# Chapter 13: Transportation

## A. INTRODUCTION

This chapter describes the transportation characteristics and potential impacts associated with the Innovation QNS project (the Proposed Development) in accordance with the guidance presented 2021 *City Environmental Quality Review (CEQR) Technical Manual*. The Applicant (a joint venture between Kaufman Astoria Studios, Bedrock Real Estate Partners, and Silverstein Properties) is requesting a rezoning and other discretionary actions (the Proposed Actions) from the City Planning Commission (CPC) pursuant to the City's Uniform Land Use Review Procedure (ULURP) to facilitate the Proposed Development, which would redevelop a portion of the five city blocks bounded by 35th Avenue to the north, 43rd Street/Northern Boulevard to the east, 36th Avenue to the south and 37th Street to the west (the "Project Area"; see Figure 1-1 in Chapter 1, "Project Description") in the Astoria neighborhood of Queens in Community District 1. The Project Area (Blocks 641, 668, 669, 670, and 671) contains 43 lots, of which 21 are controlled by the Applicant while the remaining lots are controlled by others. The Applicant-controlled lots would be declared a Large Scale General Development (LSGD) with the Proposed Actions and would contain the Proposed Development: these lots are referred to as the "Development Site." The lots outside of the Development Site are not included in the Proposed Development but would be rezoned with the Proposed Actions: these lots are referred to as the "Additional Affected Area" (see Figure 1-2 in Chapter 1, "Project Description").

The Proposed Development~~, also known as the Innovation QNS project,~~ would redevelop the Development Site with a series of mixed-use buildings and publicly accessible open space. The Innovation QNS project is intended to create a series of arts and cultural venues including a multi-purpose arts and culture center, a re-envisioned multiplex movie theater that would provide a state-of-the-art cinematic experience, galleries, artists' workshops, and tech and general office space. In addition to art and cultural venues, the project would include eating and drinking establishments, a grocery store and world market, and other local retail, service, and community facility uses to support the new residential population, the existing business and residential community, and provide a strong anchor for the Steinway Street and 35th Avenue commercial corridors. Residential towers and lower rise buildings would house approximately 2,800 new residential dwelling units (DUs) offering a wide range of housing options for a varied population. Pursuant to the Mandatory Inclusionary Housing (MIH) Option 1 program, 25 percent of the residential floor area would be permanently affordable units (approximately 711 DUs), a portion of which would be senior affordable housing units (subject to the availability of existing programs). The commercial space in the Proposed Development would also potentially include one or more physical culture establishments, i.e., a gym or fitness center. A series of outdoor spaces would link the blocks and would be programmed pursuant to ongoing community dialogue with art exhibits, a children's play area adjacent to a day care center, and covered outdoor seating serving the world market, performances, and events. Parking would be provided in below grade

parking facilities on each of the project blocks. In total, the Proposed Development would contain approximately 2.9 million gross square feet (gsf) of space.

In addition to the Proposed Development with approximately 2.9 million gsf of space on Sites A through E shown in Figure 1-1 in Chapter 1, "Project Description," the Proposed Actions would facilitate the redevelopment of several projected development sites in the Additional Affected Area (Sites F, G, H, I, J, and K) that are not controlled by the Applicant. These additional developments would include approximately 800,000 gsf of residential and commercial space, similar to the Proposed Development. Therefore, the Proposed Actions would facilitate the development of a total of approximately 3.7 million gsf in the Project Area.

In order to assess the potential effects of the Proposed actions, a Reasonable Worst Case Development Scenario (RWCDS) for both the future without the proposed actions (No Action condition) and the future with the Proposed Actions (With Action condition) is analyzed for an analysis year of 2032. The Project Area is largely underutilized; as the majority of the Project Area is zoned M1-1, which permits a maximum FAR of 1.0 and only permits low density manufacturing, automotive, and commercial uses, it is reasonable to assume that redevelopment of the active commercial and auto-related facilities on the majority of the properties in the Project Area would not occur under existing zoning. However, portions of the Applicant-controlled properties are feasible development sites under existing zoning since they contain vacant buildings and open parking areas for vehicular storage. The Applicant controls the properties in the Development Site with the purpose of transforming the area into a mixed-use district serving the nearby neighborhood and would seek to make a return on those properties absent the Proposed Actions (the No Action condition), by redeveloping the underutilized parcels on Blocks C and D to the maximum extent feasible under the existing zoning.

