**C**	-	**0.80**	**20.5**	**C**
Main Street at Roosevelt Avenue													
Main Street	NB	T	0.64	23.7	C	T	0.68	24.5	C	T	0.68	24.5	C
	SB	T	0.54	21.8	C	T	0.63	23.7	C	T	0.54	22.0	C
Roosevelt Avenue	EB	LTR	1.04	93.9	F	LTR	0.87	42.8	D	LTR	1.02	67.1	E
	WB	LTR	1.00	76.5	E	LTR	0.89	43.7	D	LTR	0.98	54.7	D
	Overall Intersection	-	**0.80**	**47.6**	**D**	-	**0.78**	**31.7**	**C**	-	**0.86**	**40.7**	**D**
Union Street at Roosevelt Avenue													
Union Street	NB	TR	0.55	18.9	B	TR	0.46	17.3	B	TR	0.46	17.4	B
	SB	LT	1.28	154.0	F	LT	1.01	57.9	E	LT	1.23	134.3	F
		R	1.93	447.1	F	R	2.67	789.3	F	R	1.93	453.3	F
Roosevelt Avenue	EB	LTR	2.34	633.4	F	LTR	1.95	459.4	F	LTR	2.00	480.3	F
	WB	LT	0.82	33.3	C	LT	0.58	24.4	C	LT	0.75	31.8	C
		R	0.77	43.4	D	R	1.21	180.8	F	R	1.34	224.8	F
	Overall Intersection	-	**2.12**	**242.2**	**F**	-	**2.33**	**254.0**	**F**	-	**1.96**	**226.3**	**F**
Parsons Boulevard at Roosevelt Avenue													
Parsons Boulevard	NB	LTR	0.82	38.4	D	LTR	0.74	28.0	C	LTR	0.96	43.7	D
	SB	LTR	0.80	34.2	C	LTR	0.75	26.1	C	LTR	0.77	27.2	C
Roosevelt Avenue	EB	LTR	0.70	32.1	C	LTR	0.46	20.1	C	LTR	0.72	26.9	C
	WB	LTR	0.94	49.9	D	LTR	0.64	24.4	C	LTR	0.76	28.8	C
	Overall Intersection	-	**0.88**	**38.7**	**D**	-	**0.69**	**25.2**	**C**	-	**0.86**	**32.1**	**C**
KISSENA BOULEVARD													
Main Street at Kissena Boulevard													
Main Street	NB	L	0.76	38.9	D	L	0.91	60.1	E	L	0.70	32.8	C
		TR	0.59	22.4	C	TR	0.60	21.5	C	TR	0.68	23.0	C
	SB	L	0.88	55.5	E	L	0.52	21.4	C	L	0.44	19.8	B
		TR	0.51	20.2	C	TR	0.54	19.7	B	TR	0.49	18.9	B
Kissena Boulevard	WB	T	0.73	38.2	D	T	0.66	24.8	C	T	0.66	24.6	C
	Overall Intersection	-	**0.81**	**30.5**	**C**	-	**0.79**	**25.0**	**C**	-	**0.68**	**22.4**	**C**
SANFORD AVENUE													
College Point Boulevard at Sanford Avenue													
College Point Boulevard	NB	L	0.40	15.8	B	L	0.53	22.5	C	L	0.24	13.2	B
		T	0.76	16.2	B	T	0.83	18.3	B	T	0.57	12.7	B
	SB	TR	0.76	16.1	B	TR	0.83	18.3	B	TR	0.80	17.4	B
Sanford Avenue	WB	L	0.82	50.2	D	L	0.88	56.5	E	L	0.58	34.8	C
		TR	0.48	28.6	C	TR	0.52	29.3	C	TR	0.34	26.6	C
	Overall Intersection	-	**0.78**	**20.0**	**B**	-	**0.85**	**22.6**	**C**	-	**0.73**	**17.6**	**B**
Union Street at Sanford Avenue													
Union Street	NB	LTR	0.39	21.7	C	LTR	0.49	24.4	C	LTR	0.42	22.2	C
	SB	LTR	0.71	26.3	C	LTR	0.93	36.0	D	LTR	0.82	30.1	C
Sanford Avenue	EB	-	-	-	-	DefL	0.58	24.6	C	-	-	-	-
		LTR	0.29	14.3	B	TR	0.33	15.1	B	LTR	0.24	13.8	B
	WB	LTR	0.91	32.4	C	LTR	0.75	23.8	C	LTR	0.70	22.4	C
	Overall Intersection	-	**0.82**	**25.7**	**C**	-	**0.83**	**28.0**	**C**	-	**0.75**	**24.1**	**C**

TABLE 8
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 NO ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue													
Parsons Boulevard	NB	LTR	1.05	58.4	E	LTR	0.86	32.6	C	LTR	0.94	38.6	D
	SB	LTR	0.70	25.1	C	LTR	0.74	26.0	C	LTR	0.75	26.4	C
Sanford Avenue	EB	LTR	0.61	23.6	C	LTR	0.63	23.5	C	LTR	0.81	30.1	C
	WB	LTR	0.76	28.5	C	LTR	0.86	33.3	C	LTR	0.83	32.5	C
Overall Intersection		**-**	**0.90**	**35.3**	**D**	**-**	**0.86**	**29.0**	**C**	**-**	**0.88**	**31.9**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE													
College Point Boulevard at 32nd Avenue													
College Point Boulevard	NB	T	0.40	23.8	C	T	0.37	23.3	C	T	0.45	24.0	C
		TR	0.27	22.0	C	TR	0.59	26.1	C	TR	0.35	22.9	C
	SB	L	0.45	33.6	C	L	0.58	38.3	D	L	0.28	27.8	C
		T	0.41	10.6	B	T	0.46	11.1	B	T	0.30	9.6	A
32nd Avenue	WB	LTR	0.75	38.4	D	LTR	0.47	30.3	C	LTR	0.31	26.9	C
Overall Intersection		**-**	**1.10**	**21.2**	**C**	**-**	**1.05**	**21.9**	**C**	**-**	**0.86**	**19.6**	**B**
NORTHERN BOULEVARD SERVICE ROAD													
College Point Boulevard at Northern Boulevard Service Road													
College Point Boulevard	NB	TR	0.49	12.7	B	TR	0.55	13.4	B	TR	0.51	12.9	B
	SB	LT	0.85	22.5	C	LT	0.92	28.0	C	LT	0.55	14.0	B
Northern Blvd Service Rd	WB	LR	0.72	33.9	C	LR	0.72	33.2	C	LR	0.57	29.2	C
Overall Intersection		**-**	**0.81**	**20.4**	**C**	**-**	**0.85**	**22.7**	**C**	**-**	**0.56**	**15.9**	**B**
STADIUM ROAD													
Boat Basin Road at Stadium Road													
Boat Basin Road	NB	-	-	-	-	-	-	-	-	L	2.39	663.8	F
		LTR	0.54	43.9	D	LTR	0.68	49.6	D	TR	1.90	438.3	F
	SB	LTR	0.90	35.6	D	LTR	0.77	24.6	C	LTR	0.41	27.7	C
Stadium Road	WB	LTR	0.88	33.1	C	LTR	1.00	45.6	D	LTR	0.27	9.3	A
Overall Intersection		**-**	**0.85**	**35.2**	**D**	**-**	**0.83**	**35.1**	**D**	**-**	**0.98**	**431.4**	**F**
UNSIGNALIZED INTERSECTIONS													
Willets Point Boulevard at 126th Street													
126th Street	SB	LT	-	8.2	A	LT	-	9.0	A	LT	-	8.2	A
Willets Point Boulevard	WB	LR	-	12.4	B	LR	-	11.0	B	LR	-	10.1	B
Overall Intersection		**-**	**-**	**12.3**	**B**	**-**	**-**	**10.9**	**B**	**-**	**-**	**8.9**	**A**
Boat Basin Road at Worlds Fair Marina													
Boat Basin Road	NB	L	-	54.8	F	L	-	41.4	E	L	-	103.5	F
		R	-	8.6	A	R	-	8.7	A	R	-	13.4	B
Worlds Fair Marina	WB	LT	-	12.4	B	LT	-	11.2	B	LT	-	7.8	A
Overall Intersection		**-**	**-**	**13.7**	**B**	**-**	**-**	**12.2**	**B**	**-**	**-**	**54.1**	**F**
Willets Point Boulevard at Northern Boulevard													
Willets Point Boulevard	NB	TR	-	9.6	A	TR	-	9.2	A	TR	-	9.1	A
Overall Intersection		**-**	**-**	**9.6**	**A**	**-**	**-**	**9.2**	**A**	**-**	**-**	**9.1**	**A**
Boat Basin Road at Stadium Road / Citifield Entrance 8													
Citifield Entrance 8	NB	-	-		-	-	-		-	-	-		-
Boat Basin Road	SB	LT	-	8.4	A	LT	-	7.8	A				
Stadium Road	EB	LT	-	31.4	D	LT	-	88.5	F	LT	-	82.9	F
		TR	-	31.0	D	TR	-	39.9	E				
Citifield Entrance 9	WB	R	-	10.3	B	R	-	9.3	A	R	-	56.1	F
Overall Intersection		**-**	**-**	**30.0**	**D**	**-**	**-**	**58.7**	**F**	**-**	**-**	**79.3**	**F**
Grand Central Parkway Ramp at West Park Loop/Stadium Road													
Grand Central Parkway Off-Ramp	EB	L	-	35.6	E	L	-	35.9	E	L	-	53.2	F
		R	-	9.6	A	R	-	9.2	A	R	-	22.8	C
Overall Intersection		**-**	**-**	**32.4**	**D**	**-**	**-**	**33.1**	**D**	**-**	**-**	**41.7**	**E**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 9
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
SIGNALIZED INTERSECTIONS																	
ASTORIA BOULEVARD																	
108th Street at Astoria Boulevard																	
108th Street	NB	DefL	0.77	59.7	E	DefL	0.57	29.6	C	DefL	0.68	52.5	D	DefL	0.62	30.8	C
		T	0.22	35.7	D	T	0.13	20.1	C	T	0.21	35.6	D	T	0.20	21.0	C
	SB	LTR	0.35	38.3	D	LTR	0.17	20.6	C	LTR	0.38	38.9	D	LTR	0.25	21.6	C
Astoria Boulevard	EB	TR	0.61	25.8	C	TR	0.88	31.2	C	TR	0.91	27.5	C	TR	1.00	42.0	D
	WB	L	0.56	14.8	B	L	0.74	33.8	C	L	0.71	45.6	D	L	0.54	23.9	C
		TR	0.77	7.9	A	TR	0.35	12.6	B	TR	0.35	9.9	A	TR	0.38	12.7	B
Overall Intersection		-	**0.77**	**17.9**	**B**	-	**0.76**	**25.3**	**C**	-	**0.84**	**26.3**	**C**	-	**0.81**	**30.4**	**C**
NORTHERN BOULEVARD																	
108th Street at Northern Boulevard (RT. 25A)																	
108th Street	NB	LTR	1.20	139.5	F	LTR	1.47	257.2	F	LTR	1.49	267.6	F	LTR	1.50	274.3	F
	SB	LTR	0.97	79.0	E	LTR	0.92	69.0	E	LTR	1.12	112.7	F	LTR	0.93	69.3	E
Northern Boulevard (Rt. 25A)	EB	L	0.07	21.4	C	L	0.08	25.2	C	L	0.15	36.2	D	L	0.17	41.3	D
		TR	0.77	21.1	C	TR	0.94	34.1	C	TR	0.87	14.8	B	TR	1.01	45.4	D
	WB	L	0.44	21.7	C	L	0.75	50.1	D	L	0.66	43.0	D	L	0.76	46.6	D
		TR	1.03	33.7	C	TR	1.04	57.1	E	TR	1.17	104.6	F	TR	1.22	128.0	F
Overall Intersection		-	**0.94**	**39.0**	**D**	-	**1.11**	**66.9**	**E**	-	**1.17**	**73.9**	**E**	-	**1.23**	**102.9**	**F**
114th Street at Northern Boulevard (RT. 25A)																	
114th Street	SB	LTR	0.49	48.2	D	LTR	0.44	45.7	D	LTR	0.45	47.2	D	LTR	0.43	45.0	D
Northern Boulevard (Rt. 25A)	EB	T	0.89	42.1	D	T	0.86	29.9	C	T	1.18	100.1	F	T	0.77	25.6	C
		R	0.74	38.4	D	R	0.48	19.7	B	R	0.85	17.8	B	R	0.62	23.1	C
	WB	DefL	0.51	16.6	B	DefL	0.64	27.0	C	DefL	1.03	89.8	F	DefL	0.91	43.8	D
		T	1.17	94.4	F	T	0.76	13.3	B	T	0.94	20.1	C	T	1.01	33.1	C
Overall Intersection		-	**1.32**	**70.9**	**E**	-	**1.24**	**22.1**	**C**	-	**1.61**	**55.1**	**E**	-	**1.32**	**31.1**	**C**
126th Street at Northern Boulevard (RT. 25A)																	
126th Street	NB	L	0.37	42.6	D	L	0.66	48.9	D	L	0.62	47.4	D	L	0.65	48.4	D
		R	0.39	43.4	D	R	0.54	46.7	D	R	0.49	44.9	D	R	0.61	48.1	D
Northern Boulevard	EB	T	0.22	6.3	A	T	0.32	7.0	A	T	0.36	7.3	A	T	0.29	6.8	A
	WB	T	0.66	10.9	B	T	0.36	7.3	A	T	0.43	7.9	A	T	0.34	7.2	A
Grand Central Parkway Ramp	EB	T	0.43	8.1	A	T	0.41	7.8	A	T	0.47	8.4	A	T	0.44	8.0	A
Van Wyck & Whitestone Expressway Ramp	WB	T	1.20	144.9	F	T	1.02	50.4	D	T	1.12	83.0	F	T	1.01	46.9	D
Overall Intersection		-	**1.02**	**53.0**	**D**	-	**0.94**	**25.8**	**C**	-	**1.00**	**34.0**	**C**	-	**0.93**	**25.2**	**C**
Prince Street at Northern Boulevard (RT. 25A)																	
Prince Street	NB	LTR	1.13	124.0	F	LTR	1.13	107.5	F	LTR	1.17	122.7	F	LTR	1.10	91.6	F
	SB	LTR	0.78	52.5	D	LTR	0.52	41.0	D	LTR	0.51	41.4	D	LTR	0.45	36.6	D
Northern Boulevard (Rt. 25A)	EB	L	0.94	89.0	F	L	0.87	69.8	E	L	0.60	45.4	D	L	0.65	49.1	D
		T	0.80	22.4	C	T	0.95	37.8	D	T	0.99	42.2	D	T	1.09	77.0	E
	WB	L	0.94	88.4	F	L	0.89	88.0	F	L	0.79	70.6	E	L	0.80	63.5	E
		T	1.15	90.0	F	T	1.15	108.7	F	T	1.16	113.1	F	T	1.19	121.3	F
Northern Boulevard Service Rd.	EB	TR	0.44	16.5	B	TR	0.60	26.0	C	TR	0.64	27.1	C	TR	0.61	25.5	C
	WB	TR	0.67	19.2	B	TR	0.76	37.5	D	TR	0.71	37.6	D	TR	0.81	38.5	D
Overall Intersection		-	**1.10**	**59.1**	**E**	-	**1.09**	**68.3**	**E**	-	**1.02**	**69.4**	**E**	-	**1.05**	**83.6**	**F**
Main Street at Northern Boulevard (RT. 25A)																	
Main Street	NB	L	0.76	43.1	D	L	0.97	62.8	E	L	0.95	59.2	E	L	0.92	54.6	D
		R	0.83	52.1	D	R	0.66	38.7	D	R	0.95	71.2	E	R	0.87	58.7	E
Northern Boulevard (Rt 25A)	EB	T	0.94	39.4	D	T	1.00	49.4	D	T	1.10	78.3	E	T	0.99	46.3	D
		R	1.14	113.1	F	R	1.25	157.1	F	R	1.16	115.7	F	R	1.34	192.6	F
Northern Boulevard (Rt 25A)	WB	L	0.16	26.4	C	L	0.10	25.6	C	L	0.16	26.7	C	L	0.08	25.1	C
		T	1.04	40.6	D	T	0.79	23.7	C	T	0.80	23.9	C	T	0.98	34.5	C
Overall Intersection		-	**0.99**	**47.8**	**D**	-	**1.00**	**56.9**	**E**	-	**1.06**	**61.7**	**E**	-	**1.12**	**60.9**	**E**
Union Street at Northern Boulevard (RT. 25A)																	
Union Street	NB	TR	0.66	34.6	C	TR	0.76	38.1	D	TR	0.76	37.8	D	TR	0.75	37.3	D
	SB	TR	0.87	41.0	D	TR	0.54	32.1	C	TR	0.81	38.7	D	TR	0.63	33.9	C
Northern Boulevard (Rt. 25A)	EB	L	0.94	61.7	E	L	0.54	22.7	C	L	0.75	42.2	D	L	0.71	32.9	C
		TR	1.22	139.0	F	TR	1.41	223.1	F	TR	1.16	108.1	F	TR	1.50	263.0	F
	WB	L	1.00	71.8	E	L	1.16	136.3	F	L	0.84	47.9	D	L	0.85	45.5	D
		TR	0.96	38.8	D	TR	0.88	39.6	D	TR	0.97	45.8	D	TR	1.08	76.8	E
Overall Intersection		-	**1.05**	**71.2**	**E**	-	**1.37**	**115.3**	**F**	-	**0.99**	**69.4**	**E**	-	**1.11**	**136.3**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)																	
Parsons Boulevard	NB	L	0.91	81.5	F	L	0.71	55.9	E	L	0.83	67.6	E	L	0.84	67.3	E
		TR	0.55	39.5	D	TR	0.51	38.4	D	TR	0.49	35.0	D	TR	0.58	40.3	D
	SB	LTR	0.79	45.7	D	LTR	1.14	108.3	F	LTR	1.12	99.9	F	LTR	1.14	106.9	F
Northern Boulevard (Rt. 25A)	EB	L	0.53	45.1	D	L	0.81	58.6	E	L	0.50	47.9	D	L	0.52	46.4	D
		TR	1.03	60.8	E	TR	1.08	79.0	E	TR	0.99	42.0	D	TR	1.13	97.4	F
	WB	L	0.43	36.4	D	L	0.36	37.5	D	L	0.39	40.7	D	L	0.47	44.5	D
		TR	1.11	83.5	F	TR	1.22	136.0	F	TR	1.13	96.2	F	TR	1.22	133.2	F
Overall Intersection		-	**1.00**	**67.9**	**E**	-	**1.18**	**98.2**	**F**	-	**1.09**	**66.4**	**E**	-	**1.15**	**104.5**	**F**
34TH AVENUE																	
114th Street at 34th Avenue																	
114th Street	SB	L	0.85	39.1	D	L	0.89	49.2	D	L	1.06	78.2	E	L	1.08	90.1	F
		T	0.33	24.8	C	T	0.31	25.1	C	T	0.47	27.1	C	T	0.42	26.6	C
34th Avenue	EB	TR	0.44	12.0	B	TR	0.39	11.3	B	TR	0.37	11.1	B	TR	0.56	13.5	B
Overall Intersection		-	**0.58**	**24.4**	**C**	-	**0.56**	**29.9**	**C**	-	**0.61**	**45.5**	**D**	-	**0.74**	**45.7**	**D**
126th Street/GCP Ramp at 34th Avenue																	
126th Street	NB	DefL	0.25	22.1	C	DefL	0.47	28.2	C	DefL	0.61	31.8	C	DefL	0.37	25.2	C
		TR	0.22	20.6	C	TR	0.34	22.1	C	TR	0.33	21.9	C	TR	0.33	22.0	C
Northern Boulevard Ramp	SB	LTR	0.39	23.6	C	LTR	0.74	35.4	D	LTR	0.41	24.0	C	LTR	0.63	29.7	C
GCP Ramp	SB	LTR	1.22	169.9	F	LTR	2.04	525.7	F	LTR	1.93	475.9	F	LTR	1.94	483.1	F
Shea Road	EB	-	-	-	-	-	-	-	-	DefL	1.66	364.6	F	DefL	1.97	494.9	F
		LTR	0.66	48.7	D	LTR	1.12	120.3	F	TR	0.88	72.1	E	TR	1.03	99.8	F
34th Avenue	WB	LTR	0.73	61.2	E	LTR	0.98	108.8	F	LTR	1.00	99.7	F	LTR	0.77	62.5	E
Overall Intersection		-	**0.66**	**71.9**	**E**	-	**1.14**	**199.1**	**F**	-	**1.18**	**197.6**	**F**	-	**1.27**	**227.9**	**F**