**Table 13-1** shows the total anticipated No Action and With Action land uses on the Projected Development Sites A through K that were considered for the purposes of the transportation analyses. As shown in **Table 13-1**, under the RWCDS, it is estimated that there would be a net increase of 3,643 DUs, 89,909 gsf of local retail space, 50 cinema seats, 250,070 gsf of office space, 2.17 acres of publicly accessible open space (including approximately 0.23 acre of potential active open space at the southern end of Block A), and 107,720 gsf of community facility space, including 70,820 gsf of community center space, 5,000 gsf of medical office space, 10,000 gsf of daycare space and 21,900 gsf of arts and cultural center space. The RWCDS would also include a net increase of 30,000 gsf of physical cultural establishment space and 933 parking spaces. It is also anticipated that bicycle parking (as required by the New York City Zoning Resolution) would be provided within the Proposed Development. In addition, it is estimated that there would be a net decrease of 32,736 gsf of destination retail space, 33,300 gsf of auto dealership space, and 150,715 gsf of industrial space, including 82,909 gsf of light industrial space and 67,806 gsf of warehouse space. As the specific community facility uses are not finalized at this time, the community facility components are analyzed as medical office, daycare, community center, and arts and cultural center space.

**Table 13-1**
**2032 RWCDS No Action and With Action Land Uses**

| Land Use | No Action Condition | With Action Condition | Net Increment |
|---|---|---|---|
| **Residential** | | | |
| Residential | 7,512 gsf (9 DU) | 3,104,308 gsf (3,652 DU) | + 3,096,796 gsf (+ 3,643 DU) |
| **Commercial** | | | |
| Local Retail | 70,006 gsf | 159,915 gsf | + 89,909 gsf |
| Destination Retail | 32,736 gsf | 0 gsf | - 32,736 gsf |
| Auto Dealership | 33,300 gsf | 0 gsf | - 33,300 gsf |
| Office | 0 gsf | 250,070 gsf | + 250,070 gsf |
| Cinema | 98,810 gsf (3,450 seats) | 73,000 gsf (3,500 seats) | - 25,810 gsf (+ 50 seats) |
| Supermarket | 30,000 gsf | 30,000 gsf | + 0 gsf |
| Physical Cultural Establishment | 0 gsf | *30,000 gsf* | *+ 30,000 gsf* |
| ***Total Commercial*** | **264,852 gsf** | ***542,985 gsf*** | ***+ 278,133 gsf*** |
| **Community Facility** | | | |
| Community Center | 0 gsf | 70,820 gsf | + 70,820 gsf |
| Medical Office | 0 gsf | 5,000 gsf | + 5,000 gsf |
| Daycare | 0 gsf | 10,000 gsf | + 10,000 gsf |
| Arts and Cultural Center | 0 gsf | 21,900 gsf | + 21,900 gsf |
| ***Total Community Facility*** | ***0 gsf*** | ***107,720 gsf*** | ***+ 107,720 gsf*** |
| **Industrial** | | | |
| Light Industrial | 82,909 gsf | 0 gsf | - 82,909 gsf |
| Warehouse | 67,806 gsf | 0 gsf | - 67,806 gsf |
| ***Total Industrial*** | ***150,715 gsf*** | ***0 gsf*** | ***- 150,715 gsf*** |
| **Open Space** | | | |
| Publicly Accessible Open Space | 0 acres | 2.17 acres[2] | + 2.17 acres |
| **Parking** | | | |
| Parking Spaces[1] | 700 | 1,633 | +933 |

**Notes:**
[1] With Action parking includes 1,467 spaces on Applicant-controlled Sites A-E and 243 spaces on Sites F through K.
[2] Total publicly accessible open space in the Proposed Development, including approximately 0.23 acre (10,000 sf) of potential active open space at the southern end of Block A.

This chapter describes in detail the existing transportation conditions in proximity to the Project Area. Future conditions in the year 2032 without the Proposed Actions are then determined, including additional transportation system demand and any changes expected by the year 2032. The increase in travel demand resulting from the Proposed Actions is then projected and added to the No Action condition to develop the 2032 future with the Proposed Actions (the With Action condition). Significant adverse impacts from project-generated trips are then identified and described in detail. Chapter 20, "Mitigation," discusses practicable measures to address these impacts.

## B. PRINCIPAL CONCLUSIONS

A detailed transportation analysis was conducted and concludes that the Proposed Actions would result, as detailed below, in significant adverse impacts to: a) vehicular traffic at ~~21~~23 intersections, b) subway line haul conditions on southbound N/W trains in the AM peak hour, and

c) pedestrian conditions at three sidewalks and two crosswalks. (Potential measures to mitigate these impacts are described in Chapter 20, "Mitigation").

## TRAFFIC

Traffic conditions were evaluated for the weekday 7:45–8:45 a.m., 1:00–2:00 p.m. (midday), 4:00–5:00 p.m., and Saturday 2:00–3:00 p.m. peak hours at 42 intersections in the traffic study area where additional traffic resulting from the Proposed Actions would be most heavily concentrated. As summarized in **Tables 13-2 and 13-3**, the traffic impact analysis indicates the potential for significant adverse impacts at ~~24~~23 intersections (all signalized) during one or more analyzed peak hours. Significant adverse impacts were identified to ~~33~~31 lane groups at ~~20~~19 intersections during the weekday AM peak hour, ~~24~~21 lane groups at ~~16~~13 intersections in the midday peak hour, ~~32~~29 lane groups at ~~19~~18 intersections in the PM peak hour, and 25 lane groups at 16 intersections during the Saturday peak hour. Chapter 20, "Mitigation," discusses potential measures to mitigate these significant adverse traffic impacts.

**Table 13-2**
**Number of Impacted Intersections and Lane Groups by Peak Hour**

| | Peak Hour | | | |
|---|---|---|---|---|
| | **Weekday AM** | **Weekday Midday** | **Weekday PM** | **Saturday Midday** |
| Impacted Lane Groups | 31 | 21 | 29 | 25 |
| Impacted Intersections | 19 | 13 | 18 | 16 |

## TRANSIT

*SUBWAY*

*Subway Stations*

The Proposed Actions would generate a net increment of approximately 2,~~642~~540 and 2,~~958~~313 new subway trips during the weekday AM and PM commuter peak hours, respectively. The analysis of subway station conditions focuses on three Metropolitan Transportation Authority (MTA) New York City Transit (NYCT) subway stations in proximity to the Project Area where incremental demand from the Proposed Actions would exceed the 200-trip ~~2020 *City Environmental Quality Review (CEQR)*~~*CEQR Technical Manual* analysis threshold in one or both peak hours. Two of these stations, the 36th Street station and the Steinway Street station, are served by M and R trains on the Queens Boulevard Line. The third station, the 36th Avenue station, is served by the N and W trains on the Astoria Line. The Proposed Actions are not expected to result in significant adverse impacts in either the AM or PM peak hour at any of the three analyzed subway stations.

**Table 13-3**
**Summary of Significantly Impacted Intersections**

| Signalized Intersections | Peak Hour | | | |
|---|---|---|---|---|
| | Weekday AM | Weekday Midday | Weekday PM | Saturday |
| Broadway & 43rd Street | X | X | X | X |
| 34th Ave & 43rd Street | | | X | X |
| 35th Ave & 38th Street | | | X | |
| 35th Ave & Steinway Street | X | X | X | X |
| 35th Ave & 41st Street | | | X | X |
| 36th Ave & 38th Street | X | | | |
| 36th Ave & Steinway Street | X | X | X | X |
| Northern Blvd & Queensboro Bridge | X | X | X | X |
| Northern Blvd & 35th St/ 38th Ave | X | | | |
| Northern Blvd & 37th St/ Standard Lane | X | | X | |
| Northern Blvd & 38th Street | X | | | |
| Northern Blvd & 39th St/ Steinway St | X | X | X | X |
| Northern Blvd & 41st St | X | | | |
| Northern Blvd & 42nd St/ Driveway | X | X | X | X |
| Northern Blvd & 42nd Pl/ 43rd Street | X | X | X | X |
| Northern Blvd & 44th St/ 35th Ave | X | X | X | X |
| Northern Blvd & 46th Street | X | | | X |
| Northern Blvd & 48th St/ 34th Ave | X | X | X | X |
| Northern Blvd & 51st St/ Woodside Ave | X | X | X | X |
| Skillman Ave & 39th Street | | | X | |
| 43rd Ave & 39th Street | X | X | X | X |
| Greenpoint Ave & Hunts Point Ave | X | X | X | X |
| Greenpoint Ave & Borden Ave | X | X | X | X |
| **Total Impacted Intersections** | **19** | **13** | **18** | **16** |

X - denotes intersection significantly impacted in peak hour.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

*Subway Line Haul*

The Project Area is directly served by four NYCT subway routes—M and R trains operating on the Queens Boulevard Line and N and W trains operating on the Astoria Line. The peak direction of travel is typically Manhattan-bound (southbound) in the AM peak hour and Queens-bound (northbound) in the PM peak hour.

In the With Action condition, southbound N/W trains are expected to be operating over capacity in the AM peak hour, and would experience an average incremental increase of 5.~~56~~25 persons/car during this period, just above the five persons/car *CEQR Technical Manual* impact threshold. As summarized in **Table 13-4**, southbound N/W service would therefore be considered significantly adversely impacted by the Proposed Actions in the AM peak hour. All other analyzed subway routes are projected to operate below capacity in the peak direction in both the AM and PM peak hours and would therefore not be significant adversely impacted by the Proposed Actions in either period. Chapter 20, "Mitigation," discusses potential measures to mitigate the significant adverse subway line haul ~~impacts~~impact.