TABLE 9
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE																	
108th Street at Roosevelt Avenue																	
108th Street	NB	LTR	1.00	73.7	E	LTR	1.09	103.9	F	LTR	1.10	99.7	F	LTR	1.20	139.1	F
	SB	LTR	1.05	85.2	F	LTR	1.20	136.6	F	LTR	1.16	120.0	F	LTR	1.12	105.3	F
Roosevelt Avenue	EB	LTR	0.69	16.5	B	LTR	0.80	21.6	C	LTR	0.79	11.4	B	LTR	0.76	18.8	B
	WB	LTR	0.83	10.7	B	LTR	0.92	31.5	C	LTR	0.92	22.6	C	LTR	0.86	17.4	B
	Overall Intersection	-	**0.89**	**33.5**	**C**	-	**1.00**	**55.2**	**E**	-	**0.98**	**47.3**	**D**	-	**0.95**	**52.0**	**D**
111th Street at Roosevelt Avenue																	
111th Street	NB	LTR	0.97	63.1	E	LTR	0.71	49.8	D	LTR	0.83	54.4	D	LTR	1.03	69.7	E
Roosevelt Avenue	EB	LTR	0.69	15.9	B	LTR	0.79	19.6	B	LTR	0.85	13.5	B	LTR	0.94	32.7	C
	WB	LTR	0.93	18.4	B	LTR	0.93	32.3	C	LTR	1.30	156.4	F	LTR	1.30	158.3	F
	Overall Intersection	-	**0.94**	**26.0**	**C**	-	**0.87**	**29.4**	**C**	-	**1.17**	**89.5**	**F**	-	**1.23**	**94.6**	**F**
114th Street at Roosevelt Avenue																	
114th Street	NB	LTR	1.00	66.8	E	LTR	0.68	49.6	D	LTR	0.95	58.3	E	LTR	0.99	64.4	E
	SB	LTR	1.19	139.2	F	LTR	0.87	72.5	E	LTR	1.19	134.8	F	LTR	1.23	150.1	F
Roosevelt Avenue	EB	LTR	0.85	24.6	C	LTR	1.02	57.1	E	LTR	1.07	56.5	E	LTR	1.51	251.3	F
	WB	LTR	0.59	5.7	A	LTR	0.59	12.5	B	LTR	0.88	21.7	C	LTR	0.89	23.0	C
	Overall Intersection	-	**0.94**	**33.2**	**C**	-	**0.98**	**35.8**	**D**	-	**1.11**	**46.0**	**D**	-	**1.42**	**104.2**	**F**
126th Street at Roosevelt Avenue																	
126th Street	NB	LTR	0.21	36.9	D	LTR	0.93	72.4	E	LTR	0.70	57.4	E	LTR	0.38	41.2	D
	SB	DefL	1.24	182.2	F	DefL	1.32	217.2	F	DefL	1.12	128.7	F	DefL	1.16	146.0	F
		TR	0.69	53.6	D	TR	0.74	57.3	E	TR	0.76	53.2	D	TR	0.66	48.5	D
Roosevelt Avenue	EB	-	-	-	-	-	-	-	-	DefL	0.74	29.4	C	-	-	-	-
		LTR	0.58	12.8	B	LTR	0.61	13.4	B	TR	0.65	7.3	A	LTR	0.80	19.3	B
	WB	LTR	0.64	6.3	A	LTR	0.58	12.3	B	LTR	0.65	13.6	B	LTR	0.57	12.1	B
	Overall Intersection	-	**0.79**	**35.5**	**D**	-	**0.79**	**43.9**	**D**	-	**0.84**	**32.5**	**C**	-	**0.90**	**36.4**	**D**
College Point Boulevard at Roosevelt Avenue																	
College Point Boulevard	NB	L	1.45	258.0	F	L	1.58	310.3	F	L	1.43	254.8	F	L	1.54	288.3	F
		TR	0.72	27.0	C	TR	0.86	29.7	C	TR	0.74	30.5	C	TR	0.91	32.0	C
	SB	TR	0.86	44.1	D	TR	1.26	155.4	F	TR	1.35	204.5	F	TR	1.07	75.5	E
Roosevelt Avenue	EB	L	0.44	39.9	D	L	0.56	30.5	C	L	0.49	37.3	D	L	0.57	20.9	C
		TR	1.01	66.4	E	TR	1.38	197.7	F	TR	1.32	179.5	F	TR	1.39	200.6	F
	WB	L	0.22	45.2	D	L	0.27	33.4	C	L	0.24	43.6	D	L	0.33	34.2	C
		TR	0.69	44.9	D	TR	0.63	31.8	C	TR	0.50	37.1	D	TR	0.55	28.3	C
	Overall Intersection	-	**1.12**	**71.7**	**E**	-	**1.50**	**128.0**	**F**	-	**1.43**	**140.3**	**F**	-	**1.39**	**100.6**	**F**
Prince Street at Roosevelt Avenue																	
Prince Street	SB	LTR	0.50	30.7	C	LTR	0.83	45.0	D	LTR	0.58	32.6	C	LTR	0.94	54.2	D
Roosevelt Avenue	EB	DefL	1.27	171.0	F	DefL	0.95	37.3	D	DefL	1.10	95.6	F	DefL	0.81	20.5	C
		TR	0.59	23.1	C	TR	0.71	15.2	B	TR	0.74	27.2	C	TR	0.79	17.2	B
	WB	LTR	0.90	33.3	C	LTR	0.56	12.4	B	LTR	0.64	21.4	C	LTR	0.61	13.3	B
	Overall Intersection	-	**0.94**	**64.6**	**E**	-	**0.91**	**25.9**	**C**	-	**0.88**	**42.4**	**D**	-	**0.85**	**24.6**	**C**
Main Street at Roosevelt Avenue																	
Main Street	NB	T	0.58	21.9	C	T	0.65	24.0	C	T	0.50	20.8	C	T	0.74	25.8	C
	SB	T	0.42	19.2	B	T	0.49	21.4	C	T	0.52	21.5	C	T	0.63	23.4	C
Roosevelt Avenue	EB	LTR	0.69	41.7	D	LTR	0.96	59.0	E	LTR	1.27	178.0	F	LTR	1.08	88.7	F
	WB	LTR	1.02	72.4	E	LTR	0.96	51.6	D	LTR	1.17	128.8	F	LTR	0.92	36.8	D
	Overall Intersection	-	**0.76**	**38.9**	**D**	-	**0.80**	**37.3**	**D**	-	**0.82**	**78.8**	**E**	-	**0.91**	**41.1**	**D**
Union Street at Roosevelt Avenue																	
Union Street	NB	TR	0.58	19.6	B	TR	0.57	19.2	B	TR	0.40	16.5	B	TR	0.55	18.8	B
	SB	LT	1.04	59.4	E	LT	0.96	46.3	D	LT	0.88	32.8	C	LT	1.02	56.1	E
		R	0.83	33.6	C	R	3.00+	1000.0+	F	R	2.48	705.0	F	R	2.75	822.2	F
Roosevelt Avenue	EB	LTR	1.41	221.2	F	LTR	2.18	566.2	F	LTR	2.01	484.2	F	LTR	2.55	728.2	F
	WB	LT	0.99	49.5	D	LT	0.67	27.4	C	LT	0.61	25.9	C	LT	0.61	25.3	C
		R	1.00	68.9	E	R	0.84	61.5	E	R	0.96	86.2	F	R	1.20	173.0	F
	Overall Intersection	-	**1.21**	**73.8**	**E**	-	**3.00+**	**491.8**	**F**	-	**2.26**	**232.3**	**F**	-	**2.66**	**336.2**	**F**
Parsons Boulevard at Roosevelt Avenue																	
Parsons Boulevard	NB	LTR	1.10	80.2	F	LTR	0.65	24.3	C	LTR	0.85	40.2	D	LTR	0.86	34.6	C
	SB	LTR	0.79	33.6	C	LTR	0.63	23.0	C	LTR	0.69	29.9	C	LTR	0.77	26.5	C
Roosevelt Avenue	EB	LTR	0.50	26.0	C	LTR	0.65	25.3	C	LTR	0.58	28.4	C	LTR	0.84	34.2	C
	WB	LTR	1.14	98.7	F	LTR	0.80	32.2	C	LTR	0.80	37.5	D	LTR	0.93	45.4	D
	Overall Intersection	-	**1.12**	**64.9**	**E**	-	**0.72**	**26.2**	**C**	-	**0.83**	**34.3**	**C**	-	**0.90**	**34.7**	**C**
KISSENA BOULEVARD																	
Main Street at Kissena Boulevard																	
Main Street	NB	L	0.71	31.8	C	L	0.85	48.4	D	L	0.75	37.1	D	L	1.15	123.2	F
		TR	0.68	24.6	C	TR	0.62	21.9	C	TR	0.57	22.1	C	TR	0.67	22.9	C
	SB	L	0.63	37.5	D	L	0.45	20.2	C	L	0.82	49.5	D	L	0.53	21.6	C
		TR	0.38	18.2	B	TR	0.50	19.2	B	TR	0.45	19.2	B	TR	0.56	19.9	B
Kissena Boulevard	WB	T	0.72	37.5	D	T	0.71	26.3	C	T	0.64	34.9	C	T	0.73	26.4	C
	Overall Intersection	-	**0.72**	**27.1**	**C**	-	**0.78**	**24.2**	**C**	-	**0.78**	**28.9**	**C**	-	**0.94**	**33.4**	**C**
SANFORD AVENUE																	
College Point Boulevard at Sanford Avenue																	
College Point Boulevard	NB	L	0.20	10.1	B	L	0.55	23.1	C	L	0.51	30.5	C	L	0.61	30.1	C
		T	0.68	14.8	B	T	0.66	14.4	B	T	0.60	13.2	B	T	0.73	15.7	B
	SB	TR	0.58	13.1	B	TR	0.77	17.0	B	TR	0.99	34.9	C	TR	0.86	19.4	B
Sanford Avenue	WB	L	0.77	43.9	D	L	0.56	34.3	C	L	0.75	44.9	D	L	0.68	38.5	D
		TR	0.56	30.2	C	TR	0.42	27.8	C	TR	0.41	27.6	C	TR	0.59	30.8	C
	Overall Intersection	-	**0.71**	**18.9**	**B**	-	**0.70**	**18.3**	**B**	-	**0.91**	**28.1**	**C**	-	**0.80**	**20.8**	**C**
Union Street at Sanford Avenue																	
Union Street	NB	LTR	0.68	29.3	C	LTR	0.33	20.5	C	LTR	0.29	20.0	C	LTR	0.38	21.5	C
	SB	LTR	0.60	24.3	C	LTR	0.60	24.0	C	LTR	0.72	26.3	C	LTR	0.74	27.2	C
Sanford Avenue	EB	DefL	0.55	25.0	C	DefL	0.41	19.3	B	-	-	-	-	DefL	0.47	21.1	C
		TR	0.36	15.7	B	TR	0.20	13.6	B	LTR	0.31	14.6	B	TR	0.34	15.4	B
	WB	LTR	0.86	27.6	C	LTR	0.85	27.3	C	LTR	0.69	22.4	C	LTR	0.85	27.4	C
	Overall Intersection	-	**0.79**	**25.1**	**C**	-	**0.76**	**24.4**	**C**	-	**0.70**	**22.2**	**C**	-	**0.82**	**25.4**	**C**

TABLE 9
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue																	
Parsons Boulevard	NB	LTR	1.08	62.9	E	LTR	1.12	81.2	F	LTR	0.87	32.6	C	LTR	0.90	35.1	D
	SB	LTR	0.95	36.2	D	LTR	0.73	26.1	C	LTR	0.82	30.0	C	LTR	0.91	35.8	D
Sanford Avenue	EB	LTR	0.71	26.8	C	LTR	0.56	22.3	C	LTR	0.70	26.0	C	LTR	0.73	26.7	C
	WB	LTR	0.82	30.5	C	LTR	0.87	34.7	C	LTR	0.80	30.5	C	LTR	0.92	39.6	D
Overall Intersection		-	**0.95**	**39.9**	**D**	-	**1.00**	**42.5**	**D**	-	**0.84**	**29.9**	**C**	-	**0.92**	**34.6**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE																	
College Point Boulevard at 32nd Avenue																	
College Point Boulevard	NB	T	0.43	23.7	C	T	0.71	30.0	C	T	0.50	25.2	C	T	0.36	23.2	C
		TR	0.69	31.2	C	TR	0.79	35.3	D	TR	0.91	44.7	D	TR	0.77	33.5	C
	SB	L	0.49	36.3	D	L	0.73	47.0	D	L	0.47	34.3	C	L	0.51	35.7	D
		T	0.58	12.8	B	T	0.49	11.6	B	T	0.43	10.8	B	T	0.41	10.6	B
32nd Avenue	WB	LTR	0.84	42.1	D	LTR	0.76	38.5	D	LTR	0.87	42.4	D	LTR	0.52	31.5	C
Overall Intersection		-	**1.38**	**23.3**	**C**	-	**1.28**	**27.4**	**C**	-	**1.14**	**28.1**	**C**	-	**1.04**	**22.9**	**C**
NORTHERN BOULEVARD SERVICE ROAD																	
College Point Boulevard at Northern Boulevard Service Road																	
College Point Boulevard	NB	TR	0.41	11.7	B	TR	0.52	13.0	B	TR	0.55	13.4	B	TR	0.53	13.2	B
	SB	LT	0.85	22.5	C	LT	0.84	22.1	C	LT	0.83	22.0	C	LT	0.77	19.5	B
Northern Blvd Service Rd	WB	LR	0.79	37.2	D	LR	0.83	39.8	D	LR	0.77	36.4	D	LR	0.76	35.5	D
Overall Intersection		-	**0.83**	**21.5**	**C**	-	**0.84**	**21.7**	**C**	-	**0.81**	**20.7**	**C**	-	**0.77**	**19.7**	**B**
STADIUM ROAD																	
Boat Basin Road at Stadium Road																	
Boat Basin Road	NB	LTR	0.04	7.0	A	LTR	0.15	7.7	A	LTR	0.22	8.2	A	LTR	0.22	8.2	A
	SB	LTR	0.55	11.8	B	LTR	0.46	10.6	B	LTR	0.59	12.1	B	LTR	0.54	11.3	B
Stadium Road	EB	-	-	-	-	DefL	0.29	28.3	C	DefL	0.81	79.1	E	DefL	0.73	52.1	D
		LTR	0.19	25.3	C	TR	0.36	28.1	C	TR	0.38	28.6	C	TR	0.48	30.5	C
	WB	-	-	-	-	DefL	1.59	311.4	F	-	-	-	-	DefL	2.43	686.4	F
		LTR	0.62	32.8	C	TR	0.78	43.1	D	LTR	0.95	54.8	D	TR	1.07	91.1	F
Overall Intersection		-	**0.57**	**19.0**	**B**	-	**0.81**	**90.1**	**F**	-	**0.70**	**28.4**	**C**	-	**1.13**	**208.2**	**F**
UNSIGNALIZED INTERSECTIONS																	
Boat Basin Road at Worlds Fair Marina																	
Boat Basin Road	NB	L	-	207.2	F	L	-	850.5	F	L	-	571.4	F	L	-	1000.0+	F
		R	-	8.7	A	R	-	8.7	A	R	-	9.1	A	R	-	8.9	A
Worlds Fair Marina	WB	LT	-	9.6	A	LT	-	9.7	A	LT	-	8.9	A	LT	-	9.5	A
Overall Intersection		-	-	**25.1**	**D**	-	-	**165.4**	**F**	-	-	**128.9**	**F**	-	-	**284.4**	**F**
Willets Point Boulevard at Northern Boulevard																	
Willets Point Boulevard	NB	TR	-	10.3	B	TR	-	10.6	B	TR	-	9.9	A	TR	-	9.2	A
Overall Intersection		-	-	**10.3**	**B**	-	-	**10.6**	**B**	-	-	**9.9**	**A**	-	-	**9.2**	**A**
Grand Central Parkway Ramp at West Park Loop/Stadium Road																	
Stadium Road	SB	LT	-	7.5	A	LT	-	7.8	A	LT	-	7.8	A	LT	-	8.2	A
Grand Central Parkway Off-Ramp	EB	L	-	15.8	C	L	-	31.4	D	L	-	24.6	C	L	-	74.9	F
		T	-	17.1	C	T	-	192.5	F	T	-	105.9	F	T	-	431.0	F
		R	-	9.6	A	R	-	10.2	B	R	-	10.5	B	R	-	10.5	B
Willets West Center Exit	WB	L	-	20.5	C	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	8.5	A	R	-	8.8	A	R	-	9.0	A	R	-	9.2	A
Overall Intersection		-	-	**15.4**	**C**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 10
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