**Table 13-4**
**Summary of Significant Subway Line Haul Impacts**

| Route | Direction | Impacted Time Period |
|---|---|---|
| N/W | SB | AM |

*BUS*

The Proposed Actions are expected to generate a net total of approximately 142 and ~~197~~181 incremental bus trips during the weekday AM and PM peak hours, respectively, on the four MTA Bus Company local bus routes serving the Project Area—the Q66, Q101, Q102, and Q104. The number of incremental trips in one direction is expected to reach the 50-trip *CEQR Technical Manual* analysis threshold for a detailed bus analysis on eastbound Q66 buses in the AM and PM peak hours and on westbound Q66 buses in the PM peak hour. As Q66 buses would continue to operate with available capacity in both directions in both the AM and PM peak hours in the With Action condition, the Proposed Actions are not expected to result in significant adverse impacts to local bus service in either period.

**CITYWIDE FERRY SERVICE (CWFS)**

As there are no ferry landings proximate to the Project Area, the Proposed Actions are not expected to generate appreciable demand on the CWFS. Therefore, a detailed analysis of CWFS conditions under the Proposed Actions is not warranted and not included in the EIS.

**PEDESTRIANS**

The Proposed Actions would generate a net increment of ~~approximately 920~~approximately1,593 walk-only trips in the weekday AM peak hour, ~~3,037~~2,615 in the weekday midday, ~~1,786~~3,089 in the weekday PM peak hour and ~~1,651~~3,372 in the Saturday peak hour. Persons en route to and from subway station entrances and bus stops would add 2,~~784~~682, 1,~~438, 3,155~~474, 2,494 and 2,~~552~~538 additional pedestrian trips to Project Area sidewalks and crosswalks during these same periods, respectively. Peak hour pedestrian conditions were evaluated at 138 pedestrian elements where new trips generated by projected developments are expected to be most concentrated. These elements—40 sidewalks, 65 corner areas, and 33 crosswalks—are primarily located in the immediate vicinity of the Project Area and along corridors connecting the Project Area to nearby subway station entrances. As shown in **Table 13-5**, based on *CEQR Technical Manual* criteria, three sidewalks and two crosswalks would be significantly adversely impacted by the Proposed Actions in one or more of the analyzed peak hours, and there would be no significant impacts to any corner areas. Chapter 20, "Mitigation," discusses potential measures to mitigate these significant adverse pedestrian impacts.

**Table 13-5**
**Summary of Significant Pedestrian Impacts**

| Corridor/Intersection | Impacted Element | Peak Hour | | | |
|---|---|---|---|---|---|
| | | AM | Midday | PM | Saturday |
| 36th Avenue between 38th and Steinway Streets | North Sidewalk | X | | X | X |
| 36th Avenue between 32nd and 33rd Streets | North Sidewalk | X | | | X |
| 36th Avenue between 32nd and 33rd Streets | South Sidewalk | X | | | |
| 35th Avenue & 41st Street | East Crosswalk | | | | X |
| 35th Avenue & Steinway Street | South Crosswalk | | | | X |

## VEHICULAR AND PEDESTRIAN SAFETY

Under the 2015 *Vision Zero Queens Pedestrian Safety Action Plan*, and the 2019 *Boroughs Pedestrian Safety Action Plan Update,* the Project Area is located within a "Priority Area," where safety issues were found to occur systematically at an area-wide level. Northern Boulevard, ~~Queens Boulevard,~~ 34th Avenue and Broadway are identified as Priority Corridors, and Northern Boulevard is also identified as a Truck Priority ~~Corridors~~Corridor.

Crash data for intersections in the traffic and pedestrian study areas were obtained from the New York City Department of Transportation (DOT) for the three-year period between January 1, 2017, and December 31, 2019 (the most recent three-year period for which data are available). During this period, ~~794~~911 reportable and non-reportable crashes, ~~101~~115 pedestrian/bicyclist-related injury crashes, and two fatalities occurred at analyzed study area intersections.

Under *CEQR Technical Manual* guidance, high crash locations are defined as those with ~~48 or more total reportable and non-reportable crashes or~~ five or more pedestrian/bicyclist injury crashes occurring in any consecutive 12 months of the most recent three-year period for which data are available. A review of the crash data identified two study area intersections as high crash locations—Northern Boulevard at 43rd Street/42nd Place, which experienced five pedestrian/bicyclist-related crashes in 2017, and Northern Boulevard at 39th Street/Steinway Street, which experienced five pedestrian/bicyclist-related crashes in 2019 (see **Table 13-6**). After safety improvements were implemented by DOT at Northern Boulevard/43rd Street/42nd Place in 2017 and 2018, there were no pedestrian or bicycle injury crashes reported in 2018 and only two bicycle injury crashes in 2019. At Northern Boulevard/39th Street/Steinway Street, only two pedestrian crashes occurred in 2017 and only one bicycle-related crash in 2018. The increase in crashes in 2019 may have been due in part to construction activity, including sidewalk and lane closures, associated with a new development at the northwest corner of the intersection.