INTERSECTION & APPROACH		Weekday Pre-Game (5:30 - 6:30 PM) Mvt.	V/C	Control Delay	LOS	Saturday Pre-Game (3:15 - 4:15 PM) Mvt.	V/C	Control Delay	LOS	Saturday Post-Game (7:15 - 8:15 PM) Mvt.	V/C	Control Delay	LOS
SIGNALIZED INTERSECTIONS													
ASTORIA BOULEVARD													
108th Street at Astoria Boulevard													
108th Street	NB	DefL	0.77	58.8	E	DefL	0.52	27.5	C	DefL	0.60	30.0	C
		T	0.27	36.7	D	T	0.19	20.9	C	T	0.21	21.2	C
	SB	LTR	0.34	37.8	D	LTR	0.22	21.4	C	LTR	0.19	20.8	C
Astoria Boulevard	EB	TR	1.07	57.4	E	TR	0.78	27.5	C	TR	0.70	25.8	C
	WB	L	0.73	49.6	D	L	0.80	38.7	D	L	0.92	51.8	D
		TR	0.29	9.3	A	TR	0.30	12.0	B	TR	0.31	12.1	B
Overall Intersection		-	**0.95**	**47.6**	**D**	-	**0.70**	**23.7**	**C**	-	**0.74**	**24.5**	**C**
NORTHERN BOULEVARD													
108th Street at Northern Boulevard (RT. 25A)													
108th Street	NB	LTR	1.39	223.3	F	LTR	1.37	213.5	F	LTR	1.39	221.9	F
	SB	LTR	1.11	104.9	F	LTR	1.07	92.5	F	LTR	1.17	123.3	F
Northern Boulevard (Rt. 25A)	EB	L	0.18	33.0	C	L	0.09	36.8	D	L	0.14	38.3	D
		TR	0.87	15.0	B	TR	1.01	45.7	D	TR	1.00	43.0	D
	WB	L	0.72	46.3	D	L	0.85	49.9	D	L	1.02	76.3	E
		TR	1.09	66.5	E	TR	1.18	109.0	F	TR	1.16	102.5	F
Overall Intersection		-	**1.14**	**55.4**	**E**	-	**1.19**	**90.8**	**F**	-	**1.21**	**91.2**	**F**
114th Street at Northern Boulevard (RT. 25A)													
114th Street	SB	LTR	0.82	60.2	E	LTR	0.67	51.8	D	LTR	0.50	46.6	D
Northern Boulevard (Rt. 25A)	EB	T	1.03	39.9	D	T	0.79	25.9	C	T	0.69	23.3	C
		R	0.64	15.0	B	R	0.80	29.3	C	R	0.67	24.9	C
	WB	DefL	0.94	66.6	E	DefL	0.95	58.9	E	DefL	1.40	206.2	F
		T	0.87	15.5	B	T	0.86	16.1	B	T	1.21	110.8	F
Overall Intersection		-	**1.54**	**29.7**	**C**	-	**1.34**	**26.0**	**C**	-	**2.14**	**91.0**	**F**
126th Street at Northern Boulevard (RT. 25A)													
126th Street	NB	L	0.62	47.3	D	L	0.75	51.2	D	L	2.39	674.7	F
		R	0.60	48.7	D	R	0.50	45.0	D	R	1.03	70.6	E
Northern Boulevard	EB	T	0.32	7.0	A	T	0.22	6.3	A	T	0.23	6.3	A
	WB	T	0.85	18.4	B	T	0.72	13.9	B	T	0.33	7.1	A
Grand Central Parkway Ramp	EB	T	0.57	9.6	A	T	0.46	8.2	A	T	0.48	8.4	A
Van Wyck & Whitestone Expressway Ramp	WB	T	0.73	12.8	B	T	0.70	11.9	B	T	0.82	18.4	B
Overall Intersection		-	**0.79**	**16.7**	**B**	-	**0.73**	**16.7**	**B**	-	**1.17**	**222.3**	**F**
Prince Street at Northern Boulevard (RT. 25A)													
Prince Street	NB	LTR	1.10	92.3	F	LTR	1.08	85.5	F	LTR	1.10	93.5	F
	SB	LTR	0.58	42.0	D	LTR	0.50	37.4	D	LTR	0.40	38.5	D
Northern Boulevard (Rt. 25A)	EB	L	0.95	68.2	E	L	0.97	78.9	E	L	0.87	63.3	E
		T	1.06	61.6	E	T	0.99	42.2	D	T	1.05	58.3	E
	WB	L	0.77	67.3	E	L	0.95	94.7	F	L	0.88	86.1	F
		T	1.12	95.1	F	T	1.14	103.7	F	T	0.99	51.1	D
Northern Boulevard Service Rd.	EB	TR	0.58	24.8	C	TR	0.50	22.9	C	TR	0.44	21.7	C
	WB	TR	0.83	44.6	D	TR	0.79	37.5	D	TR	0.58	30.0	C
Overall Intersection		-	**1.07**	**69.9**	**E**	-	**1.09**	**67.0**	**E**	-	**1.04**	**54.4**	**D**
Main Street at Northern Boulevard (RT. 25A)													
Main Street	NB	L	0.89	51.4	D	L	0.85	47.3	D	L	0.84	47.2	D
		R	0.88	58.6	E	R	0.92	64.0	E	R	0.72	40.8	D
Northern Boulevard (Rt 25A)	EB	T	1.16	103.9	F	T	0.98	43.7	D	T	1.08	74.1	E
		R	1.20	124.0	F	R	1.31	177.6	F	R	1.15	112.5	F
Northern Boulevard (Rt 25A)	WB	L	0.22	27.8	C	L	0.16	26.5	C	L	0.11	25.9	C
		T	0.80	23.9	C	T	0.91	27.9	C	T	0.72	21.5	C
Overall Intersection		-	**1.05**	**71.2**	**E**	-	**1.13**	**55.4**	**E**	-	**0.95**	**57.0**	**E**
Union Street at Northern Boulevard (RT. 25A)													
Union Street	NB	TR	0.68	35.3	D	TR	0.68	35.1	D	TR	0.65	34.4	C
	SB	TR	0.68	34.8	C	TR	0.59	32.8	C	TR	0.66	34.3	C
Northern Boulevard (Rt. 25A)	EB	L	0.62	30.9	C	L	0.68	34.4	C	L	0.72	34.6	C
		TR	1.19	122.4	F	TR	1.29	170.6	F	TR	1.27	158.1	F
	WB	L	0.78	40.4	D	L	0.96	64.1	E	L	0.98	78.1	E
		TR	1.03	73.4	E	TR	1.02	55.0	D	TR	0.88	40.3	D
Overall Intersection		-	**0.95**	**82.9**	**F**	-	**0.99**	**91.9**	**F**	-	**0.97**	**86.5**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)													
Parsons Boulevard	NB	L	0.87	77.2	E	L	0.67	49.8	D	L	0.73	55.7	E
		TR	0.57	39.9	D	TR	0.53	38.7	D	TR	0.58	38.0	D
	SB	LTR	1.18	123.4	F	LTR	1.13	103.2	F	LTR	1.13	100.6	F
Northern Boulevard (Rt. 25A)	EB	L	0.55	48.8	D	L	0.42	44.2	D	L	0.49	44.5	D
		TR	0.99	39.8	D	TR	1.16	108.0	F	TR	1.18	117.7	F
	WB	L	0.47	42.0	D	L	0.43	44.4	D	L	0.51	46.6	D
		TR	1.16	107.5	F	TR	1.11	85.8	F	TR	1.15	104.0	F
Overall Intersection		-	**1.13**	**73.1**	**E**	-	**1.09**	**88.6**	**F**	-	**1.10**	**98.8**	**F**
34TH AVENUE													
114th Street at 34th Avenue													
114th Street	SB	L	1.11	100.4	F	L	1.08	87.6	F	L	1.21	131.0	F
		T	0.61	30.5	C	T	0.61	30.2	C	T	0.41	25.8	C
34th Avenue	EB	TR	0.55	13.5	B	TR	0.45	12.0	B	TR	0.41	11.6	B
Overall Intersection		-	**0.75**	**49.9**	**D**	-	**0.67**	**47.9**	**D**	-	**0.71**	**75.8**	**E**
126th Street/GCP Ramp at 34th Avenue													
126th Street	NB	-	-	-	-	DefL	1.05	160.2	F	DefL	2.13	544.1	F
		LTR	0.38	35.7	D	TR	0.62	41.4	D	TR	1.47	246.4	F
Northern Boulevard Ramp	SB	LTR	1.12	124.7	F	LTR	1.29	192.4	F	LTR	0.34	19.5	B
GCP Ramp	SB	LTR	1.58	311.2	F	LTR	1.57	307.9	F	LTR	1.95	490.2	F
Shea Road	EB	-	-	-	-	-	-	-	-	DefL	1.42	253.2	F
		LTR	1.71	362.8	F	LTR	1.39	220.6	F	TR	0.50	47.5	D
34th Avenue	WB	LTR	0.64	46.4	D	LTR	0.82	40.6	D	LTR	0.83	73.6	E
Overall Intersection		-	**1.48**	**264.8**	**F**	-	**1.42**	**211.0**	**F**	-	**1.92**	**313.5**	**F**

TABLE 10
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2018 PHASE 1A WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE													
108th Street at Roosevelt Avenue													
108th Street	NB	LTR	1.14	111.4	F	LTR	1.16	119.9	F	LTR	1.14	113.2	F
	SB	LTR	1.12	104.5	F	LTR	1.14	112.6	F	LTR	1.17	124.3	F
Roosevelt Avenue	EB	LTR	0.75	9.5	A	LTR	0.82	21.3	C	LTR	0.67	15.8	B
	WB	LTR	0.72	13.3	B	LTR	1.07	53.4	D	LTR	0.99	26.6	C
	Overall Intersection	-	**0.86**	**43.9**	**D**	-	**1.09**	**63.1**	**E**	-	**1.03**	**54.3**	**D**
111th Street at Roosevelt Avenue													
111th Street	NB	LTR	1.02	67.5	E	LTR	1.03	67.8	E	LTR	1.03	69.2	E
Roosevelt Avenue	EB	LTR	0.81	11.0	B	LTR	0.91	26.8	C	LTR	0.78	19.4	B
	WB	LTR	1.24	131.1	F	LTR	1.26	138.9	F	LTR	1.28	145.8	F
	Overall Intersection	-	**1.18**	**73.1**	**E**	-	**1.20**	**81.1**	**F**	-	**1.21**	**88.5**	**F**
114th Street at Roosevelt Avenue													
114th Street	NB	LTR	0.89	57.0	E	LTR	1.06	75.7	E	LTR	0.66	45.2	D
	SB	LTR	1.20	137.3	F	LTR	1.16	115.9	F	LTR	1.14	111.5	F
Roosevelt Avenue	EB	LTR	1.11	68.7	E	LTR	1.42	210.7	F	LTR	1.52	255.0	F
	WB	LTR	0.84	19.7	B	LTR	0.73	15.7	B	LTR	0.93	25.4	C
	Overall Intersection	-	**1.14**	**51.5**	**D**	-	**1.34**	**99.0**	**F**	-	**1.41**	**96.0**	**F**
126th Street at Roosevelt Avenue													
126th Street	NB	LTR	0.28	38.6	D	LTR	0.59	51.3	D	LTR	0.59	62.5	E
	SB	DefL	0.88	47.0	D	-	-	-	-	-	-	-	-
		TR	0.60	39.7	D	LTR	0.92	47.6	D	LTR	1.58	301.4	F
Roosevelt Avenue	EB	DefL	3.00+	1000.0+	F	DefL	3.00+	1000.0+	F	-	-	-	-
		TR	0.76	9.3	A	TR	0.60	13.4	B	LTR	0.70	25.3	C
	WB	LTR	0.78	17.0	B	LTR	0.76	16.1	B	LTR	0.56	21.2	C
	Overall Intersection	-	**2.84**	**256.2**	**F**	-	**2.85**	**260.3**	**F**	-	**1.08**	**163.0**	**F**
College Point Boulevard at Roosevelt Avenue													
College Point Boulevard	NB	L	1.37	222.9	F	L	1.41	230.4	F	L	1.14	126.1	F
		TR	0.68	28.5	C	TR	0.81	26.7	C	TR	0.76	25.3	C
	SB	TR	0.91	49.1	D	TR	1.24	144.1	F	TR	0.92	43.0	D
Roosevelt Avenue	EB	L	0.50	37.4	D	L	0.49	28.9	C	L	0.61	31.0	C
		TR	1.33	180.0	F	TR	1.32	171.4	F	TR	1.33	172.1	F
	WB	L	0.31	44.8	D	L	0.28	33.3	C	L	0.24	32.7	C
		TR	0.53	37.5	D	TR	0.59	29.2	C	TR	0.46	26.4	C
	Overall Intersection	-	**1.28**	**94.1**	**F**	-	**1.45**	**112.5**	**F**	-	**1.21**	**76.7**	**E**
Prince Street at Roosevelt Avenue													A
Prince Street	SB	LTR	0.51	30.7	C	LTR	0.79	40.5	D	LTR	0.70	36.2	D
Roosevelt Avenue	EB	DefL	0.80	32.3	C	DefL	0.77	18.4	B	-	-	-	-
		TR	0.85	31.5	C	TR	0.68	13.6	B	LTR	0.78	15.0	B
	WB	LTR	0.63	22.0	C	LTR	0.64	13.6	B	LTR	0.64	13.0	B
	Overall Intersection	-	**0.70**	**28.7**	**C**	-	**0.78**	**20.1**	**C**	-	**0.76**	**18.3**	**B**
Main Street at Roosevelt Avenue													
Main Street	NB	T	0.62	23.2	C	T	0.66	23.9	C	T	0.66	23.9	C
	SB	T	0.52	21.5	C	T	0.61	23.2	C	T	0.52	21.6	C
Roosevelt Avenue	EB	LTR	1.12	118.5	F	LTR	0.91	47.8	D	LTR	1.08	84.6	F
	WB	LTR	1.02	80.3	F	LTR	0.90	45.9	D	LTR	1.00	58.9	E
	Overall Intersection	-	**0.82**	**54.6**	**D**	-	**0.78**	**33.2**	**C**	-	**0.88**	**47.0**	**D**
Union Street at Roosevelt Avenue													
Union Street	NB	TR	0.53	18.6	B	TR	0.45	17.2	B	TR	0.44	17.1	B
	SB	LT	1.23	128.1	F	LT	0.97	47.8	D	LT	1.17	109.2	F
		R	1.87	417.7	F	R	2.58	746.9	F	R	1.85	417.1	F
Roosevelt Avenue	EB	LTR	2.48	696.8	F	LTR	2.04	500.4	F	LTR	2.09	521.5	F
	WB	LT	0.85	35.7	D	LT	0.61	25.5	C	LT	0.77	33.0	C
		R	0.73	39.4	D	R	1.10	141.9	F	R	1.23	180.9	F
	Overall Intersection	-	**2.15**	**253.4**	**F**	-	**2.33**	**256.1**	**F**	-	**1.96**	**229.2**	**F**
Parsons Boulevard at Roosevelt Avenue													
Parsons Boulevard	NB	LTR	0.79	35.8	D	LTR	0.72	26.8	C	LTR	0.92	37.4	D
	SB	LTR	0.76	32.5	C	LTR	0.72	25.2	C	LTR	0.74	25.9	C
Roosevelt Avenue	EB	LTR	0.77	35.8	D	LTR	0.51	21.2	C	LTR	0.79	30.5	C
	WB	LTR	0.97	55.5	E	LTR	0.66	25.3	C	LTR	0.78	30.1	C
	Overall Intersection	-	**0.88**	**40.0**	**D**	-	**0.69**	**24.9**	**C**	-	**0.85**	**31.0**	**C**
KISSENA BOULEVARD													
Main Street at Kissena Boulevard													
Main Street	NB	L	0.71	34.8	C	L	0.85	49.1	D	L	0.66	30.0	C
		TR	0.57	21.9	C	TR	0.58	21.1	C	TR	0.65	22.4	C
	SB	L	0.85	51.6	D	L	0.50	21.0	C	L	0.43	19.5	B
		TR	0.49	19.9	B	TR	0.52	19.4	B	TR	0.47	18.7	B
Kissena Boulevard	WB	T	0.71	37.1	D	T	0.64	24.0	C	T	0.64	23.9	C
	Overall Intersection	-	**0.77**	**29.2**	**C**	-	**0.74**	**23.6**	**C**	-	**0.65**	**21.7**	**C**
SANFORD AVENUE													
College Point Boulevard at Sanford Avenue													
College Point Boulevard	NB	L	0.37	14.9	B	L	0.50	20.5	C	L	0.24	13.1	B
		T	0.74	15.8	B	T	0.81	17.6	B	T	0.56	12.5	B
	SB	TR	0.75	15.8	B	TR	0.82	17.9	B	TR	0.80	17.4	B
Sanford Avenue	WB	L	0.79	46.9	D	L	0.85	51.8	D	L	0.56	34.0	C
		TR	0.53	29.5	C	TR	0.55	30.0	C	TR	0.38	27.1	C
	Overall Intersection	-	**0.76**	**19.6**	**B**	-	**0.83**	**21.8**	**C**	-	**0.72**	**17.6**	**B**
Union Street at Sanford Avenue													
Union Street	NB	LTR	0.37	21.3	C	LTR	0.45	23.3	C	LTR	0.41	21.9	C
	SB	LTR	0.69	25.7	C	LTR	0.91	33.5	C	LTR	0.80	29.1	C
Sanford Avenue	EB	-	-	-	-	DefL	0.56	23.8	C	-	-	-	-
		LTR	0.28	14.2	B	TR	0.32	15.0	B	LTR	0.23	13.7	B
	WB	LTR	0.90	31.5	C	LTR	0.75	23.7	C	LTR	0.70	22.4	C
	Overall Intersection	-	**0.81**	**25.1**	**C**	-	**0.82**	**26.7**	**C**	-	**0.74**	**23.6**	**C**

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2018 PHASE 1A WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue													
Parsons Boulevard	NB	LTR	0.99	42.2	D	LTR	0.82	30.1	C	LTR	0.90	33.9	C
	SB	LTR	0.74	26.6	C	LTR	0.78	28.3	C	LTR	0.80	29.2	C
Sanford Avenue	EB	LTR	0.61	23.5	C	LTR	0.62	23.2	C	LTR	0.79	29.1	C
	WB	LTR	0.77	28.8	C	LTR	0.87	34.0	C	LTR	0.82	31.7	C
Overall Intersection		**-**	**0.88**	**30.9**	**C**	**-**	**0.85**	**29.2**	**C**	**-**	**0.86**	**30.9**	**C**
WHITESTONE EXPRESSWAY / 32ND AVENUE													
College Point Boulevard at 32nd Avenue													
College Point Boulevard	NB	T	0.39	23.7	C	T	0.36	23.2	C	T	0.44	23.9	C
		TR	0.26	22.0	C	TR	0.57	25.8	C	TR	0.36	23.0	C
	SB	L	0.44	33.2	C	L	0.57	37.6	D	L	0.27	27.3	C
		T	0.40	10.5	B	T	0.45	11.0	B	T	0.29	9.5	A
32nd Avenue	WB	LTR	0.72	36.8	D	LTR	0.45	29.8	C	LTR	0.29	26.7	C
Overall Intersection		**-**	**1.09**	**20.9**	**C**	**-**	**1.03**	**21.6**	**C**	**-**	**0.85**	**19.5**	**B**
NORTHERN BOULEVARD SERVICE ROAD													
College Point Boulevard at Northern Boulevard Service Road													
College Point Boulevard	NB	TR	0.48	12.5	B	TR	0.54	13.2	B	TR	0.51	12.8	B
	SB	LT	0.82	20.5	C	LT	0.89	24.2	C	LT	0.54	13.7	B
Northern Blvd Service Rd	WB	LR	0.76	35.4	D	LR	0.75	34.3	C	LR	0.59	29.8	C
Overall Intersection		**-**	**0.80**	**19.9**	**B**	**-**	**0.84**	**21.4**	**C**	**-**	**0.56**	**16.0**	**B**
STADIUM ROAD													
Boat Basin Road at Stadium Road													
Boat Basin Road	NB	-	-	-	-	-	-	-	-	DefL	0.86	73.6	E
		LTR	0.97	83.4	F	LTR	0.75	53.0	D	TR	0.27	19.7	B
	SB	LTR	0.98	48.1	D	LTR	1.07	69.3	E	LTR	0.74	27.6	C
Stadium Road	EB	DefL	0.74	57.6	E	DefL	0.85	74.2	E	DefL	1.20	186.4	F
		TR	0.33	24.0	C	TR	0.48	29.7	C	TR	0.18	12.8	B
	WB	LTR	0.88	34.2	C	LTR	0.82	32.2	C	LTR	1.07	63.7	E
Overall Intersection		**-**	**0.94**	**46.9**	**D**	**-**	**0.95**	**56.4**	**E**	**-**	**1.06**	**51.9**	**D**
UNSIGNALIZED INTERSECTIONS													
Boat Basin Road at Worlds Fair Marina													
Boat Basin Road	NB	L	-	145.2	F	L	-	98.9	F	L	-	813.1	F
		R	-	8.9	A	R	-	8.9	A	R	-	9.2	A
Worlds Fair Marina	WB	LT	-	11.6	B	LT	-	11.0	B	LT	-	8.4	A
Overall Intersection		**-**	**-**	**25.6**	**D**	**-**	**-**	**20.1**	**C**	**-**	**-**	**370.1**	**F**
Willets Point Boulevard at Northern Boulevard													
Willets Point Boulevard	NB	TR	-	8.9	A	TR	-	8.7	A	TR	-	8.8	A
Overall Intersection		**-**	**-**	**8.9**	**A**	**-**	**-**	**8.7**	**A**	**-**	**-**	**8.8**	**A**
Grand Central Parkway Ramp at West Park Loop/Stadium Road													
Stadium Road	SB	LT	-	7.8	A	LT	-	9.3	A	LT	-	7.7	A
Grand Central Parkway Off-Ramp	EB	L	-	37.9	E	L	-	38.0	E	L	-	49.9	E
		T	-	12.0	B	T	-	288.3	F	T	-	60.6	F
		R	-	9.6	A	R	-	12.5	B	R	-	13.2	B
Willets West Center Exit	WB	L	-	11.1	B	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	8.9	A	R	-	10.3	B	R	-	8.8	A
Overall Intersection		**-**	**-**	**34.4**	**D**	**-**	**-**	**1000.0+**	**F**	**-**	**-**	**1000.0+**	**F**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 11
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
SIGNALIZED INTERSECTIONS																	
ASTORIA BOULEVARD																	
108th Street at Astoria Boulevard																	
108th Street	NB	DefL	0.79	61.1	E	DefL	0.58	29.9	C	DefL	0.70	53.7	D	DefL	0.63	31.2	C
		T	0.22	35.8	D	T	0.13	20.1	C	T	0.22	35.7	D	T	0.20	21.1	C
	SB	LTR	0.36	38.5	D	LTR	0.18	20.7	C	LTR	0.40	39.4	D	LTR	0.25	21.7	C
Astoria Boulevard	EB	TR	0.65	26.6	C	TR	0.95	37.1	D	TR	0.95	30.2	C	TR	1.08	68.0	E
	WB	L	0.60	16.4	B	L	0.76	37.7	D	L	0.72	47.5	D	L	0.56	25.1	C
		TR	0.80	8.4	A	TR	0.40	13.0	B	TR	0.39	10.2	B	TR	0.42	13.2	B
Overall Intersection		-	**0.80**	**18.6**	**B**	-	**0.80**	**28.5**	**C**	-	**0.87**	**27.9**	**C**	-	**0.86**	**43.9**	**D**
NORTHERN BOULEVARD																	
108th Street at Northern Boulevard (RT. 25A)																	
108th Street	NB	LTR	1.23	154.6	F	LTR	1.50	273.2	F	LTR	1.55	294.2	F	LTR	1.54	290.6	F
	SB	LTR	0.99	83.6	F	LTR	0.95	74.0	E	LTR	1.15	125.9	F	LTR	0.95	73.8	E
Northern Boulevard (Rt. 25A)	EB	L	0.08	25.5	C	L	0.09	30.3	C	L	0.15	43.1	D	L	0.18	44.2	D
		TR	0.84	24.2	C	TR	1.04	56.7	E	TR	0.93	17.8	B	TR	1.11	81.8	F
	WB	L	0.49	27.2	C	L	0.85	62.9	E	L	0.67	44.2	D	L	0.77	49.2	D
		TR	1.09	55.7	E	TR	1.14	94.0	F	TR	1.27	147.2	F	TR	1.32	170.7	F
Overall Intersection		-	**1.00**	**53.2**	**D**	-	**1.19**	**91.5**	**F**	-	**1.25**	**93.9**	**F**	-	**1.30**	**135.8**	**F**
114th Street at Northern Boulevard (RT. 25A)																	
114th Street	SB	LTR	0.50	48.5	D	LTR	0.46	46.0	D	LTR	0.45	47.3	D	LTR	0.43	45.2	D
Northern Boulevard (Rt. 25A)	EB	T	0.99	56.5	E	T	0.97	41.4	D	T	1.27	142.3	F	T	0.86	29.9	C
		R	0.76	39.2	D	R	0.49	19.9	B	R	0.87	18.4	B	R	0.63	23.5	C
	WB	DefL	0.55	22.8	C	DefL	0.73	42.7	D	DefL	1.05	96.0	F	DefL	1.03	77.7	E
		T	1.23	121.8	F	T	0.83	15.6	B	T	1.01	34.6	C	T	1.09	60.3	E
Overall Intersection		-	**1.37**	**90.6**	**F**	-	**1.36**	**28.3**	**C**	-	**1.73**	**77.9**	**E**	-	**1.56**	**48.5**	**D**
126th Street at Northern Boulevard (RT. 25A)																	
126th Street	NB	L	0.71	51.1	D	L	1.05	97.8	F	L	1.02	87.1	F	L	1.01	85.2	F
		R	0.43	44.2	D	R	0.68	51.7	D	R	0.59	47.5	D	R	0.72	52.4	D
Northern Boulevard	EB	T	0.23	6.4	A	T	0.33	7.1	A	T	0.37	7.4	A	T	0.31	6.9	A
	WB	T	0.69	11.5	B	T	0.38	7.5	A	T	0.45	8.2	A	T	0.36	7.3	A
Grand Central Parkway Ramp	EB	T	0.45	8.3	A	T	0.42	7.9	A	T	0.50	8.8	A	T	0.47	8.4	A
Van Wyck & Whitestone Expressway Ramp	WB	T	1.35	206.5	F	T	1.16	100.9	F	T	1.24	131.8	F	T	1.15	96.0	F
Overall Intersection		-	**1.20**	**73.8**	**E**	-	**1.14**	**48.7**	**D**	-	**1.19**	**53.6**	**D**	-	**1.12**	**45.5**	**D**
Prince Street at Northern Boulevard (RT. 25A)																	
Prince Street	NB	LTR	1.15	132.8	F	LTR	1.19	129.9	F	LTR	1.23	148.9	F	LTR	1.13	105.2	F
	SB	LTR	0.80	53.5	D	LTR	0.54	41.3	D	LTR	0.53	41.7	D	LTR	0.47	36.9	D
Northern Boulevard (Rt. 25A)	EB	L	0.96	94.8	F	L	0.89	72.8	E	L	0.62	45.8	D	L	0.66	49.6	D
		T	0.84	23.8	C	T	1.01	49.0	D	T	1.04	57.9	E	T	1.15	103.1	F
	WB	L	0.96	92.6	F	L	0.90	91.0	F	L	0.81	72.6	E	L	0.82	65.3	E
		T	1.18	106.9	F	T	1.19	126.0	F	T	1.20	129.5	F	T	1.23	138.9	F
Northern Boulevard Service Rd.	EB	TR	0.45	16.7	B	TR	0.62	26.4	C	TR	0.66	27.5	C	TR	0.62	25.8	C
	WB	TR	0.76	21.9	C	TR	0.90	49.8	D	TR	0.83	45.8	D	TR	0.95	54.3	D
Overall Intersection		-	**1.14**	**66.9**	**E**	-	**1.13**	**80.0**	**E**	-	**1.06**	**82.2**	**F**	-	**1.09**	**100.8**	**F**
Main Street at Northern Boulevard (RT. 25A)																	
Main Street	NB	L	0.77	43.7	D	L	0.98	64.9	E	L	0.96	61.0	E	L	0.93	56.1	E
		R	0.85	55.0	E	R	0.68	39.6	D	R	0.97	76.1	E	R	0.89	62.7	E
Northern Boulevard (Rt 25A)	EB	T	0.98	46.4	D	T	1.06	68.9	E	T	1.16	104.8	F	T	1.05	65.0	E
		R	1.17	124.0	F	R	1.28	168.4	F	R	1.19	127.1	F	R	1.38	209.6	F
Northern Boulevard (Rt 25A)	WB	L	0.17	26.4	C	L	0.10	25.7	C	L	0.17	26.8	C	L	0.08	25.2	C
		T	1.10	63.8	E	T	0.86	26.3	C	T	0.86	26.2	C	T	1.04	53.4	D
Overall Intersection		-	**1.01**	**60.8**	**E**	-	**1.02**	**65.7**	**E**	-	**1.08**	**73.9**	**E**	-	**1.16**	**75.7**	**E**
Union Street at Northern Boulevard (RT. 25A)																	
Union Street	NB	TR	0.67	35.0	C	TR	0.78	38.8	D	TR	0.78	38.5	D	TR	0.76	37.9	D
	SB	TR	0.90	43.0	D	TR	0.56	32.4	C	TR	0.82	39.5	D	TR	0.65	34.4	C
Northern Boulevard (Rt. 25A)	EB	L	0.96	65.7	E	L	0.55	27.0	C	L	0.78	44.9	D	L	0.72	34.1	C
		TR	1.28	166.5	F	TR	1.50	262.2	F	TR	1.22	136.8	F	TR	1.58	301.0	F
	WB	L	1.02	77.6	E	L	1.17	126.0	F	L	0.86	50.2	D	L	0.86	46.6	D
		TR	1.01	49.1	D	TR	0.96	46.9	D	TR	1.04	63.4	E	TR	1.16	113.0	F
Overall Intersection		-	**1.11**	**84.3**	**F**	-	**1.40**	**132.8**	**F**	-	**1.02**	**86.6**	**F**	-	**1.15**	**163.5**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)																	
Parsons Boulevard	NB	L	0.97	95.4	F	L	0.75	60.0	E	L	0.86	73.5	E	L	0.87	73.0	E
		TR	0.56	39.8	D	TR	0.52	38.8	D	TR	0.50	35.3	D	TR	0.60	40.8	D
	SB	LTR	0.84	48.6	D	LTR	1.21	139.4	F	LTR	1.16	116.5	F	LTR	1.18	124.3	F
Northern Boulevard (Rt. 25A)	EB	L	0.55	46.5	D	L	0.86	63.5	E	L	0.52	49.5	D	L	0.54	48.5	D
		TR	1.11	88.5	F	TR	1.18	117.1	F	TR	1.06	62.6	E	TR	1.22	135.8	F
	WB	L	0.46	39.7	D	L	0.39	41.9	D	L	0.40	42.2	D	L	0.49	46.0	D
		TR	1.18	110.3	F	TR	1.34	185.4	F	TR	1.22	134.6	F	TR	1.31	175.2	F
Overall Intersection		-	**1.03**	**88.8**	**F**	-	**1.28**	**134.3**	**F**	-	**1.13**	**90.1**	**F**	-	**1.19**	**137.0**	**F**
34TH AVENUE																	
114th Street at 34th Avenue																	
114th Street	SB	L	0.87	40.7	D	L	0.91	51.8	D	L	1.08	85.9	F	L	1.10	97.2	F
		T	0.34	25.0	C	T	0.31	25.3	C	T	0.48	27.3	C	T	0.43	26.7	C
34th Avenue	EB	TR	0.46	12.3	B	TR	0.40	11.4	B	TR	0.38	11.2	B	TR	0.57	13.7	B
Overall Intersection		-	**0.60**	**25.0**	**C**	-	**0.58**	**31.1**	**C**	-	**0.63**	**49.1**	**D**	-	**0.75**	**48.5**	**D**
126th Street/GCP Ramp at 34th Avenue																	
126th Street	NB	DefL	0.36	24.7	C	DefL	1.16	142.8	F	DefL	1.54	289.0	F	DefL	0.85	56.9	E
		TR	0.31	21.7	C	TR	0.53	25.3	C	TR	0.51	24.8	C	TR	0.49	24.6	C
Northern Boulevard Ramp	SB	LTR	0.53	26.7	C	LTR	1.03	77.6	E	LTR	0.59	28.7	C	LTR	0.99	66.7	E
GCP Ramp	SB	LTR	2.52	738.7	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F
Shea Road	EB	-	-	-	-	DefL	2.58	784.7	F	DefL	3.00+	1000.0+	F	DefL	3.00+	1000.0+	F
		LTR	1.34	211.3	F	TR	1.99	500.6	F	TR	1.56	314.7	F	TR	1.88	450.9	F
34th Avenue	WB	LTR	3.00+	1000.0+	F	LTR	3.00+	981.0	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F
Overall Intersection		-	**1.69**	**437.1**	**F**	-	**2.28**	**689.8**	**F**	-	**2.82**	**697.4**	**F**	-	**3.00+**	**817.2**	**F**

TABLE 11
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE																	
108th Street at Roosevelt Avenue																	
108th Street	NB	LTR	1.05	88.8	F	LTR	1.14	122.3	F	LTR	1.15	121.5	F	LTR	1.26	163.4	F
	SB	LTR	1.10	104.3	F	LTR	1.25	158.9	F	LTR	1.19	135.8	F	LTR	1.18	127.6	F
Roosevelt Avenue	EB	LTR	0.77	19.3	B	LTR	0.89	28.3	C	LTR	0.86	15.8	B	LTR	0.84	23.5	C
	WB	LTR	0.90	15.1	B	LTR	1.04	57.4	E	LTR	1.01	38.3	D	LTR	0.96	24.7	C
	Overall Intersection	-	**0.96**	**40.4**	**D**	-	**1.10**	**71.8**	**E**	-	**1.06**	**59.0**	**E**	-	**1.04**	**61.9**	**E**
111th Street at Roosevelt Avenue																	
111th Street	NB	LTR	1.00	69.6	E	LTR	0.72	50.9	D	LTR	0.86	56.9	E	LTR	1.05	77.4	E
Roosevelt Avenue	EB	LTR	0.75	18.1	B	LTR	0.89	26.0	C	LTR	0.93	20.4	C	LTR	1.04	56.6	E
	WB	LTR	1.01	32.4	C	LTR	1.03	55.0	D	LTR	1.42	210.1	F	LTR	1.45	223.5	F
	Overall Intersection	-	**1.00**	**34.0**	**C**	-	**0.95**	**42.4**	**D**	-	**1.27**	**118.7**	**F**	-	**1.34**	**134.4**	**F**
114th Street at Roosevelt Avenue																	
114th Street	NB	LTR	1.03	76.1	E	LTR	0.70	50.7	D	LTR	0.98	63.6	E	LTR	1.02	72.1	E
	SB	LTR	1.32	192.7	F	LTR	0.90	76.5	E	LTR	1.22	146.7	F	LTR	1.26	162.9	F
Roosevelt Avenue	EB	LTR	0.93	34.3	C	LTR	1.22	128.5	F	LTR	1.27	147.1	F	LTR	1.81	385.3	F
	WB	LTR	0.65	6.4	A	LTR	0.69	14.6	B	LTR	1.02	44.8	D	LTR	1.01	42.6	D
	Overall Intersection	-	**1.04**	**42.4**	**D**	-	**1.13**	**59.2**	**E**	-	**1.25**	**81.7**	**F**	-	**1.64**	**152.7**	**F**
126th Street at Roosevelt Avenue																	
126th Street	NB	LTR	0.23	37.2	D	LTR	1.28	189.5	F	LTR	1.26	209.1	F	LTR	0.48	45.8	D
	SB	DefL	1.50	287.1	F	DefL	1.76	405.6	F	DefL	1.40	239.9	F	DefL	1.48	276.2	F
		TR	0.92	76.4	E	TR	1.25	183.0	F	TR	1.46	263.9	F	TR	1.03	97.3	F
Roosevelt Avenue	EB	DefL	0.69	24.2	C	DefL	0.73	30.0	C	DefL	1.16	129.6	F	DefL	1.17	131.5	F
		TR	0.55	12.5	B	TR	0.67	15.3	B	TR	0.66	7.6	A	TR	0.70	15.9	B
	WB	LTR	0.72	7.5	A	LTR	0.68	14.4	B	LTR	0.73	15.7	B	LTR	0.68	14.2	B
	Overall Intersection	-	**0.91**	**54.4**	**D**	-	**0.98**	**95.2**	**F**	-	**1.24**	**96.9**	**F**	-	**1.26**	**71.7**	**E**
College Point Boulevard at Roosevelt Avenue																	
College Point Boulevard	NB	L	1.61	327.8	F	L	1.78	398.6	F	L	1.55	305.4	F	L	1.72	367.7	F
		TR	0.73	27.4	C	TR	0.88	31.0	C	TR	0.75	31.1	C	TR	0.93	34.4	C
	SB	TR	0.96	55.3	E	TR	1.42	226.4	F	TR	1.45	246.0	F	TR	1.21	132.9	F
Roosevelt Avenue	EB	L	0.47	40.6	D	L	0.59	31.0	C	L	0.51	37.9	D	L	0.60	21.2	C
		TR	1.10	94.9	F	TR	1.55	276.0	F	TR	1.44	232.3	F	TR	1.53	262.2	F
	WB	L	0.22	45.2	D	L	0.28	33.5	C	L	0.25	43.7	D	L	0.34	34.3	C
		TR	0.75	47.4	D	TR	0.70	34.3	C	TR	0.55	38.3	D	TR	0.61	29.7	C
	Overall Intersection	-	**1.20**	**90.4**	**F**	-	**1.70**	**177.2**	**F**	-	**1.56**	**170.9**	**F**	-	**1.50**	**139.3**	**F**
Prince Street at Roosevelt Avenue																	
Prince Street	SB	LTR	0.52	31.0	C	LTR	0.86	47.3	D	LTR	0.60	33.2	C	LTR	0.96	58.3	E
Roosevelt Avenue	EB	DefL	1.32	191.1	F	DefL	0.98	44.9	D	DefL	1.14	112.8	F	DefL	0.83	22.4	C
		TR	0.64	24.5	C	TR	0.79	17.7	B	TR	0.82	31.1	C	TR	0.86	20.1	C
	WB	LTR	0.94	38.8	D	LTR	0.61	13.3	B	LTR	0.68	22.3	C	LTR	0.65	14.2	B
	Overall Intersection	-	**0.98**	**70.3**	**E**	-	**0.94**	**28.6**	**C**	-	**0.91**	**46.9**	**D**	-	**0.89**	**26.6**	**C**
Main Street at Roosevelt Avenue																	
Main Street	NB	T	0.60	22.3	C	T	0.67	24.4	C	T	0.51	21.1	C	T	0.76	26.4	C
	SB	T	0.43	19.4	B	T	0.51	21.6	C	T	0.54	21.7	C	T	0.64	23.8	C
Roosevelt Avenue	EB	LTR	0.76	45.4	D	LTR	1.07	88.7	F	LTR	1.43	246.5	F	LTR	1.18	124.4	F
	WB	LTR	1.09	94.7	F	LTR	1.05	73.7	E	LTR	1.25	160.8	F	LTR	0.99	47.7	D
	Overall Intersection	-	**0.80**	**46.5**	**D**	-	**0.86**	**50.3**	**D**	-	**0.90**	**104.2**	**F**	-	**0.96**	**52.5**	**D**
Union Street at Roosevelt Avenue																	
Union Street	NB	TR	0.60	20.0	B	TR	0.58	19.4	B	TR	0.42	16.7	B	TR	0.56	19.2	B
	SB	LT	1.09	75.8	E	LT	0.99	52.8	D	LT	0.92	36.8	D	LT	1.07	71.4	E
		R	0.85	35.3	D	R	3.00+	1000.0+	F	R	2.58	751.0	F	R	2.83	856.2	F
Roosevelt Avenue	EB	LTR	1.58	296.9	F	LTR	2.45	683.8	F	LTR	2.19	566.7	F	LTR	2.79	836.4	F
	WB	LT	1.06	69.3	E	LT	0.74	30.6	C	LT	0.66	27.8	C	LT	0.67	27.5	C
		R	1.04	78.8	E	R	0.87	66.4	E	R	0.99	93.9	F	R	1.26	194.6	F
	Overall Intersection	-	**1.31**	**97.3**	**F**	-	**3.00+**	**524.8**	**F**	-	**2.40**	**262.6**	**F**	-	**2.81**	**377.4**	**F**
Parsons Boulevard at Roosevelt Avenue																	
Parsons Boulevard	NB	LTR	1.14	99.0	F	LTR	0.69	25.8	C	LTR	0.88	43.3	D	LTR	0.90	38.5	D
	SB	LTR	0.81	34.7	C	LTR	0.65	23.6	C	LTR	0.71	30.6	C	LTR	0.79	27.3	C
Roosevelt Avenue	EB	LTR	0.55	27.2	C	LTR	0.77	30.8	C	LTR	0.66	31.4	C	LTR	0.95	49.1	D
	WB	LTR	1.21	130.7	F	LTR	0.88	39.0	D	LTR	0.87	43.3	D	LTR	1.04	70.8	E
	Overall Intersection	-	**1.18**	**80.3**	**F**	-	**0.78**	**30.0**	**C**	-	**0.87**	**37.3**	**D**	-	**0.97**	**45.9**	**D**
KISSENA BOULEVARD																	
Main Street at Kissena Boulevard																	
Main Street	NB	L	0.75	34.7	C	L	0.89	54.8	D	L	0.78	39.5	D	L	1.20	144.1	F
		TR	0.69	25.1	C	TR	0.63	22.2	C	TR	0.58	22.4	C	TR	0.69	23.4	C
	SB	L	0.65	38.3	D	L	0.46	20.4	C	L	0.84	51.7	D	L	0.55	21.9	C
		TR	0.39	18.3	B	TR	0.52	19.4	B	TR	0.46	19.3	B	TR	0.57	20.2	C
Kissena Boulevard	WB	T	0.73	38.3	D	T	0.72	27.1	C	T	0.66	35.5	D	T	0.75	27.2	C
	Overall Intersection	-	**0.75**	**27.8**	**C**	-	**0.80**	**25.1**	**C**	-	**0.81**	**29.6**	**C**	-	**0.98**	**36.0**	**D**
SANFORD AVENUE																	
College Point Boulevard at Sanford Avenue																	
College Point Boulevard	NB	L	0.21	10.4	B	L	0.62	28.3	C	L	0.52	31.5	C	L	0.71	42.2	D
		T	0.70	15.2	B	T	0.68	14.8	B	T	0.62	13.5	B	T	0.76	16.4	B
	SB	TR	0.60	13.4	B	TR	0.80	18.1	B	TR	1.02	42.8	D	TR	0.89	21.3	C
Sanford Avenue	WB	L	0.79	45.6	D	L	0.57	34.8	C	L	0.77	46.6	D	L	0.69	39.1	D
		TR	0.62	31.5	C	TR	0.48	28.8	C	TR	0.46	28.4	C	TR	0.65	32.4	C
	Overall Intersection	-	**0.73**	**19.6**	**B**	-	**0.73**	**19.3**	**B**	-	**0.94**	**32.5**	**C**	-	**0.83**	**22.4**	**C**
Union Street at Sanford Avenue																	
Union Street	NB	LTR	0.70	30.3	C	LTR	0.34	20.8	C	LTR	0.30	20.1	C	LTR	0.40	21.8	C
	SB	LTR	0.62	24.9	C	LTR	0.62	24.4	C	LTR	0.74	27.2	C	LTR	0.76	28.0	C
Sanford Avenue	EB	DefL	0.58	26.6	C	DefL	0.45	20.5	C	-	-	-	-	DefL	0.50	22.3	C
		TR	0.37	15.8	B	TR	0.21	13.7	B	LTR	0.32	14.7	B	TR	0.35	15.5	B
	WB	LTR	0.91	31.6	C	LTR	0.93	34.9	C	LTR	0.72	23.8	C	LTR	0.93	34.2	C
	Overall Intersection	-	**0.82**	**26.8**	**C**	-	**0.79**	**26.8**	**C**	-	**0.73**	**23.0**	**C**	-	**0.85**	**27.4**	**C**