**Table 13-6**
**High Crash Locations**

| Intersection | Total Pedestrian/Bicycle Injury Crashes | | | Total Crashes (Reportable + Non-Reportable) | | |
|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 |
| Northern Blvd at 43rd Street/42nd Place | 5 | 0 | 2 | 15 | 14 | 13 |
| Northern Boulevard at 39th Street/Steinway Street | 2 | 1 | 5 | 23 | 17 | 19 |

**PARKING**

Parking demand from the proposed local retail, supermarket, office, and community facility uses would typically peak in the midday and would decline during the late afternoon and evening. By contrast, demand from the cinema and physical cultural establishment uses would typically peak in the evening hours and residential demand would peak overnight. Therefore, some of the spaces used by residents would be available to accommodate commercial and community facility demand during daytime hours. Weekday parking demand from the Proposed Development (Sites A through E) would peak at approximately 1,~~431~~411 spaces from 8:00 p.m. to 9:00 p.m., primarily due to the overlapping of residential and cinema demand. On a Saturday, parking demand from the Proposed Development would peak at approximately 1,~~770~~788 spaces, also between 8:00 p.m. to 9:00 p.m. These forecasts assume 100 percent occupancy of the cinema, which should be considered very conservative as multiplex cinemas typically operate at substantially lower occupancy levels. Even when blockbuster movies are released (typically five to seven times per year), total occupancy will generally not exceed 60 percent, even on opening weekend, as the hit movie will not be showing on all of the screens at the cinema.

In addition to parking demand from the Proposed Development, new demand would also be generated by the Additional Affected Area (Sites F through K) under the Proposed Actions' RWCDS. Parking demand generated by the Additional Affected Area is expected to peak at approximately 308 spaces during the overnight period on weekdays, and at ~~342~~336 spaces during the 5:00 p.m. to 6:00 p.m. period on Saturdays.

Overall, parking demand generated by the Projected Development Site (Sites A through K) under the Proposed Actions' RWCDS would peak at approximately 1,~~737~~710 spaces during the 8:00 p.m. to 9:00 p.m. period on weekdays, and at 2,~~080~~099 spaces during the same period on Saturdays, primarily due to the overlapping of residential and cinema demand (conservatively assuming 100 percent occupancy at the cinema).

The Proposed Actions' RWCDS includes a total of approximately 1,633 on-site accessory parking spaces. These would include 1,390 spaces located in five below-grade parking garages on the Development Site, and approximately 243 parking spaces in the Additional Affected Area. No existing off-street public parking would be displaced from the Project Area under the Proposed Actions; however, 39 spaces of existing on-street parking would be displaced to accommodate truck access to the Proposed Development's loading berths. Therefore, the total increase in parking demand under the Proposed Actions' RWCDS would result in parking shortfalls of approximately ~~143~~116 spaces during the 8:00 p.m. to 9:00 p.m. period on weekdays, and approximately ~~486~~505 spaces during the same period on Saturdays (conservatively assuming 100 percent occupancy at the cinema). This excess demand would need to be accommodated in nearby off-street public parking facilities, or by on-street parking. Consequently, the Proposed Actions may potentially contribute to, or result in, off-street and on-street parking shortfalls in the 2032 With Action condition. Based on *CEQR Technical Manual* guidance, any projected shortfall in parking capacity would not be considered significant due to the magnitude of available alternative modes of transportation.

## C. PRELIMINARY ANALYSIS METHODOLOGY

The ~~*City Environmental Quality Review (CEQR)*~~ *Technical Manual* describes a two-level screening procedure for the preparation of a "preliminary analysis" to determine if quantified

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

## D. LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the numbers of person and vehicle trips by mode expected to be generated by the Proposed Actions during the weekday AM, midday, PM, and Saturday peak hours for the RWCDS. These estimates were then compared to the *CEQR Technical Manual* analysis thresholds to determine if a Level 2 screening and/or quantified operational analyses may be warranted. The travel demand assumptions used for the assessment are described in the following sections along with a detailed forecast of the travel demand that would be generated by the RWCDS.