TABLE 11
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue																	
Parsons Boulevard	NB	LTR	1.12	78.7	E	LTR	1.18	107.5	F	LTR	0.91	35.9	D	LTR	0.95	41.9	D
	SB	LTR	0.99	43.4	D	LTR	0.80	29.4	C	LTR	0.90	37.5	D	LTR	1.01	54.2	D
Sanford Avenue	EB	LTR	0.73	27.7	C	LTR	0.58	22.8	C	LTR	0.73	27.1	C	LTR	0.75	27.5	C
	WB	LTR	0.86	33.4	C	LTR	0.93	41.4	D	LTR	0.84	33.3	C	LTR	0.98	50.6	D
Overall Intersection		-	**0.99**	**47.0**	**D**	-	**1.06**	**52.2**	**D**	-	**0.87**	**33.7**	**C**	-	**1.00**	**44.6**	**D**
WHITESTONE EXPRESSWAY / 32ND AVENUE																	
College Point Boulevard at 32nd Avenue																	
College Point Boulevard	NB	T	0.45	24.0	C	T	0.70	29.8	C	T	0.52	25.6	C	T	0.38	23.5	C
		TR	0.71	31.7	C	TR	0.80	36.0	D	TR	0.93	46.9	D	TR	0.79	34.4	C
	SB	L	0.51	36.8	D	L	0.75	48.2	D	L	0.49	34.8	C	L	0.52	36.1	D
		T	0.60	13.1	B	T	0.50	11.8	B	T	0.44	11.0	B	T	0.42	10.8	B
32nd Avenue	WB	LTR	0.87	44.3	D	LTR	0.78	39.6	D	LTR	0.89	44.7	D	LTR	0.54	31.9	C
Overall Intersection		-	**1.40**	**23.9**	**C**	-	**1.29**	**27.8**	**C**	-	**1.15**	**29.1**	**C**	-	**1.05**	**23.3**	**C**
NORTHERN BOULEVARD SERVICE ROAD																	
College Point Boulevard at Northern Boulevard Service Road																	
College Point Boulevard	NB	TR	0.42	11.8	B	TR	0.54	13.3	B	TR	0.57	13.7	B	TR	0.55	13.4	B
	SB	LT	0.89	25.1	C	LT	0.88	25.1	C	LT	0.88	24.9	C	LT	0.81	21.3	C
Northern Blvd Service Rd	WB	LR	0.90	46.3	D	LR	0.98	59.8	E	LR	0.88	44.8	D	LR	0.90	46.4	D
Overall Intersection		-	**0.89**	**24.9**	**C**	-	**0.92**	**27.7**	**C**	-	**0.88**	**23.8**	**C**	-	**0.84**	**23.3**	**C**
STADIUM ROAD																	
Boat Basin Road at Stadium Road																	
Boat Basin Road	NB	LTR	0.04	7.0	A	LTR	0.15	7.7	A	LTR	0.23	8.3	A	LTR	0.24	8.4	A
	SB	DefL	0.59	14.3	B	DefL	0.75	21.7	C	-	-	-	-	-	-	-	-
		TR	0.68	16.3	B	TR	0.42	10.4	B	LTR	0.74	15.4	B	LTR	0.71	14.8	B
Stadium Road	EB	-	-	-	-	DefL	0.57	42.7	D	DefL	1.06	148.7	F	DefL	1.71	397.1	F
		LTR	0.27	26.3	C	TR	0.40	28.9	C	TR	0.41	29.2	C	TR	0.53	31.6	C
	WB	-	-	-	-	DefL	1.62	325.7	F	-	-	-	-	DefL	2.49	711.0	F
		LTR	0.81	40.4	D	TR	1.41	231.4	F	LTR	1.48	253.5	F	TR	1.69	351.7	F
Overall Intersection		-	**0.72**	**23.7**	**C**	-	**1.02**	**130.1**	**F**	-	**0.97**	**111.7**	**F**	-	**1.27**	**266.8**	**F**
UNSIGNALIZED INTERSECTIONS																	
Boat Basin Road at Worlds Fair Marina																	
Boat Basin Road	NB	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	8.7	A	R	-	8.7	A	R	-	9.1	A	R	-	8.9	A
Worlds Fair Marina	WB	LT	-	11.2	B	LT	-	11.1	B	LT	-	9.6	A	LT	-	10.8	B
Overall Intersection		-	-	**987.9**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**
Willets Point Boulevard at Northern Boulevard																	
Northern Boulevard	EB	TR	-	20.2	C	TR	-	41.9	E	TR	-	311.5	F	TR	-	71.7	F
Overall Intersection		-	-	**20.2**	**C**	-	-	**41.9**	**E**	-	-	**311.5**	**F**	-	-	**71.7**	**F**
Grand Central Parkway Ramp at West Park Loop/Stadium Road																	
Stadium Road	SB	LT	-	7.5	A	LT	-	7.8	A	LT	-	7.8	A	LT	-	8.2	A
Grand Central Parkway Off-Ramp	EB	L	-	19.3	C	L	-	51.6	F	L	-	36.0	E	L	-	177.8	F
		T	-	17.7	C	T	-	243.2	F	T	-	157.1	F	T	-	516.2	F
		R	-	9.8	A	R	-	10.8	B	R	-	11.6	B	R	-	11.3	B
Willets West Center Exit	WB	L	-	20.9	C	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	8.5	A	R	-	8.8	A	R	-	9.0	A	R	-	9.2	A
Overall Intersection		-	-	**18.0**	**C**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**
NEW (WITH ACTION) SIGNALIZED INTERSECTION																	
126th Street at New Willets Point Boulevard																	
126th Street	NB	TR	0.39	19.5	B	TR	0.60	23.8	C	TR	0.52	21.7	C	TR	0.55	22.4	C
	SB	-	-	-	-	DefL	0.67	18.9	B	DefL	0.48	13.4	B	DefL	0.54	14.8	B
		LT	0.32	9.0	A	T	0.38	9.9	A	T	0.42	10.5	B	T	0.43	10.5	B
New Willets Point Boulevard	WB	L	0.24	37.3	D	L	0.55	44.6	D	L	0.69	50.0	D	L	0.52	43.4	D
		R	0.15	22.8	C	R	0.57	33.4	C	R	0.77	45.0	D	R	0.42	28.3	C
Overall Intersection		-	**0.43**	**16.7**	**B**	-	**0.79**	**23.5**	**C**	-	**0.82**	**25.7**	**C**	-	**0.79**	**21.2**	**C**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 12
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**
SIGNALIZED INTERSECTIONS													
ASTORIA BOULEVARD													
108th Street at Astoria Boulevard													
108th Street	NB	DefL	0.79	61.3	E	DefL	0.53	27.8	C	DefL	0.62	30.4	C
		T	0.28	36.8	D	T	0.20	21.0	C	T	0.21	21.2	C
	SB	LTR	0.35	38.0	D	LTR	0.22	21.4	C	LTR	0.19	20.9	C
Astoria Boulevard	EB	TR	1.11	76.7	E	TR	0.84	29.5	C	TR	0.75	27.0	C
	WB	L	0.74	51.2	D	L	0.82	45.5	D	L	0.99	73.4	E
		TR	0.32	9.6	A	TR	0.33	12.3	B	TR	0.35	12.4	B
Overall Intersection		-	**0.98**	**60.6**	**E**	-	**0.73**	**25.1**	**C**	-	**0.84**	**26.9**	**C**
NORTHERN BOULEVARD													
108th Street at Northern Boulevard (RT. 25A)													
108th Street	NB	LTR	1.44	245.2	F	LTR	1.42	234.5	F	LTR	1.43	241.2	F
	SB	LTR	1.15	118.5	F	LTR	1.10	104.9	F	LTR	1.21	144.6	F
Northern Boulevard (Rt. 25A)	EB	L	0.19	37.0	D	L	0.09	43.4	D	L	0.14	44.3	D
		TR	0.93	18.0	B	TR	1.10	78.2	E	TR	1.09	72.1	E
	WB	L	0.73	47.6	D	L	0.88	53.8	D	L	1.06	90.3	F
		TR	1.15	95.2	F	TR	1.27	148.7	F	TR	1.25	141.1	F
Overall Intersection		-	**1.16**	**69.1**	**E**	-	**1.26**	**121.8**	**F**	-	**1.28**	**121.1**	**F**
114th Street at Northern Boulevard (RT. 25A)													
114th Street	SB	LTR	0.91	69.8	E	LTR	0.75	55.8	E	LTR	0.51	46.8	D
Northern Boulevard (Rt. 25A)	EB	T	1.10	69.2	E	T	0.88	29.8	C	T	0.76	25.4	C
		R	0.74	17.1	B	R	0.90	37.6	D	R	0.68	25.4	C
	WB	DefL	0.96	71.8	E	DefL	1.07	96.1	F	DefL	1.55	279.0	F
		T	0.93	19.0	B	T	0.92	20.0	B	T	1.28	144.5	F
Overall Intersection		-	**1.65**	**42.7**	**D**	-	**1.66**	**32.9**	**C**	-	**2.52**	**116.5**	**F**
126th Street at Northern Boulevard (RT. 25A)													
126th Street	NB	L	0.96	73.7	E	L	1.10	109.7	F	L	2.45	698.6	F
		R	0.71	53.3	D	R	0.61	47.7	D	R	2.12	553.1	F
Northern Boulevard	EB	T	0.33	7.1	A	T	0.24	6.4	A	T	0.24	6.4	A
	WB	T	0.89	21.2	C	T	0.77	15.4	B	T	0.35	7.2	A
Grand Central Parkway Ramp	EB	T	0.60	10.1	B	T	0.48	8.5	A	T	0.50	8.8	A
Van Wyck & Whitestone Expressway Ramp	WB	T	0.79	14.5	B	T	0.76	13.6	B	T	0.91	26.5	C
Overall Intersection		-	**0.90**	**22.2**	**C**	-	**0.84**	**27.2**	**C**	-	**1.26**	**282.7**	**F**
Prince Street at Northern Boulevard (RT. 25A)													
Prince Street	NB	LTR	1.12	102.0	F	LTR	1.11	98.7	F	LTR	1.13	109.9	F
	SB	LTR	0.59	42.3	D	LTR	0.51	37.7	D	LTR	0.41	38.7	D
Northern Boulevard (Rt. 25A)	EB	L	0.97	73.3	E	L	1.00	84.9	F	L	0.89	66.0	E
		T	1.10	81.0	F	T	1.04	57.0	E	T	1.10	80.0	E
	WB	L	0.78	69.0	E	L	0.97	99.7	F	L	0.90	89.7	F
		T	1.15	109.8	F	T	1.18	120.4	F	T	1.02	59.5	E
Northern Boulevard Service Rd.	EB	TR	0.59	25.1	C	TR	0.51	23.1	C	TR	0.45	21.8	C
	WB	TR	0.94	59.7	E	TR	0.91	48.8	D	TR	0.67	33.1	C
Overall Intersection		-	**1.10**	**83.5**	**F**	-	**1.12**	**79.4**	**E**	-	**1.08**	**67.1**	**E**
Main Street at Northern Boulevard (RT. 25A)													
Main Street	NB	L	0.90	52.7	D	L	0.86	48.1	D	L	0.85	47.9	D
		R	0.91	62.7	E	R	0.95	68.8	E	R	0.74	42.2	D
Northern Boulevard (Rt 25A)	EB	T	1.22	128.5	F	T	1.03	58.5	E	T	1.14	99.7	F
		R	1.23	137.5	F	R	1.34	192.7	F	R	1.18	124.2	F
Northern Boulevard (Rt 25A)	WB	L	0.23	28.0	C	L	0.16	26.6	C	L	0.12	25.9	C
		T	0.85	25.9	C	T	0.97	34.0	C	T	0.76	22.8	C
Overall Intersection		-	**1.07**	**83.0**	**F**	-	**1.16**	**64.0**	**E**	-	**0.98**	**68.8**	**E**
Union Street at Northern Boulevard (RT. 25A)													
Union Street	NB	TR	0.70	35.8	D	TR	0.69	35.6	D	TR	0.66	34.8	C
	SB	TR	0.69	35.3	D	TR	0.60	33.1	C	TR	0.68	34.8	C
Northern Boulevard (Rt. 25A)	EB	L	0.64	32.5	C	L	0.69	35.8	D	L	0.74	36.0	D
		TR	1.25	147.1	F	TR	1.36	202.7	F	TR	1.34	189.3	F
	WB	L	0.79	41.8	D	L	0.98	53.9	D	L	1.00	83.5	F
		TR	1.11	102.9	F	TR	1.09	84.0	F	TR	0.94	46.4	D
Overall Intersection		-	**0.98**	**102.5**	**F**	-	**1.03**	**113.2**	**F**	-	**0.97**	**101.2**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)													
Parsons Boulevard	NB	L	0.90	84.6	F	L	0.70	52.2	D	L	0.76	59.1	E
		TR	0.58	40.4	D	TR	0.54	39.1	D	TR	0.59	38.4	D
	SB	LTR	1.22	142.7	F	LTR	1.18	126.8	F	LTR	1.17	119.2	F
Northern Boulevard (Rt. 25A)	EB	L	0.58	49.4	D	L	0.46	46.2	D	L	0.52	46.0	D
		TR	1.05	56.9	E	TR	1.24	145.1	F	TR	1.26	153.0	F
	WB	L	0.49	43.0	D	L	0.44	45.8	D	L	0.51	43.6	D
		TR	1.24	141.1	F	TR	1.20	124.2	F	TR	1.23	139.8	F
Overall Intersection		-	**1.18**	**94.1**	**F**	-	**1.14**	**119.6**	**F**	-	**1.16**	**127.3**	**F**
34TH AVENUE													
114th Street at 34th Avenue													
114th Street	SB	L	1.13	108.9	F	L	1.11	96.4	F	L	1.23	142.7	F
		T	0.81	38.6	D	T	0.80	37.4	D	T	0.42	26.0	C
34th Avenue	EB	TR	0.57	13.7	B	TR	0.46	12.2	B	TR	0.42	11.7	B
Overall Intersection		-	**0.77**	**53.8**	**D**	-	**0.69**	**52.3**	**D**	-	**0.73**	**81.8**	**F**
126th Street/GCP Ramp at 34th Avenue													
126th Street	NB	DefL	1.40	271.9	F	DefL	1.56	337.1	F	-	-	-	-
		TR	0.63	42.5	D	TR	0.79	45.4	D	LTR	2.28	619.0	F
Northern Boulevard Ramp	SB	LTR	1.68	367.0	F	LTR	1.88	450.3	F	LTR	2.93	932.9	F
GCP Ramp	SB	LTR	1.54	295.1	F	LTR	1.71	372.2	F	LTR	2.17	577.3	F
Shea Road	EB	DefL	1.56	306.9	F	-	-	-	-	DefL	2.73	825.6	F
		TR	1.45	249.5	F	LTR	1.31	184.6	F	TR	0.77	44.5	D
34th Avenue	WB	LTR	1.27	182.2	F	LTR	2.33	637.7	F	LTR	1.22	163.6	F
Overall Intersection		-	**1.59**	**251.9**	**F**	-	**2.01**	**308.7**	**F**	-	**2.63**	**584.6**	**F**

TABLE 12
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE													
108th Street at Roosevelt Avenue													
108th Street	NB	LTR	1.20	138.7	F	LTR	1.23	149.0	F	LTR	1.20	135.5	F
	SB	LTR	1.19	134.0	F	LTR	1.19	134.5	F	LTR	1.22	146.1	F
Roosevelt Avenue	EB	LTR	0.82	11.9	B	LTR	0.90	28.3	C	LTR	0.75	18.4	B
	WB	LTR	0.81	15.3	B	LTR	1.18	104.4	F	LTR	1.09	64.8	E
	Overall Intersection	-	**0.92**	**53.4**	**D**	-	**1.20**	**92.0**	**F**	-	**1.12**	**75.8**	**E**
111th Street at Roosevelt Avenue													
111th Street	NB	LTR	1.05	77.5	E	LTR	1.06	76.7	E	LTR	1.06	78.8	E
Roosevelt Avenue	EB	LTR	0.88	15.1	B	LTR	1.00	44.5	D	LTR	0.87	24.9	C
	WB	LTR	1.36	180.9	F	LTR	1.40	199.0	F	LTR	1.40	199.9	F
	Overall Intersection	-	**1.27**	**98.0**	**F**	-	**1.30**	**115.1**	**F**	-	**1.31**	**117.2**	**F**
114th Street at Roosevelt Avenue													
114th Street	NB	LTR	0.91	59.1	E	LTR	1.08	86.5	F	LTR	0.68	45.9	D
	SB	LTR	1.50	269.0	F	LTR	1.35	202.5	F	LTR	1.18	125.8	F
Roosevelt Avenue	EB	LTR	1.25	137.1	F	LTR	1.64	311.2	F	LTR	1.78	372.4	F
	WB	LTR	0.93	26.8	C	LTR	0.83	19.5	B	LTR	1.02	42.8	D
	Overall Intersection	-	**1.33**	**95.9**	**F**	-	**1.56**	**147.0**	**F**	-	**1.60**	**136.9**	**F**
126th Street at Roosevelt Avenue													
126th Street	NB	LTR	1.09	168.9	F	LTR	1.70	409.4	F	LTR	0.23	37.7	D
	SB	-	-	-	-	-	-	-	-	DefL	0.79	45.1	D
		LTR	1.79	399.0	F	LTR	1.86	434.0	F	TR	0.75	39.2	D
Roosevelt Avenue	EB	DefL	1.77	382.5	F	DefL	2.20	577.1	F	DefL	3.00+	1000.0+	F
		TR	0.78	9.8	A	TR	0.61	13.7	B	TR	1.06	74.8	E
	WB	LTR	0.74	15.7	B	LTR	0.77	16.5	B	LTR	0.67	23.9	C
	Overall Intersection	-	**1.77**	**170.0**	**F**	-	**2.10**	**215.0**	**F**	-	**3.00+**	**905.4**	**F**
College Point Boulevard at Roosevelt Avenue													
College Point Boulevard	NB	L	1.48	272.0	F	L	1.55	292.6	F	L	1.32	194.3	F
		TR	0.69	29.0	C	TR	0.83	27.7	C	TR	0.78	26.0	C
	SB	TR	0.99	62.3	E	TR	1.37	200.7	F	TR	1.03	65.9	E
Roosevelt Avenue	EB	L	0.52	37.8	D	L	0.52	29.4	C	L	0.64	31.6	C
		TR	1.45	232.6	F	TR	1.47	235.6	F	TR	1.44	222.7	F
	WB	L	0.31	44.9	D	L	0.28	33.4	C	L	0.24	32.8	C
		TR	0.57	38.6	D	TR	0.65	30.9	C	TR	0.51	27.4	C
	Overall Intersection	-	**1.37**	**116.7**	**F**	-	**1.61**	**150.8**	**F**	-	**1.40**	**102.8**	**F**
Prince Street at Roosevelt Avenue													
Prince Street	SB	LTR	0.52	31.0	C	LTR	0.80	41.4	D	LTR	0.72	37.1	D
Roosevelt Avenue	EB	DefL	0.84	35.6	D	DefL	0.80	20.0	B	-	-	-	-
		TR	0.91	37.5	D	TR	0.74	14.9	B	LTR	0.82	16.3	B
	WB	LTR	0.67	23.0	C	LTR	0.68	14.6	B	LTR	0.68	13.9	B
	Overall Intersection	-	**0.75**	**31.6**	**C**	-	**0.80**	**21.0**	**C**	-	**0.79**	**19.2**	**B**
Main Street at Roosevelt Avenue													
Main Street	NB	T	0.63	23.6	C	T	0.67	24.3	C	T	0.67	24.3	C
	SB	T	0.53	21.7	C	T	0.63	23.5	C	T	0.53	21.9	C
Roosevelt Avenue	EB	LTR	1.21	151.7	F	LTR	0.99	64.7	E	LTR	1.18	119.6	F
	WB	LTR	1.09	103.4	F	LTR	0.98	60.2	E	LTR	1.06	76.4	E
	Overall Intersection	-	**0.86**	**68.0**	**E**	-	**0.83**	**40.5**	**D**	-	**0.93**	**61.3**	**E**
Union Street at Roosevelt Avenue													
Union Street	NB	TR	0.54	18.8	B	TR	0.46	17.3	B	TR	0.45	17.3	B
	SB	LT	1.27	146.5	F	LT	1.01	55.9	E	LT	1.21	127.2	F
		R	1.91	437.2	F	R	2.65	781.7	F	R	1.90	439.9	F
Roosevelt Avenue	EB	LTR	2.70	796.8	F	LTR	2.23	586.8	F	LTR	2.29	608.9	F
	WB	LT	0.91	43.0	D	LT	0.67	27.5	C	LT	0.84	38.4	D
		R	0.76	42.2	D	R	1.17	166.8	F	R	1.29	206.4	F
	Overall Intersection	-	**2.27**	**288.6**	**F**	-	**2.45**	**288.0**	**F**	-	**2.08**	**264.3**	**F**
Parsons Boulevard at Roosevelt Avenue													
Parsons Boulevard	NB	LTR	0.83	39.2	D	LTR	0.76	29.0	C	LTR	0.97	46.2	D
	SB	LTR	0.78	33.4	C	LTR	0.74	25.8	C	LTR	0.77	26.9	C
Roosevelt Avenue	EB	LTR	0.88	45.0	D	LTR	0.60	23.5	C	LTR	0.88	37.9	D
	WB	LTR	1.05	78.5	E	LTR	0.73	28.1	C	LTR	0.84	34.7	C
	Overall Intersection	-	**0.94**	**49.3**	**D**	-	**0.75**	**26.7**	**C**	-	**0.93**	**36.6**	**D**
KISSENA BOULEVARD													
Main Street at Kissena Boulevard													
Main Street	NB	L	0.75	38.3	D	L	0.90	59.1	E	L	0.70	32.7	C
		TR	0.59	22.2	C	TR	0.60	21.4	C	TR	0.67	22.8	C
	SB	L	0.87	54.4	D	L	0.52	21.3	C	L	0.44	19.7	B
		TR	0.50	20.1	C	TR	0.54	19.6	B	TR	0.48	18.8	B
Kissena Boulevard	WB	T	0.73	38.0	D	T	0.66	24.5	C	T	0.65	24.4	C
	Overall Intersection	-	**0.80**	**30.2**	**C**	-	**0.78**	**24.9**	**C**	-	**0.68**	**22.2**	**C**
SANFORD AVENUE													
College Point Boulevard at Sanford Avenue													
College Point Boulevard	NB	L	0.41	16.4	B	L	0.58	26.0	C	L	0.27	14.4	B
		T	0.76	16.4	B	T	0.84	18.7	B	T	0.58	12.8	B
	SB	TR	0.78	16.7	B	TR	0.85	19.3	B	TR	0.84	18.6	B
Sanford Avenue	WB	L	0.81	49.2	D	L	0.87	54.6	D	L	0.58	34.6	C
		TR	0.58	30.6	C	TR	0.61	31.3	C	TR	0.42	27.8	C
	Overall Intersection	-	**0.79**	**20.6**	**C**	-	**0.86**	**23.3**	**C**	-	**0.75**	**18.5**	**B**
Union Street at Sanford Avenue													
Union Street	NB	LTR	0.39	21.7	C	LTR	0.47	23.7	C	LTR	0.42	22.2	C
	SB	LTR	0.71	26.3	C	LTR	0.94	36.5	D	LTR	0.82	30.2	C
Sanford Avenue	EB	-	-	-	-	DefL	0.59	25.4	C	-	-	-	-
		LTR	0.29	14.3	B	TR	0.33	15.1	B	LTR	0.24	13.8	B
	WB	LTR	0.95	36.9	D	LTR	0.79	25.3	C	LTR	0.73	23.6	C
	Overall Intersection	-	**0.84**	**27.4**	**C**	-	**0.86**	**28.6**	**C**	-	**0.77**	**24.5**	**C**

TABLE 12
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2028 PHASE 1B WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue													
Parsons Boulevard	NB	LTR	1.04	56.9	E	LTR	0.87	34.0	C	LTR	0.94	39.2	D
	SB	LTR	0.81	30.5	C	LTR	0.87	34.6	C	LTR	0.88	35.8	D
Sanford Avenue	EB	LTR	0.63	24.1	C	LTR	0.65	24.0	C	LTR	0.82	30.7	C
	WB	LTR	0.81	31.3	C	LTR	0.91	38.9	D	LTR	0.86	35.1	D
Overall Intersection		**-**	**0.93**	**36.8**	**D**	**-**	**0.89**	**33.3**	**C**	**-**	**0.90**	**35.2**	**D**
WHITESTONE EXPRESSWAY / 32ND AVENUE													
College Point Boulevard at 32nd Avenue													
College Point Boulevard	NB	T	0.41	23.9	C	T	0.38	23.5	C	T	0.46	24.2	C
		TR	0.27	22.0	C	TR	0.59	26.1	C	TR	0.36	23.1	C
	SB	L	0.45	33.5	C	L	0.58	38.1	D	L	0.28	27.8	C
		T	0.42	10.7	B	T	0.46	11.2	B	T	0.30	9.6	A
32nd Avenue	WB	LTR	0.74	37.8	D	LTR	0.46	30.1	C	LTR	0.30	26.8	C
Overall Intersection		**-**	**1.10**	**21.1**	**C**	**-**	**1.04**	**21.9**	**C**	**-**	**0.86**	**19.7**	**B**
NORTHERN BOULEVARD SERVICE ROAD													
College Point Boulevard at Northern Boulevard Service Road													
College Point Boulevard	NB	TR	0.50	12.7	B	TR	0.55	13.4	B	TR	0.53	13.1	B
	SB	LT	0.86	22.6	C	LT	0.93	28.7	C	LT	0.57	14.3	B
Northern Blvd Service Rd	WB	LR	0.87	43.3	D	LR	0.87	42.5	D	LR	0.70	33.2	C
Overall Intersection		**-**	**0.86**	**22.7**	**C**	**-**	**0.91**	**25.2**	**C**	**-**	**0.61**	**17.3**	**B**
STADIUM ROAD													
Boat Basin Road at Stadium Road													
Boat Basin Road	NB	-	-	-	-	-	-	-	-	DefL	1.29	220.0	F
		LTR	0.99	88.7	F	LTR	0.76	53.5	D	TR	0.28	19.7	B
	SB	LTR	1.15	105.2	F	LTR	1.40	210.4	F	LTR	1.00	55.7	E
Stadium Road	EB	DefL	1.30	231.2	F	DefL	1.20	179.1	F	DefL	2.84	867.4	F
		TR	0.35	24.4	C	TR	0.45	26.1	C	TR	0.53	17.5	B
	WB	LTR	1.10	84.9	F	LTR	0.94	35.5	D	LTR	0.77	21.8	C
Overall Intersection		**-**	**1.19**	**96.3**	**F**	**-**	**1.23**	**135.6**	**F**	**-**	**2.17**	**159.5**	**F**
UNSIGNALIZED INTERSECTIONS													
Boat Basin Road at Worlds Fair Marina													
Boat Basin Road	NB	L	-	781.3	F	L	-	700.9	F	L	-	1000.0+	F
		R	-	8.9	A	R	-	8.9	A	R	-	10.7	B
Worlds Fair Marina	WB	LT	-	13.6	B	LT	-	12.9	B	LT	-	8.9	A
Overall Intersection		-	**-**	**491.1**	**F**	-	**-**	**428.5**	**F**	-	**-**	**1000.0+**	**F**
Willets Point Boulevard at Northern Boulevard													
Northern Boulevard	EB	TR	-	19.3	C	TR	-	16.3	C	TR	-	763.2	F
Overall Intersection		-	**-**	**19.3**	**C**	-	**-**	**16.3**	**C**	-	**-**	**763.2**	**F**
Grand Central Parkway Ramp at West Park Loop/Stadium Road													
Stadium Road	SB	LT	-	9.2	A	LT	-	9.4	A	LT	-	13.0	B
Grand Central Parkway Off-Ramp	EB	L	-	186.4	F	L	-	191.9	F	L	-	179.9	F
		T	-	461.7	F	T	-	520.6	F	T	-	701.8	F
		R	-	242.3	F	R	-	314.1	F	R	-	11.5	B
Willets West Center Exit	WB	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	10.2	B	R	-	10.3	B	R	-	13.3	B
Overall Intersection		-	**-**	**1000.0+**	**F**	-	**-**	**1000.0+**	**F**	-	**-**	**1000.0+**	**F**
NEW (WITH ACTION) SIGNALIZED INTERSECTION													
126th Street at New Willets Point Boulevard													
126th Street	NB	TR	0.42	20.1	C	TR	0.52	22.1	C	TR	0.96	44.6	D
	SB	-	-	-	-	-	-	-	-	DefL	0.54	35.0	D
		LT	0.70	15.0	B	LT	0.72	15.9	B	T	0.46	11.0	B
New Willets Point Boulevard	WB	L	0.65	48.3	D	L	0.70	50.4	D	L	0.40	40.4	D
		R	0.37	27.4	C	R	0.52	31.9	C	R	0.36	27.0	C
Overall Intersection		-	**0.67**	**21.4**	**C**	-	**0.70**	**23.4**	**C**	-	**1.02**	**35.6**	**D**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 13
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
SIGNALIZED INTERSECTIONS																	
ASTORIA BOULEVARD																	
108th Street at Astoria Boulevard																	
108th Street	NB	DefL	0.80	62.7	E	DefL	0.58	30.1	C	DefL	0.71	54.7	D	DefL	0.63	31.5	C
		T	0.22	35.8	D	T	0.13	20.1	C	T	0.22	35.7	D	T	0.21	21.1	C
	SB	LTR	0.36	38.5	D	LTR	0.18	20.7	C	LTR	0.40	39.4	D	LTR	0.26	21.7	C
Astoria Boulevard	EB	TR	0.68	27.3	C	TR	1.00	45.7	D	TR	0.98	33.2	C	TR	1.13	89.4	F
	WB	L	0.62	17.7	B	L	0.77	38.5	D	L	0.73	48.7	D	L	0.57	26.0	C
		TR	0.82	8.8	A	TR	0.43	13.4	B	TR	0.41	10.5	B	TR	0.44	13.5	B
Overall Intersection		-	**0.82**	**19.2**	**B**	-	**0.82**	**32.8**	**C**	-	**0.89**	**29.8**	**C**	-	**0.88**	**55.1**	**E**
NORTHERN BOULEVARD																	
108th Street at Northern Boulevard (RT. 25A)																	
108th Street	NB	LTR	1.26	165.1	F	LTR	1.52	282.2	F	LTR	1.56	302.4	F	LTR	1.55	294.2	F
	SB	LTR	1.00	86.6	F	LTR	0.96	76.2	E	LTR	1.18	135.2	F	LTR	0.97	77.5	E
Northern Boulevard (Rt. 25A)	EB	L	0.08	29.6	C	L	0.09	34.3	C	L	0.15	45.1	D	L	0.18	45.4	D
		TR	0.90	28.4	C	TR	1.12	87.4	F	TR	0.98	23.2	C	TR	1.20	119.4	F
	WB	L	0.53	32.6	C	L	0.86	66.4	E	L	0.67	45.1	D	L	0.77	50.6	D
		TR	1.13	75.0	E	TR	1.22	127.3	F	TR	1.35	183.7	F	TR	1.39	205.0	F
Overall Intersection		-	**1.05**	**65.8**	**E**	-	**1.25**	**117.4**	**F**	-	**1.30**	**111.6**	**F**	-	**1.35**	**164.9**	**F**
114th Street at Northern Boulevard (RT. 25A)																	
114th Street	SB	LTR	0.51	48.8	D	LTR	0.46	46.1	D	LTR	0.47	47.9	D	LTR	0.45	45.6	D
Northern Boulevard (Rt. 25A)	EB	T	1.08	84.8	F	T	1.06	65.4	E	T	1.35	179.3	F	T	0.95	38.1	D
		R	0.76	39.5	D	R	0.49	20.0	B	R	0.87	18.6	B	R	0.63	23.7	C
	WB	DefL	0.57	26.3	C	DefL	0.77	50.8	D	DefL	1.06	100.3	F	DefL	1.13	116.6	F
		T	1.28	144.2	F	T	0.88	18.3	B	T	1.08	56.5	E	T	1.15	86.0	F
Overall Intersection		-	**1.41**	**110.6**	**F**	-	**1.46**	**39.3**	**D**	-	**1.78**	**102.1**	**F**	-	**1.93**	**66.3**	**E**
126th Street at Northern Boulevard (RT. 25A)																	
126th Street	NB	L	1.09	112.5	F	L	1.43	248.4	F	L	1.41	240.8	F	L	1.38	229.1	F
		R	0.49	45.6	D	R	0.85	63.1	E	R	0.73	52.8	D	R	0.86	62.2	E
Northern Boulevard	EB	T	0.26	6.5	A	T	0.35	7.2	A	T	0.40	7.6	A	T	0.34	7.1	A
	WB	T	0.72	12.2	B	T	0.41	7.8	A	T	0.47	8.4	A	T	0.39	7.6	A
Grand Central Parkway Ramp	EB	T	0.49	8.7	A	T	0.46	8.3	A	T	0.54	9.3	A	T	0.53	9.1	A
Van Wyck & Whitestone Expressway Ramp	WB	T	1.48	265.0	F	T	1.32	166.2	F	T	1.35	179.7	F	T	1.30	159.2	F
Overall Intersection		-	**1.39**	**98.7**	**F**	-	**1.34**	**95.2**	**F**	-	**1.36**	**92.0**	**F**	-	**1.32**	**87.9**	**F**
Prince Street at Northern Boulevard (RT. 25A)																	
Prince Street	NB	LTR	1.17	140.0	F	LTR	1.21	141.8	F	LTR	1.25	159.4	F	LTR	1.14	108.9	F
	SB	LTR	0.81	54.1	D	LTR	0.54	41.4	D	LTR	0.53	41.8	D	LTR	0.47	36.9	D
Northern Boulevard (Rt. 25A)	EB	L	0.97	96.9	F	L	0.90	73.8	E	L	0.62	46.0	D	L	0.67	49.9	D
		T	0.87	25.2	C	T	1.05	63.7	E	T	1.10	81.2	F	T	1.21	128.1	F
	WB	L	0.96	94.1	F	L	0.91	93.1	F	L	0.82	73.7	E	L	0.83	66.0	E
		T	1.22	120.8	F	T	1.23	141.1	F	T	1.23	141.9	F	T	1.26	154.3	F
Northern Boulevard Service Rd.	EB	TR	0.45	16.7	B	TR	0.62	26.5	C	TR	0.66	27.6	C	TR	0.63	26.0	C
	WB	TR	0.86	26.4	C	TR	1.03	77.1	E	TR	0.93	58.8	E	TR	1.09	91.9	F
Overall Intersection		-	**1.16**	**73.3**	**E**	-	**1.15**	**92.9**	**F**	-	**1.10**	**96.2**	**F**	-	**1.13**	**118.3**	**F**
Main Street at Northern Boulevard (RT. 25A)																	
Main Street	NB	L	0.78	43.8	D	T	0.98	66.1	E	T	0.97	62.1	E	T	0.94	56.9	E
		R	0.86	56.1	E	R	0.69	40.0	D	R	0.99	79.7	E	R	0.90	63.9	E
Northern Boulevard (Rt 25A)	EB	T	1.02	55.7	E	T	1.12	90.6	F	T	1.23	135.3	F	T	1.11	87.7	F
		R	1.18	128.3	F	R	1.29	173.4	F	R	1.20	132.4	F	R	1.40	216.1	F
Northern Boulevard (Rt 25A)	WB	L	0.17	26.5	C	L	0.11	25.7	C	L	0.17	26.9	C	L	0.08	25.2	C
		T	1.15	86.7	F	T	0.91	30.0	C	T	0.90	29.0	C	T	1.11	79.1	E
Overall Intersection		-	**1.02**	**73.9**	**E**	-	**1.03**	**74.8**	**E**	-	**1.10**	**87.6**	**F**	-	**1.17**	**93.2**	**F**
Union Street at Northern Boulevard (RT. 25A)																	
Union Street	NB	TR	0.68	35.2	D	TR	0.79	39.1	D	TR	0.79	38.9	D	TR	0.77	38.2	D
	SB	TR	0.92	44.8	D	TR	0.56	32.5	C	TR	0.83	40.0	D	TR	0.66	34.7	C
Northern Boulevard (Rt. 25A)	EB	L	0.97	69.1	E	L	0.56	28.3	C	L	0.79	46.1	D	L	0.74	25.7	C
		TR	1.33	188.3	F	TR	1.57	294.1	F	TR	1.29	167.3	F	TR	1.66	336.0	F
	WB	L	1.02	78.9	E	L	1.18	144.3	F	L	0.86	39.9	D	L	0.87	47.0	D
		TR	1.06	67.3	E	TR	1.03	64.7	E	TR	1.10	86.6	F	TR	1.25	149.3	F
Overall Intersection		-	**1.13**	**98.4**	**F**	-	**1.42**	**152.0**	**F**	-	**1.06**	**106.3**	**F**	-	**1.19**	**190.0**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)																	
Parsons Boulevard	NB	L	1.00	104.0	F	L	0.78	63.7	E	L	0.88	77.4	E	L	0.90	77.8	E
		TR	0.57	39.9	D	TR	0.53	39.0	D	TR	0.50	35.4	D	TR	0.61	41.1	D
	SB	LTR	0.87	51.1	D	LTR	1.27	166.5	F	LTR	1.19	128.1	F	LTR	1.22	140.7	F
Northern Boulevard (Rt. 25A)	EB	L	0.57	47.7	D	L	0.91	64.9	E	L	0.56	48.3	D	L	0.58	49.2	D
		TR	1.17	115.0	F	TR	1.25	151.0	F	TR	1.13	92.1	F	TR	1.30	172.1	F
	WB	L	0.47	41.9	D	L	0.39	43.1	D	L	0.40	43.7	D	L	0.49	43.9	D
		TR	1.23	135.4	F	TR	1.43	229.3	F	TR	1.29	164.6	F	TR	1.40	215.1	F
Overall Intersection		-	**1.07**	**108.6**	**F**	-	**1.36**	**166.7**	**F**	-	**1.18**	**114.2**	**F**	-	**1.26**	**168.2**	**F**
34TH AVENUE																	
114th Street at 34th Avenue																	
114th Street	SB	L	0.87	41.3	D	L	0.92	52.8	D	L	1.09	89.3	F	L	1.11	100.9	F
		T	0.35	25.0	C	T	0.31	25.3	C	T	0.48	27.4	C	T	0.43	26.8	C
34th Avenue	EB	TR	0.48	12.6	B	TR	0.40	11.5	B	TR	0.39	11.3	B	TR	0.58	13.9	B
Overall Intersection		-	**0.62**	**25.2**	**C**	-	**0.58**	**31.5**	**C**	-	**0.63**	**50.6**	**D**	-	**0.76**	**50.0**	**D**
126th Street/GCP Ramp at 34th Avenue																	
126th Street	NB	DefL	0.56	31.7	C	DefL	2.17	574.2	F	DefL	2.79	846.1	F	DefL	1.49	272.4	F
		TR	0.41	23.3	C	TR	0.73	30.7	C	TR	0.71	29.8	C	TR	0.67	28.7	C
Northern Boulevard Ramp	SB	LTR	0.65	30.6	C	LTR	1.39	219.1	F	LTR	0.82	41.0	D	LTR	1.59	310.0	F
GCP Ramp	SB	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F
Shea Road	EB	-	-	-	-	DefL	3.00+	1000.0+	F	DefL	3.00+	1000.0+	F	DefL	3.00+	1000.0+	F
		LTR	2.17	581.7	F	TR	2.98	943.3	F	TR	2.34	656.6	F	TR	2.92	917.1	F
34th Avenue	WB	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F
Overall Intersection		-	**3.00+**	**1000.0+**	**F**	-	**3.00+**	**1000.0+**	**F**	-	**3.00+**	**1000.0+**	**F**	-	**3.00+**	**1000.0+**	**F**