### BACKGROUND

Overall, the Project Area encompasses five city blocks (Blocks 641, 668, 669, 670, and 671) containing 43 lots, of which 21 are controlled by the Applicant while the remaining lots are controlled by others (see Figure 1-1 in Chapter 1, "Project Description"). As shown in **Table 13-1**, under the RWCDS, it is estimated that there would be a net increase of 3,643 DUs, 89,909 gross square feet (gsf) of local retail space, 50 cinema seats, 250,070 gsf of office space, 2.17 acres of publicly accessible open space (including approximately 0.23 acre of potential active open space at the southern end of Block A), and 107,720 gsf of community facility space, including 70,820 gsf of community center space, 5,000 gsf of medical office space, 10,000 gsf of daycare space and 21,900 gsf of arts and cultural center space. The RWCDS would also include a net increase of 30,000 gsf of physical cultural establishment space and 933 parking spaces. In addition, it is estimated that there would be a net decrease of 32,736 gsf of destination retail space, 33,300 gsf of auto dealership space, and 150,715 gsf of industrial space, including 82,909 gsf of light industrial space and 67,806 gsf of warehouse space. As the specific community facility uses are not finalized at this time, the community facility components are analyzed as medical office, daycare, community center, and arts and cultural center space.

### TRANSPORTATION PLANNING FACTORS

The transportation planning factors used to forecast travel demand for the RWCDS land uses are summarized in **Table 13-7**. The trip generation rates, temporal distributions, modal splits, vehicle occupancies, and truck trip factors for each of the land uses were primarily based on those cited in the *CEQR Technical Manual;* 2015–2019 American Community Survey (ACS) journey-to-

work data for Brooklyn census tracts in proximity to the Project Area (tracts 51, 55, 57, 59, 155, 157, and 159); 2012–2016 American Association of State Highway Transportation Officials (AASHTO) Census Transportation Planning Products (CTPP) reverse journey-to-work data; data from surveys of the travel demand characteristics at existing office and retail uses; data provided by the New York City Department of Transportation (DOT); and factors developed for recent environmental reviews.

Factors are shown for the weekday AM and PM peak hours (typical peak periods for commuter travel demand) and the weekday midday and Saturday peak hours (typical peak periods for retail demand). Additional details on the transportation planning factors used for the travel demand forecast are presented in the *Transportation Planning Factors and Travel Demand Forecast* technical memorandum provided in Appendix D.

It should be noted that, consistent with *CEQR Technical Manual* guidance, the travel demand forecast reflects the fact that some local retail trip generation can be considered "linked trips" (i.e., internal trips between uses on a site that do not use the street or sidewalk), "pass-by trips" (i.e., existing trips already present on the adjacent network that enter a site as an intermediate stop), or "diverted trips" (i.e., trips already on the network that alter their route to access a site). Under *CEQR Technical Manual* guidance, up to a 50 percent credit can be taken for linked, pass-by and/or diverted trips.

As shown in **Table 13-1**, under the Proposed Actions, a substantial amount of residential, non-retail commercial, and community facility uses would be developed on the Projected Development Sites. These proposed uses are expected to generate substantially more trips than would the proposed local retail uses, and it is anticipated that many of these trips would involve a stop at one or more local retail establishments within the Project Area. Furthermore, many of the proposed retail and non-retail uses would be accessed from the publicly accessible open spaces included as part of the Proposed Development. As these open spaces would provide an internal circulation function, it is expected that many trips would be considered linked trips as they would not occur on public streets or sidewalks. Lastly, given the numbers of existing trips in the Project Area and new trips that would be generated under the Proposed Actions, it is anticipated that there would be substantial numbers of pass-by and diverted trips. Consequently, the travel demand forecast for local retail uses reflects a 50 percent credit consistent with *CEQR Technical Manual* guidance.

With regard to the cinema use, it is important to note that the travel demand forecast assumes 100 percent occupancy of all seats. However, multiplex cinemas typically operate at substantially lower occupancy levels. Even when blockbuster movies are released (typically five to seven times per year), total occupancy will generally not exceed 60 percent, even on opening weekend, as the hit movie will not be showing on all of the screens at the cinema. The travel demand forecast should therefore be considered very conservative with respect to cinema demand.