TABLE 13
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
				Control				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE																	
108th Street at Roosevelt Avenue																	
108th Street	NB	LTR	1.08	97.3	F	LTR	1.19	140.3	F	LTR	1.19	138.5	F	LTR	1.30	183.3	F
	SB	LTR	1.13	116.0	F	LTR	1.27	170.9	F	LTR	1.22	147.9	F	LTR	1.19	135.8	F
Roosevelt Avenue	EB	LTR	0.82	22.6	C	LTR	0.96	39.6	D	LTR	0.93	21.9	C	LTR	0.92	30.7	C
	WB	LTR	0.96	21.3	C	LTR	1.14	96.3	F	LTR	1.10	68.9	E	LTR	1.05	48.9	D
	Overall Intersection	-	**1.00**	**45.8**	**D**	-	**1.18**	**93.6**	**F**	-	**1.13**	**75.8**	**E**	-	**1.12**	**75.6**	**E**
111th Street at Roosevelt Avenue																	
111th Street	NB	LTR	1.02	73.8	E	LTR	0.73	51.2	D	LTR	0.86	57.2	E	LTR	1.06	81.0	F
Roosevelt Avenue	EB	LTR	0.81	21.0	C	LTR	0.96	37.0	D	LTR	0.99	33.0	C	LTR	1.13	89.1	F
	WB	LTR	1.07	51.9	D	LTR	1.11	83.4	F	LTR	1.51	251.7	F	LTR	1.57	277.3	F
	Overall Intersection	-	**1.05**	**44.2**	**D**	-	**1.01**	**60.1**	**E**	-	**1.33**	**144.1**	**F**	-	**1.43**	**172.2**	**F**
114th Street at Roosevelt Avenue																	
114th Street	NB	LTR	1.04	79.3	E	LTR	0.71	51.2	D	LTR	0.99	64.9	E	LTR	1.03	74.0	E
	SB	LTR	1.41	233.5	F	LTR	0.91	79.2	E	LTR	1.24	152.6	F	LTR	1.28	172.2	F
Roosevelt Avenue	EB	LTR	1.01	52.1	D	LTR	1.38	201.0	F	LTR	1.53	263.0	F	LTR	2.13	531.0	F
	WB	LTR	0.69	7.0	A	LTR	0.77	17.1	B	LTR	1.18	108.2	F	LTR	1.13	87.0	F
	Overall Intersection	-	**1.12**	**52.0**	**D**	-	**1.26**	**83.1**	**F**	-	**1.44**	**145.3**	**F**	-	**1.88**	**216.6**	**F**
126th Street at Roosevelt Avenue																	
126th Street	NB	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F
	SB	-	-	-	-	DefL	3.00+	1000.0+	F	DefL	3.00+	1000.0+	F	DefL	3.00+	1000.0+	F
		LTR	2.92	917.4	F	TR	2.72	828.3	F	TR	2.91	912.9	F	TR	2.15	572.4	F
Roosevelt Avenue	EB	DefL	1.05	89.7	F	DefL	1.20	147.7	F	DefL	1.74	372.8	F	DefL	1.91	447.9	F
		TR	0.61	13.8	B	TR	0.71	16.7	B	TR	0.69	8.1	A	TR	0.74	17.2	B
	WB	LTR	0.89	14.5	B	LTR	0.85	21.6	C	LTR	0.89	24.0	C	LTR	0.84	20.5	C
	Overall Intersection	-	**1.79**	**406.1**	**F**	-	**2.78**	**686.8**	**F**	-	**3.00+**	**1000.0+**	**F**	-	**3.00+**	**742.6**	**F**
College Point Boulevard at Roosevelt Avenue																	
College Point Boulevard	NB	L	1.79	410.8	F	L	2.01	500.9	F	L	1.70	368.8	F	L	1.93	464.3	F
		TR	0.74	27.7	C	TR	0.89	31.5	C	TR	0.76	31.3	C	TR	0.94	35.6	D
	SB	TR	1.06	81.2	F	TR	1.57	292.4	F	TR	1.53	284.5	F	TR	1.35	194.4	F
Roosevelt Avenue	EB	L	0.49	41.3	D	L	0.61	31.4	C	L	0.53	38.4	D	L	0.63	21.6	C
		TR	1.19	132.2	F	TR	1.73	355.4	F	TR	1.61	307.1	F	TR	1.69	335.2	F
	WB	L	0.23	45.3	D	L	0.28	33.5	C	L	0.25	43.7	D	L	0.34	34.4	C
		TR	0.81	51.0	D	TR	0.77	38.1	D	TR	0.60	39.7	D	TR	0.67	31.4	C
	Overall Intersection	-	**1.37**	**118.0**	**F**	-	**1.90**	**229.3**	**F**	-	**1.71**	**207.8**	**F**	-	**1.78**	**185.7**	**F**
Prince Street at Roosevelt Avenue																	
Prince Street	SB	LTR	0.52	31.1	C	LTR	0.86	47.9	D	LTR	0.61	33.3	C	LTR	0.97	60.6	E
Roosevelt Avenue	EB	DefL	1.37	211.9	F	DefL	1.01	52.2	D	DefL	1.18	126.9	F	DefL	0.87	25.2	C
		TR	0.67	25.8	C	TR	0.85	20.9	C	TR	0.89	36.6	D	TR	0.91	23.9	C
	WB	LTR	0.99	47.4	D	LTR	0.65	14.2	B	LTR	0.72	23.2	C	LTR	0.70	15.4	B
	Overall Intersection	-	**1.01**	**77.2**	**E**	-	**0.96**	**31.0**	**C**	-	**0.93**	**50.9**	**D**	-	**0.93**	**28.8**	**C**
Main Street at Roosevelt Avenue																	
Main Street	NB	T	0.60	22.4	C	T	0.67	24.6	C	T	0.51	21.2	C	T	0.77	26.7	C
	SB	T	0.44	19.5	B	T	0.51	21.7	C	T	0.54	21.8	C	T	0.65	23.9	C
Roosevelt Avenue	EB	LTR	0.81	49.7	D	LTR	1.18	129.3	F	LTR	1.57	309.1	F	LTR	1.27	163.8	F
	WB	LTR	1.14	113.3	F	LTR	1.14	107.9	F	LTR	1.33	195.1	F	LTR	1.05	66.8	E
	Overall Intersection	-	**0.83**	**53.3**	**D**	-	**0.92**	**69.9**	**E**	-	**0.96**	**130.9**	**F**	-	**1.02**	**67.3**	**E**
Union Street at Roosevelt Avenue																	
Union Street	NB	TR	0.61	20.1	C	TR	0.58	19.5	B	TR	0.42	16.8	B	TR	0.57	19.2	B
	SB	LT	1.10	80.0	F	LT	1.01	59.5	E	LT	0.93	37.9	D	LT	1.08	75.2	E
		R	0.85	35.8	D	R	3.00+	1000.0+	F	R	2.61	765.5	F	R	2.83	856.2	F
Roosevelt Avenue	EB	LTR	1.75	372.1	F	LTR	2.70	797.9	F	LTR	2.39	657.4	F	LTR	3.00+	941.2	F
	WB	LT	1.12	93.7	F	LT	0.82	35.3	D	LT	0.72	30.2	C	LT	0.74	30.1	C
		R	1.05	82.6	F	R	0.89	70.5	E	R	1.01	100.0	F	R	1.30	212.7	F
	Overall Intersection	-	**1.40**	**119.5**	**F**	-	**3.00+**	**553.1**	**F**	-	**2.51**	**292.4**	**F**	-	**2.92**	**412.5**	**F**
Parsons Boulevard at Roosevelt Avenue																	
Parsons Boulevard	NB	LTR	1.17	112.0	F	LTR	0.72	27.4	C	LTR	0.92	49.2	D	LTR	0.93	44.3	D
	SB	LTR	0.82	35.1	D	LTR	0.66	23.9	C	LTR	0.71	30.8	C	LTR	0.79	27.6	C
Roosevelt Avenue	EB	LTR	0.58	28.4	C	LTR	0.88	40.0	D	LTR	0.75	35.8	D	LTR	1.05	73.6	E
	WB	LTR	1.28	161.7	F	LTR	0.95	50.1	D	LTR	0.94	53.3	D	LTR	1.12	99.2	F
	Overall Intersection	-	**1.23**	**94.0**	**F**	-	**0.84**	**36.0**	**D**	-	**0.93**	**42.4**	**D**	-	**1.03**	**61.3**	**E**
KISSENA BOULEVARD																	
Main Street at Kissena Boulevard																	
Main Street	NB	L	0.78	36.7	D	L	0.92	61.0	E	L	0.80	42.4	D	L	1.25	163.4	F
		TR	0.70	25.4	C	TR	0.64	22.5	C	TR	0.59	22.6	C	TR	0.70	23.6	C
	SB	L	0.66	38.7	D	L	0.47	20.5	C	L	0.85	52.7	D	L	0.55	22.1	C
		TR	0.39	18.4	B	TR	0.52	19.5	B	TR	0.46	19.4	B	TR	0.58	20.3	C
Kissena Boulevard	WB	T	0.74	38.9	D	T	0.73	27.4	C	T	0.67	35.8	D	T	0.76	27.4	C
	Overall Intersection	-	**0.76**	**28.4**	**C**	-	**0.82**	**26.0**	**C**	-	**0.82**	**30.3**	**C**	-	**1.00**	**38.5**	**D**
SANFORD AVENUE																	
College Point Boulevard at Sanford Avenue																	
College Point Boulevard	NB	L	0.23	10.7	B	L	0.66	33.1	C	L	0.54	32.5	C	L	0.78	54.4	D
		T	0.71	15.6	B	T	0.70	15.3	B	T	0.63	13.8	B	T	0.78	17.0	B
	SB	TR	0.62	13.8	B	TR	0.83	19.2	B	TR	1.06	55.2	E	TR	0.92	23.6	C
Sanford Avenue	WB	L	0.79	46.2	D	L	0.57	35.0	C	L	0.78	47.6	D	L	0.71	39.9	D
		TR	0.67	33.0	C	TR	0.53	29.9	C	TR	0.50	29.1	C	TR	0.70	34.0	C
	Overall Intersection	-	**0.74**	**20.2**	**C**	-	**0.75**	**20.3**	**C**	-	**0.97**	**39.2**	**D**	-	**0.85**	**24.1**	**C**
Union Street at Sanford Avenue																	
Union Street	NB	LTR	0.72	31.5	C	LTR	0.34	20.8	C	LTR	0.31	20.3	C	LTR	0.40	21.8	C
	SB	LTR	0.63	25.3	C	LTR	0.63	24.6	C	LTR	0.75	27.5	C	LTR	0.77	28.6	C
Sanford Avenue	EB	DefL	0.60	28.0	C	DefL	0.46	20.9	C	-	-	-	-	DefL	0.52	23.2	C
		TR	0.37	15.8	B	TR	0.21	13.7	B	LTR	0.32	14.7	B	TR	0.36	15.6	B
	WB	LTR	0.94	35.7	D	LTR	0.96	38.8	D	LTR	0.74	24.5	C	LTR	0.96	38.9	D
	Overall Intersection	-	**0.84**	**28.7**	**C**	-	**0.81**	**28.6**	**C**	-	**0.75**	**23.4**	**C**	-	**0.88**	**29.4**	**C**

TABLE 13
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 WITH ACTION TRAFFIC LEVELS OF SERVICE - NON-GAME DAY

		Weekday AM Peak Hour (8:00 - 9:00 AM)				Weekday Midday Peak Hour (1:00 - 2:00 PM)				Weekday PM Peak Hour (5:00 - 6:00 PM)				Saturday Midday Peak Hour (1:30 - 2:30 PM)			
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**
Parsons Boulevard at Sanford Avenue																	
Parsons Boulevard	NB	LTR	1.14	88.9	F	LTR	1.22	124.5	F	LTR	0.93	39.3	D	LTR	0.98	47.7	D
	SB	LTR	1.00	47.4	D	LTR	0.85	32.9	C	LTR	0.97	49.0	D	LTR	1.07	74.6	E
Sanford Avenue	EB	LTR	0.75	28.5	C	LTR	0.59	23.1	C	LTR	0.74	27.8	C	LTR	0.76	28.1	C
	WB	LTR	0.89	36.1	D	LTR	0.95	45.1	D	LTR	0.87	35.8	D	LTR	1.01	57.2	E
Overall Intersection		-	**1.02**	**51.7**	**D**	-	**1.09**	**58.6**	**E**	-	**0.92**	**38.6**	**D**	-	**1.04**	**54.0**	**D**
WHITESTONE EXPRESSWAY / 32ND AVENUE																	
College Point Boulevard at 32nd Avenue																	
College Point Boulevard	NB	T	0.47	24.2	C	T	0.71	29.7	C	T	0.54	25.9	C	T	0.39	23.6	C
		TR	0.71	31.8	C	TR	0.81	36.4	D	TR	0.93	47.3	D	TR	0.79	34.6	C
	SB	L	0.52	37.2	D	L	0.75	48.8	D	L	0.49	35.0	C	L	0.53	36.4	D
		T	0.61	13.2	B	T	0.51	11.9	B	T	0.46	11.1	B	T	0.44	10.9	B
32nd Avenue	WB	LTR	0.88	44.9	D	LTR	0.79	40.6	D	LTR	0.90	45.6	D	LTR	0.54	32.0	C
Overall Intersection		-	**1.41**	**24.1**	**C**	-	**1.30**	**28.0**	**C**	-	**1.16**	**29.3**	**C**	-	**1.05**	**23.3**	**C**
NORTHERN BOULEVARD SERVICE ROAD																	
College Point Boulevard at Northern Boulevard Service Road																	
College Point Boulevard	NB	TR	0.43	12.0	B	TR	0.55	13.4	B	TR	0.58	13.8	B	TR	0.56	13.6	B
	SB	LT	0.91	27.7	C	LT	0.90	27.2	C	LT	0.90	27.4	C	LT	0.84	22.9	C
Northern Blvd Service Rd	WB	LR	1.01	66.9	E	LR	1.11	98.3	F	LR	0.98	60.6	E	LR	1.04	75.5	E
Overall Intersection		-	**0.95**	**31.1**	**C**	-	**0.98**	**38.2**	**D**	-	**0.93**	**28.4**	**C**	-	**0.91**	**31.4**	**C**
STADIUM ROAD																	
Boat Basin Road at Stadium Road																	
Boat Basin Road	NB	LTR	0.04	7.0	A	LTR	0.15	7.6	A	LTR	0.21	8.1	A	LTR	0.21	8.1	A
	SB	DefL	0.91	32.9	C	DefL	1.12	93.8	F	DefL	0.94	41.1	D	DefL	1.07	73.7	E
		TR	0.69	16.4	B	TR	0.42	10.4	B	TR	0.71	15.6	B	TR	0.63	13.8	B
Stadium Road	EB	-	-	-	-	DefL	1.11	163.7	F	DefL	1.16	179.7	F	DefL	1.83	449.5	F
		LTR	0.37	27.8	C	TR	0.47	30.3	C	TR	0.46	30.0	C	TR	0.63	34.4	C
	WB	-	-	-	-	-	-	-	-	-	-	-	-	DefL	2.72	817.4	F
		LTR	0.97	59.9	E	LTR	2.01	492.1	F	LTR	2.00	487.5	F	TR	2.26	607.5	F
Overall Intersection		-	**0.93**	**35.1**	**D**	-	**1.40**	**247.5**	**F**	-	**1.27**	**231.2**	**F**	-	**1.59**	**356.2**	**F**
UNSIGNALIZED INTERSECTIONS																	
Boat Basin Road at Worlds Fair Marina																	
Boat Basin Road	NB	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	8.7	A	R	-	8.7	A	R	-	9.1	A	R	-	8.9	A
Worlds Fair Marina	WB	LT	-	14.6	B	LT	-	14.4	B	LT	-	10.8	B	LT	-	13.9	B
Overall Intersection		-	-	**585.7**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**
Willets Point Boulevard at Northern Boulevard																	
Northern Boulevard	EB	TR	-	779.6	F	TR	-	1000.0+	F	TR	-	1000.0+	F	TR	-	1000.0+	F
Overall Intersection		-	-	**779.6**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**
Grand Central Parkway Ramp at West Park Loop/Stadium Road																	
Stadium Road	SB	LT	-	7.5	A	LT	-	7.8	A	LT	-	7.8	A	LT	-	8.2	A
Grand Central Parkway Off-Ramp	EB	L	-	26.6	D	L	-	122.9	F	L	-	68.2	F	L	-	407.6	F
		T	-	18.5	C	T	-	293.0	F	T	-	235.7	F	T	-	620.9	F
		R	-	10.2	B	R	-	11.6	B	R	-	13.3	B	R	-	12.4	B
Willets West Center Exit	WB	L	-	22.5	C	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	8.5	A	R	-	8.8	A	R	-	9.0	A	R	-	9.2	A
Overall Intersection		-	-	**19.7**	**C**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**	-	-	**1000.0+**	**F**
NEW (WITH ACTION) SIGNALIZED INTERSECTIONS																	
126th Street at New Willets Point Boulevard																	
126th Street	NB	TR	0.60	23.8	C	TR	1.02	62.1	E	TR	1.05	71.4	E	TR	0.96	49.4	D
	SB	-	-	-	-	DefL	1.23	172.2	F	DefL	0.95	85.9	F	DefL	0.95	83.0	F
		LT	0.51	13.8	B	T	0.58	15.7	B	T	0.61	16.4	B	T	0.64	17.0	B
New Willets Point Boulevard	WB	L	0.63	43.3	D	L	0.96	75.3	E	L	1.08	108.5	F	L	0.96	73.8	E
		R	0.22	24.2	C	R	0.83	51.6	D	R	1.05	94.7	F	R	0.63	35.6	D
Overall Intersection		-	**0.72**	**23.1**	**C**	-	**1.32**	**68.0**	**E**	-	**1.40**	**70.5**	**E**	-	**1.35**	**47.9**	**D**
Citi Field/Lot B at Roosevelt Avenue																	
Citi Field/Lot B	SB	LR	0.02	34.0	C	LR	0.03	34.2	C	LR	0.02	28.3	C	LR	0.04	34.3	C
Roosevelt Avenue	EB	LT	0.43	10.0	B	LT	0.51	11.1	B	LT	0.60	16.5	B	LT	0.60	13.0	B
	WB	TR	0.48	10.7	B	TR	0.57	11.9	B	TR	0.82	22.9	C	TR	0.63	12.5	B
Overall Intersection		-	**0.35**	**10.5**	**B**	-	**0.42**	**11.7**	**B**	-	**0.54**	**20.3**	**C**	-	**0.47**	**12.9**	**B**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".

TABLE 14
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

INTERSECTION & APPROACH		Weekday Pre-Game (5:30 - 6:30 PM) Mvt.	V/C	Control Delay	LOS	Saturday Pre-Game (3:15 - 4:15 PM) Mvt.	V/C	Control Delay	LOS	Saturday Post-Game (7:15 - 8:15 PM) Mvt.	V/C	Control Delay	LOS
SIGNALIZED INTERSECTIONS													
ASTORIA BOULEVARD													
108th Street at Astoria Boulevard													
108th Street	NB	DefL	0.79	61.7	E	DefL	0.53	27.8	C	DefL	0.62	30.7	C
		T	0.28	36.8	D	T	0.20	21.0	C	T	0.22	21.3	C
	SB	LTR	0.35	38.1	D	LTR	0.23	21.4	C	LTR	0.19	20.9	C
Astoria Boulevard	EB	TR	1.13	87.2	F	TR	0.88	31.2	C	TR	0.79	28.0	C
	WB	L	0.75	51.5	D	L	0.84	47.7	D	L	1.04	88.4	F
		TR	0.33	9.7	A	TR	0.36	12.5	B	TR	0.37	12.7	B
Overall Intersection		-	**1.00**	**67.5**	**E**	-	**0.75**	**26.1**	**C**	-	**0.90**	**28.6**	**C**
NORTHERN BOULEVARD													
108th Street at Northern Boulevard (RT. 25A)													
108th Street	NB	LTR	1.45	250.0	F	LTR	1.43	238.6	F	LTR	1.44	247.2	F
	SB	LTR	1.16	126.3	F	LTR	1.12	110.3	F	LTR	1.23	149.3	F
Northern Boulevard (Rt. 25A)	EB	L	0.19	40.4	D	L	0.09	44.3	D	L	0.14	44.8	D
		TR	0.97	22.3	C	TR	1.18	109.1	F	TR	1.16	102.8	F
	WB	L	0.74	48.5	D	L	0.88	54.9	D	L	1.07	95.4	F
		TR	1.21	119.6	F	TR	1.34	179.4	F	TR	1.33	174.5	F
Overall Intersection		-	**1.20**	**80.5**	**F**	-	**1.30**	**146.8**	**F**	-	**1.33**	**146.9**	**F**
114th Street at Northern Boulevard (RT. 25A)													
114th Street	SB	LTR	0.92	72.3	E	LTR	0.76	56.5	E	LTR	0.52	47.1	D
Northern Boulevard (Rt. 25A)	EB	T	1.16	94.0	F	T	0.95	36.2	D	T	0.82	27.9	C
		R	0.75	17.4	B	R	0.91	38.6	D	R	0.69	25.6	C
	WB	DefL	0.97	74.3	E	DefL	1.16	132.3	F	DefL	1.68	342.4	F
		T	0.97	24.2	C	T	0.97	26.1	C	T	1.34	171.6	F
Overall Intersection		-	**1.72**	**54.2**	**D**	-	**2.05**	**39.9**	**D**	-	**2.98**	**137.1**	**F**
126th Street at Northern Boulevard (RT. 25A)													
126th Street	NB	L	1.16	134.2	F	L	1.43	249.8	F	L	2.80	859.2	F
		R	0.84	63.1	E	R	0.72	51.5	D	R	2.32	642.3	F
Northern Boulevard	EB	T	0.35	7.2	A	T	0.26	6.5	A	T	0.26	6.5	A
	WB	T	0.92	24.2	C	T	0.81	17.5	B	T	0.37	7.4	A
Grand Central Parkway Ramp	EB	T	0.63	10.7	B	T	0.54	9.2	A	T	0.56	9.4	A
Van Wyck & Whitestone Expressway Ramp	WB	T	0.83	16.3	B	T	0.83	16.3	B	T	1.03	50.9	D
Overall Intersection		-	**0.97**	**32.2**	**C**	-	**0.97**	**53.2**	**D**	-	**1.43**	**351.0**	**F**
Prince Street at Northern Boulevard (RT. 25A)													
Prince Street	NB	LTR	1.13	107.6	F	LTR	1.12	101.5	F	LTR	1.15	115.1	F
	SB	LTR	0.60	42.5	D	LTR	0.51	37.8	D	LTR	0.41	38.7	D
Northern Boulevard (Rt. 25A)	EB	L	0.98	75.2	E	L	1.01	87.7	F	L	0.91	67.7	E
		T	1.15	102.0	F	T	1.08	73.6	E	T	1.15	102.8	F
	WB	L	0.79	69.4	E	L	0.98	102.3	F	L	0.90	90.6	F
		T	1.17	119.4	F	T	1.21	134.4	F	T	1.05	68.2	E
Northern Boulevard Service Rd.	EB	TR	0.59	25.2	C	TR	0.51	23.2	C	TR	0.45	21.9	C
	WB	TR	1.03	80.6	F	TR	1.03	73.7	E	TR	0.76	37.6	D
Overall Intersection		-	**1.11**	**96.3**	**F**	-	**1.14**	**92.1**	**F**	-	**1.12**	**79.9**	**E**
Main Street at Northern Boulevard (RT. 25A)													
Main Street	NB	L	0.91	53.1	D	T	0.87	48.5	D	T	0.86	48.2	D
		R	0.92	64.7	E	R	0.96	71.5	E	R	0.75	42.6	D
Northern Boulevard (Rt 25A)	EB	T	1.28	153.5	F	T	1.08	76.5	E	T	1.20	125.9	F
		R	1.24	143.2	F	R	1.36	200.0	F	R	1.20	131.0	F
Northern Boulevard (Rt 25A)	WB	L	0.23	28.0	C	L	0.17	26.6	C	L	0.12	26.0	C
		T	0.89	27.7	C	T	1.02	47.2	D	T	0.81	24.3	C
Overall Intersection		-	**1.08**	**94.5**	**F**	-	**1.17**	**75.2**	**E**	-	**0.99**	**80.6**	**F**
Union Street at Northern Boulevard (RT. 25A)													
Union Street	NB	TR	0.70	36.0	D	TR	0.70	35.8	D	TR	0.67	34.9	C
	SB	TR	0.70	35.5	D	TR	0.61	33.4	C	TR	0.69	35.0	D
Northern Boulevard (Rt. 25A)	EB	L	0.64	33.5	C	L	0.70	37.2	D	L	0.76	37.5	D
		TR	1.30	172.6	F	TR	1.43	230.1	F	TR	1.40	218.9	F
	WB	L	0.80	31.9	C	L	0.99	70.1	E	L	1.01	84.6	F
		TR	1.16	124.9	F	TR	1.17	115.5	F	TR	1.00	68.9	E
Overall Intersection		-	**1.01**	**120.4**	**F**	-	**1.06**	**135.0**	**F**	-	**1.04**	**120.1**	**F**
Parsons Boulevard at Northern Boulevard (RT. 25A)													
Parsons Boulevard	NB	L	0.93	91.7	F	L	0.71	53.5	D	L	0.78	62.0	E
		TR	0.59	40.4	D	TR	0.54	39.2	D	TR	0.60	38.6	D
	SB	LTR	1.25	155.8	F	LTR	1.23	144.6	F	LTR	1.20	132.9	F
Northern Boulevard (Rt. 25A)	EB	L	0.60	50.7	D	L	0.48	46.9	D	L	0.56	47.4	D
		TR	1.11	80.5	F	TR	1.32	177.2	F	TR	1.34	187.9	F
	WB	L	0.49	44.0	D	L	0.45	47.0	D	L	0.51	47.1	D
		TR	1.29	165.0	F	TR	1.28	160.4	F	TR	1.31	173.6	F
Overall Intersection		-	**1.22**	**113.6**	**F**	-	**1.20**	**147.8**	**F**	-	**1.22**	**155.0**	**F**
34TH AVENUE													
114th Street at 34th Avenue													
114th Street	SB	L	1.15	113.7	F	L	1.11	99.3	F	L	1.24	147.1	F
		T	0.81	39.0	D	T	0.80	37.8	D	T	0.42	26.0	C
34th Avenue	EB	TR	0.57	13.8	B	TR	0.47	12.3	B	TR	0.43	11.8	B
Overall Intersection		-	**0.77**	**55.7**	**E**	-	**0.69**	**53.4**	**D**	-	**0.73**	**84.0**	**F**
126th Street/GCP Ramp at 34th Avenue													
126th Street	NB	DefL	2.45	721.3	F	DefL	2.00	516.5	F	-	-	-	-
		TR	0.81	48.2	D	TR	0.91	51.9	D	LTR	2.00	485.9	F
Northern Boulevard Ramp	SB	LTR	2.32	652.5	F	LTR	2.54	743.5	F	LTR	3.00+	1000.0+	F
GCP Ramp	SB	LTR	1.48	498.3	F	LTR	3.00+	982.6	F	LTR	3.00+	1000.0+	F
Shea Road	EB	DefL	2.43	695.2	F	-	-	-	-	DefL	3.00+	1000.0+	F
		TR	1.80	405.1	F	TR	1.52	276.3	F	TR	1.48	264.3	F
34th Avenue	WB	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F
Overall Intersection		-	**2.69**	**549.7**	**F**	-	**3.00+**	**656.6**	**F**	-	**3.00+**	**935.5**	**F**

TABLE 14
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
ROOSEVELT AVENUE													
108th Street at Roosevelt Avenue													
108th Street	NB	LTR	1.23	150.8	F	LTR	1.27	165.8	F	LTR	1.23	152.2	F
	SB	LTR	1.20	140.2	F	LTR	1.22	147.5	F	LTR	1.24	154.2	F
Roosevelt Avenue	EB	LTR	0.86	14.6	B	LTR	0.96	38.0	D	LTR	0.80	21.0	C
	WB	LTR	0.86	17.0	B	LTR	1.28	149.3	F	LTR	1.18	104.2	F
	Overall Intersection	-	**0.96**	**56.5**	**E**	-	**1.28**	**116.6**	**F**	-	**1.20**	**95.1**	**F**
111th Street at Roosevelt Avenue													
111th Street	NB	LTR	1.05	78.7	E	LTR	1.07	80.2	F	LTR	1.08	85.9	F
Roosevelt Avenue	EB	LTR	0.94	20.2	C	LTR	1.07	64.9	E	LTR	0.93	32.0	C
	WB	LTR	1.43	216.0	F	LTR	1.50	244.9	F	LTR	1.49	242.3	F
	Overall Intersection	-	**1.33**	**115.9**	**F**	-	**1.37**	**143.7**	**F**	-	**1.38**	**140.7**	**F**
114th Street at Roosevelt Avenue													
114th Street	NB	LTR	0.91	60.5	E	LTR	1.10	91.6	F	LTR	0.69	46.6	D
	SB	LTR	1.52	277.6	F	LTR	1.37	210.1	F	LTR	1.19	129.3	F
Roosevelt Avenue	EB	LTR	1.41	209.5	F	LTR	1.85	402.9	F	LTR	2.09	511.8	F
	WB	LTR	1.05	55.0	D	LTR	0.92	26.3	C	LTR	1.12	80.3	F
	Overall Intersection	-	**1.44**	**129.5**	**F**	-	**1.71**	**176.9**	**F**	-	**1.82**	**192.3**	**F**
126th Street at Roosevelt Avenue													
126th Street	NB	LTR	3.00+	1000.0+	F	LTR	3.00+	1000.0+	F	LTR	2.71	832.9	D
	SB	DefL	2.76	837.7	F	-	-	-	-	DefL	1.90	456.2	D
		TR	3.00+	1000.0+	F	LTR	2.70	810.3	F	TR	1.43	238.0	F
Roosevelt Avenue	EB	DefL	2.42	677.3	F	DefL	3.00+	1000.0+	F	DefL	3.00+	1000.0+	F
		TR	0.81	10.9	B	TR	0.64	14.3	B	TR	1.11	92.7	F
	WB	LTR	0.85	20.4	C	LTR	0.92	25.1	C	LTR	0.86	32.6	C
	Overall Intersection	-	**3.00+**	**1000.0+**	**F**	-	**3.00+**	**1000.0+**	**F**	-	**3.00+**	**1000.0+**	**F**
College Point Boulevard at Roosevelt Avenue													
College Point Boulevard	NB	L	1.56	307.3	F	L	1.69	352.9	F	L	1.47	260.9	F
		TR	0.70	29.2	C	TR	0.84	28.1	C	TR	0.78	26.3	C
	SB	TR	1.05	80.1	F	TR	1.49	252.2	F	TR	1.14	105.3	F
Roosevelt Avenue	EB	L	0.53	38.1	D	L	0.55	29.8	C	L	0.67	32.0	C
		TR	1.56	285.5	F	TR	1.60	296.4	F	TR	1.55	272.4	F
	WB	L	0.31	45.0	D	L	0.29	33.5	C	L	0.25	32.9	C
		TR	0.61	39.8	D	TR	0.71	32.8	C	TR	0.55	28.3	C
	Overall Intersection	-	**1.54**	**139.3**	**F**	-	**1.77**	**187.7**	**F**	-	**1.53**	**133.7**	**F**
Prince Street at Roosevelt Avenue													
Prince Street	SB	LTR	0.53	31.2	C	LTR	0.81	42.3	D	LTR	0.73	37.4	D
Roosevelt Avenue	EB	DefL	0.87	38.3	D	DefL	0.83	21.7	C	-	-	-	-
		TR	0.97	45.5	D	TR	0.78	16.3	B	LTR	0.86	17.6	B
	WB	LTR	0.70	23.8	C	LTR	0.73	15.8	B	LTR	0.72	14.7	B
	Overall Intersection	-	**0.78**	**35.2**	**D**	-	**0.82**	**22.0**	**C**	-	**0.82**	**20.1**	**C**
Main Street at Roosevelt Avenue													
Main Street	NB	T	0.64	23.7	C	T	0.68	24.5	C	T	0.68	24.5	C
	SB	T	0.54	21.8	C	T	0.63	23.7	C	T	0.54	22.0	C
Roosevelt Avenue	EB	LTR	1.29	184.0	F	LTR	1.08	88.7	F	LTR	1.25	149.1	F
	WB	LTR	1.13	119.1	F	LTR	1.05	78.1	E	LTR	1.13	99.9	F
	Overall Intersection	-	**0.90**	**80.0**	**F**	-	**0.87**	**50.5**	**D**	-	**0.97**	**76.1**	**E**
Union Street at Roosevelt Avenue													
Union Street	NB	TR	0.55	18.9	B	TR	0.46	17.3	B	TR	0.46	17.4	B
	SB	LT	1.28	154.0	F	LT	1.01	57.9	E	LT	1.23	134.3	F
		R	1.93	447.1	F	R	2.67	789.3	F	R	1.93	453.3	F
Roosevelt Avenue	EB	LTR	2.88	873.9	F	LTR	2.42	672.2	F	LTR	2.47	690.8	F
	WB	LT	0.96	50.7	D	LT	0.73	29.7	C	LT	0.91	46.5	D
		R	0.77	43.4	D	R	1.21	180.8	F	R	1.34	224.8	F
	Overall Intersection	-	**2.37**	**315.4**	**F**	-	**2.55**	**315.3**	**F**	-	**2.17**	**295.5**	**F**
Parsons Boulevard at Roosevelt Avenue													
Parsons Boulevard	NB	LTR	0.86	42.5	D	LTR	0.80	31.3	C	LTR	1.00	54.3	D
	SB	LTR	0.80	34.2	C	LTR	0.75	26.1	C	LTR	0.77	27.2	C
Roosevelt Avenue	EB	LTR	0.95	56.6	E	LTR	0.67	25.8	C	LTR	0.96	50.4	D
	WB	LTR	1.12	103.4	F	LTR	0.78	30.8	C	LTR	0.91	41.8	D
	Overall Intersection	-	**0.99**	**59.8**	**E**	-	**0.79**	**28.5**	**C**	-	**0.98**	**43.6**	**D**
KISSENA BOULEVARD													
Main Street at Kissena Boulevard													
Main Street	NB	L	0.78	41.1	D	L	0.94	65.9	E	L	0.72	34.4	C
		TR	0.59	22.4	C	TR	0.60	21.5	C	TR	0.68	23.0	C
	SB	L	0.88	55.5	E	L	0.52	21.4	C	L	0.44	19.8	B
		TR	0.51	20.2	C	TR	0.54	19.7	B	TR	0.49	18.9	B
Kissena Boulevard	WB	T	0.73	38.2	D	T	0.66	24.8	C	T	0.66	24.6	C
	Overall Intersection	-	**0.82**	**30.8**	**C**	-	**0.80**	**25.7**	**C**	-	**0.69**	**22.5**	**C**
SANFORD AVENUE													
College Point Boulevard at Sanford Avenue													
College Point Boulevard	NB	L	0.46	18.9	B	L	0.62	30.3	C	L	0.29	15.8	B
		T	0.78	16.9	B	T	0.86	19.7	B	T	0.59	13.1	B
	SB	TR	0.80	17.5	B	TR	0.87	20.5	C	TR	0.86	19.9	B
Sanford Avenue	WB	L	0.82	50.2	D	L	0.88	56.5	E	L	0.58	34.8	C
		TR	0.61	31.6	C	TR	0.65	32.5	C	TR	0.46	28.5	C
	Overall Intersection	-	**0.81**	**21.3**	**C**	-	**0.88**	**24.5**	**C**	-	**0.77**	**19.4**	**B**
Union Street at Sanford Avenue													
Union Street	NB	LTR	0.39	21.7	C	LTR	0.49	24.5	C	LTR	0.42	22.2	C
	SB	LTR	0.72	26.7	C	LTR	0.95	38.3	D	LTR	0.83	30.9	C
Sanford Avenue	EB	-	-	-	-	DefL	0.61	26.6	C	-	-	-	-
		LTR	0.29	14.4	B	TR	0.33	15.1	B	LTR	0.24	13.8	B
	WB	LTR	0.97	40.7	D	LTR	0.81	26.5	C	LTR	0.75	24.2	C
	Overall Intersection	-	**0.86**	**28.9**	**C**	-	**0.87**	**29.8**	**C**	-	**0.79**	**25.0**	**C**

TABLE 14
CITIFIELD - WILLETS POINT DEVELOPMENT STUDY
2032 PHASE 2 WITH ACTION TRAFFIC LEVELS OF SERVICE - GAME DAY

		Weekday Pre-Game (5:30 - 6:30 PM)				Saturday Pre-Game (3:15 - 4:15 PM)				Saturday Post-Game (7:15 - 8:15 PM)			
				Control				Control				Control	
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**
Parsons Boulevard at Sanford Avenue													
Parsons Boulevard	NB	LTR	1.08	68.6	E	LTR	0.91	37.6	D	LTR	0.97	45.6	D
	SB	LTR	0.85	34.1	C	LTR	0.94	43.9	D	LTR	0.95	44.6	D
Sanford Avenue	EB	LTR	0.63	24.2	C	LTR	0.66	24.2	C	LTR	0.83	31.5	C
	WB	LTR	0.83	32.5	C	LTR	0.93	41.9	D	LTR	0.89	38.3	D
Overall Intersection		**-**	**0.95**	**41.3**	**D**	**-**	**0.94**	**37.7**	**D**	**-**	**0.93**	**40.1**	**D**
WHITESTONE EXPRESSWAY / 32ND AVENUE													
College Point Boulevard at 32nd Avenue													
College Point Boulevard	NB	T	0.42	24.1	C	T	0.39	23.7	C	T	0.48	24.4	C
		TR	0.27	22.0	C	TR	0.59	26.1	C	TR	0.37	23.1	C
	SB	L	0.45	33.6	C	L	0.58	38.3	D	L	0.28	28.0	C
		T	0.42	10.8	B	T	0.47	11.3	B	T	0.31	9.7	A
32nd Avenue	WB	LTR	0.75	38.4	D	LTR	0.47	30.3	C	LTR	0.31	26.9	C
Overall Intersection		**-**	**1.10**	**21.2**	**C**	**-**	**1.05**	**21.9**	**C**	**-**	**0.86**	**19.8**	**B**
NORTHERN BOULEVARD SERVICE ROAD													
College Point Boulevard at Northern Boulevard Service Road													
College Point Boulevard	NB	TR	0.50	12.8	B	TR	0.57	13.6	B	TR	0.54	13.2	B
	SB	LT	0.88	24.3	C	LT	0.96	32.7	C	LT	0.58	14.6	B
Northern Blvd Service Rd	WB	LR	0.95	54.5	D	LR	0.98	59.5	E	LR	0.80	38.3	D
Overall Intersection		**-**	**0.91**	**26.1**	**C**	**-**	**0.97**	**30.8**	**C**	**-**	**0.66**	**18.9**	**B**
STADIUM ROAD													
Boat Basin Road at Stadium Road													
Boat Basin Road	NB	-	-	-	-	-	-	-	-	DefL	1.37	256.3	F
		LTR	0.98	85.0	F	LTR	0.76	53.5	D	TR	0.35	26.3	C
	SB	LTR	1.27	154.9	F	LTR	1.44	225.7	F	LTR	1.75	374.9	F
Stadium Road	EB	DefL	1.35	247.7	F	DefL	1.69	390.8	F	DefL	3.00+	1000.0+	F
		TR	0.38	24.9	C	TR	0.63	34.6	C	TR	0.49	12.2	B
	WB	LTR	1.43	225.2	F	LTR	1.43	227.5	F	LTR	0.81	18.2	B
Overall Intersection		**-**	**1.29**	**169.0**	**F**	**-**	**1.43**	**205.0**	**F**	**-**	**2.84**	**276.7**	**F**
UNSIGNALIZED INTERSECTIONS													
Boat Basin Road at Worlds Fair Marina													
Boat Basin Road	NB	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	8.9	A	R	-	9.0	A	R	-	10.7	B
Worlds Fair Marina	WB	LT	-	16.6	C	LT	-	17.8	C	LT	-	9.8	A
Overall Intersection		**-**	**-**	**420.1**	**F**	**-**	**-**	**435.9**	**F**	**-**	**-**	**1000.0+**	**F**
Willets Point Boulevard at Northern Boulevard													
Northern Boulevard	EB	TR	-	1000.0+	F	TR	-	1000.0+	F	TR	-	1000.0+	F
Overall Intersection		**-**	**-**	**1000.0+**	**F**	**-**	**-**	**1000.0+**	**F**	**-**	**-**	**1000.0+**	**F**
Grand Central Parkway Ramp at West Park Loop/Stadium Road													
Stadium Road	SB	LT	-	9.2	A	LT	-	9.5	A	LT	-	13.1	B
Grand Central Parkway Off-Ramp	EB	L	-	326.9	F	L	-	368.4	F	L	-	333.6	F
		T	-	547.0	F	T	-	592.1	F	T	-	761.5	F
		R	-	334.7	F	R	-	406.7	F	R	-	12.5	B
Willets West Center Exit	WB	L	-	1000.0+	F	L	-	1000.0+	F	L	-	1000.0+	F
		R	-	10.2	B	R	-	10.3	B	R	-	13.4	B
Overall Intersection		**-**	**-**	**1000.0+**	**F**	**-**	**-**	**1000.0+**	**F**	**-**	**-**	**1000.0+**	**F**
NEW (WITH ACTION) SIGNALIZED INTERSECTIONS													
126th Street at New Willets Point Boulevard													
126th Street	NB	TR	0.70	26.8	C	TR	0.90	39.8	D	TR	1.25	146.5	F
	SB	-	-	-	-	-	-	-	-	DefL	0.77	68.5	E
		LT	0.96	37.5	D	LT	1.03	55.9	E	T	0.63	16.7	B
New Willets Point Boulevard	WB	L	0.96	75.2	E	L	0.99	81.7	F	L	0.76	49.8	D
		R	0.63	36.3	D	R	0.68	38.9	D	R	0.60	34.9	C
Overall Intersection		**-**	**0.99**	**40.7**	**D**	**-**	**1.00**	**53.6**	**D**	**-**	**1.41**	**96.4**	**F**
Citi Field/Lot B at Roosevelt Avenue													
Citi Field/Lot B	SB	LR	0.01	33.9	C	LR	0.03	34.0	C	LR	0.02	33.9	C
Roosevelt Avenue	EB	LT	0.56	11.8	B	LT	0.50	11.0	B	LT	1.07	61.4	E
	WB	TR	1.02	46.0	D	TR	1.05	56.0	E	TR	0.55	11.6	B
Overall Intersection		**-**	**0.75**	**34.4**	**C**	**-**	**0.77**	**42.2**	**D**	**-**	**0.78**	**43.9**	**D**

Notes

(1): Control delay is measured in seconds per vehicle.

(2): Overall intersection V/C ratio is the critical lane groups' V/C ratio.

(3): V/C ratios above 1.20 represent saturated conditions and, at several locations, result in predicted average vehicle delays in the 1,000 to 4,000+ second range for signalized intersections and 1,000 to 10,000+ second range for unsignalized intersections. These are theoretical HCM-generated outputs that may, in fact, overestimate delays for such conditions. Lane groups reflecting these conditions are presented in the tables as having delays of "1,000+" seconds and v/c ratios of approximately "3.00+".