**TRAVEL DEMAND FORECAST**

The net incremental change in person and vehicle trips expected to result from the Proposed Actions by the 2032 analysis year was derived based on the net change in land uses shown in **Table 13-1** and the transportation planning factors shown in **Table 13-7**. **Table 13-8** shows an estimate of the net incremental change in peak hour person trips and vehicle trips (versus the No

Action condition) that would occur in 2032 with implementation of the Proposed Actions.[1] As shown in **Table 13-8**, under the RWCDS, the Proposed Actions would generate a net increase of approximately 4,~~299~~875 person trips in the weekday AM peak hour, 4,~~968~~448 in the weekday midday, ~~5,659~~6,194 in the weekday PM peak hour, and ~~4,775~~6,493 in the Saturday peak hour. Peak hour vehicle trips (including auto, truck, and taxi trips balanced to reflect that some taxis arrive or depart empty) would increase by a net total of approximately ~~610, 457, 689~~614, 370, 583 and ~~569~~578 (in and out combined) in the weekday AM, midday, PM, and Saturday peak hours, respectively. Peak hour subway trips would increase by a net total of 2,~~642~~540, 1,~~228~~312, 2,~~958~~313 and 2,~~372~~346 during these periods, respectively, while bus trips would increase by approximately 142, ~~210, 197~~162, 181 and ~~180~~192, respectively. Lastly, walk-only trips would increase by ~~920~~1,593, 2,615, 3,~~037, 1,786~~089 and ~~1,651~~3,372 trips during the weekday AM, midday, PM, and Saturday peak hours, respectively.

[1] The table differentiates non-linked and diverted trips for the local retail use. Linked and pass-by trips are not included as they would not contribute to travel demand on analyzed streets or sidewalks.

# Table 13-7
# Transportation Planning Factors

| Land Use: | Residential | | Local Retail | | Office | | Cinema | | Community Center | | Supermarket | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Trip Generation:** | (1) | | (1) | | (1) | | (1) | | (26) | | (1) | |
| Weekday | 8.18 | | 329 | | 18.0 | | 3.26 | | 54.6 | | 256 | |
| Saturday | 9.08 | | 358 | | 3.9 | | 6.25 | | 17.24 | | 300 | |
| | per DU | | per 1,000 sf | | per 1000 sf | | per seat | | per 1,000 sf | | per 1,000 sf | |
| **Temporal Distribution:** | (1) | | (1) | | (1) | | (1) | | (26) | | (1) | |
| AM | 9.3% | | 4.8% | | 12.4% | | 1.0% | | 6.1% | | 4.0% | |
| MD | 5.6% | | 8.0% | | 11.0% | | 3.0% | | 6.7% | | 7.0% | |
| PM | 8.5% | | 10.9% | | 10.5% | | 8.0% | | 8.0% | | 10.6% | |
| Saturday | 8.4% | | 11.7% | | 14.1% | | 5.0% | | 11.8% | | 9.5% | |
| | (3) | | (14) | | (18)(6) | | (4) | | (13) | | (25) | |
| **Modal Splits:** | | | Weekday | SAT | AM/PM/ SAT | MD | | | | | Weekday | SAT |
| Auto | 13.4% | | 11.0% | 8.0% | 14.0% | 2.0% | 56.0% | | 5.0% | | 22.0% | 8.0% |
| Taxi | 2.9% | | 0.0% | 0.0% | 2.0% | 1.0% | 7.0% | | 1.0% | | 1.0% | 1.0% |
| Subway | 76.9% | | 4.0% | 7.0% | 74.0% | 7.0% | 18.0% | | 3.0% | | 12.0% | 6.0% |
| Bus | 2.8% | | 3.0% | 4.0% | 2.0% | 7.0% | 8.0% | | 6.0% | | 3.0% | 5.0% |
| Walk/Other | 4.0% | | 82.0% | 81.0% | 8.0% | 83.0% | 11.0% | | 85.0% | | 62.0% | 80.0% |
| | 100.0% | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | | 100.0% | | 100.0% | 100.0% |
| | (1) | | (1) | | (1) | | (1) | | (26) | | (1) | |
| **In/Out Splits:** | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| AM | 22% | 78% | 53% | 47% | 89% | 11% | 95% | 5% | 66% | 34% | 51% | 49% |
| MD | 50% | 50% | 50% | 50% | 48% | 52% | 62% | 38% | 54% | 46% | 51% | 49% |
| PM | 63% | 37% | 50% | 50% | 17% | 83% | 54% | 46% | 47% | 53% | 50% | 50% |
| Saturday | 51% | 49% | 50% | 50% | 50% | 50% | 56% | 44% | 54% | 46% | 50% | 50% |
| **Vehicle Occupancy:** | (3)(7) | | (14) | | (5)(6) | | (4) | | (26)(13) | | (2)(7) | |
| | | | | | | | | | | | Weekday | Weekend |
| Auto | 1.13 | | 1.40 | | 1.12 | | 2.52 | | 1.80 | | 1.98 | 2.35 |
| Taxi | 1.40 | | 1.40 | | 1.42 | | 2.30 | | 1.40 | | 1.12 | 1.48 |
| **Truck Trip Generation:** | (1) | | (1) | | (1) | | (24) | | (13) | | (7) | |
| | Weekday | Weekend | Weekday | Weekend | Weekday | Weekend | Weekday | Weekend | Weekday | Weekend | Weekday | Weekend |
| | 0.06 | 0.02 | 0.35 | 0.04 | 0.32 | 0.01 | 0.02 | 0.00 | 0.29 | 0.29 | 0.35 | 0.04 |
| | per DU | | per 1,000 sf | | per 1,000 sf | | per seat | | per 1,000 sf | | per 1,000 sf | |
| | (1) | | (1) | | (1) | | (24) | | (13) | | (7) | |
| AM | 12.0% | | 8.0% | | 10.0% | | 12.0% | | 9.6% | | 8.0% | |
| MD | 9.0% | | 11.0% | | 11.0% | | 11.0% | | 11.0% | | 11.0% | |
| PM | 2.0% | | 2.0% | | 2.0% | | 1.0% | | 1.0% | | 2.0% | |
| Saturday | 9.0% | | 11.0% | | 11.0% | | 5.0% | | 0.0% | | 4.0% | |
| | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| All Periods | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |

## Table 13-7 (cont'd)
## Transportation Planning Factors

| Land Use: | Medical Office | Daycare (Staff) | Daycare (Students) | Daycare (Parents) | PCE (Physical Cultural Establishment) | Open Space |
|---|---|---|---|---|---|---|
| **Trip Generation:** | (1) | (1) | (1) | (1) | (1) | (1) |
| Weekday | 74.6 | 6 | 22 | 44 | 51.6 | 139 |
| Saturday | 37 | 0 | 0 | 0 | 50.4 | 196 |
| | per 1,000 sf | per 1,000 sf | per 1,000 sf | per 1,000 sf | per 1,000 sf | per acre |
| **Temporal Distribution:** | (1) | (1) | (1) | (1) | (1) | (1) |
| AM | 11.0% | 25.0% | 25.0% | 25.0% | 9.0% | 3.0% |
| MD | 12.6% | 2.5% | 0.0% | 0.0% | 7.4% | 14.0% |
| PM | 8.5% | 25.0% | 25.0% | 25.0% | 9.0% | 14.0% |
| Saturday | 16.6% | 0.0% | 0.0% | 0.0% | 12.6% | 16.0% |
| | (9) | (5) | (15) | (15) | (16) | (10) |
| **Modal Splits:** | | | | | | |
| Auto | 23.0% | 41.7% | 15.0% | 0.0% | 4.0% | 5.0% |
| Taxi | 7.0% | 0.2% | 0.0% | 0.0% | 9.0% | 0.0% |
| Subway | 14.0% | 32.5% | 5.0% | 6.0% | 12.0% | 5.0% |
| Bus | 26.0% | 9.5% | 5.0% | 6.0% | 5.0% | 5.0% |
| Walk/Other | 30.0% | 16.1% | 75.0% | 88.0% | 70.0% | 85.0% |
| | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | (1) | (1) | (1) | (1) | (1) | (1) |
| **In/Out Splits:** | In Out | In Out | In Out | In Out | In Out | In Out |
| AM | 62% 38% | 100% 0% | 100% 0% | 50% 50% | 57% 43% | 59% 41% |
| MD | 47% 53% | 50% 50% | 0% 0% | 0% 0% | 57% 43% | 55% 45% |
| PM | 35% 65% | 0% 100% | 0% 100% | 50% 50% | 52% 48% | 55% 45% |
| Saturday | 49% 51% | 0% 0% | 0% 0% | 0% 0% | 45% 55% | 55% 45% |
| **Vehicle Occupancy:** | (9) | (5)(15) | (15) | | (16) | (10) |
| Auto | 1.58 | 1.12 | 1.00 | N/A | 1.40 | 2.80 |
| Taxi | 1.58 | 1.00 | 1.00 | N/A | 1.40 | 2.80 |
| **Truck Trip Generation:** | (13) | | (15) | | (16) | (10)(11) |
| | Weekday Weekend | | Weekday Weekend | | Weekday Weekend | Weekday Weekend |
| | 0.29 0.29 | N/A | 0.03 0.00 | N/A | 0.04 0.04 | 0.02 0.02 |
| | per 1,000 sf | | per 1,000 sf | | per 1,000 sf | per acre |
| | (13) | | (15) | | (16) | (10)(11) |
| AM | 9.6% | N/A | 9.6% | N/A | 8.0% | 6.0% |
| MD | 11.0% | N/A | 11.0% | N/A | 11.0% | 6.0% |
| PM | 1.0% | N/A | 1.0% | N/A | 1.0% | 1.0% |
| Saturday | 0.0% | N/A | 0.0% | N/A | 0.0% | 6.0% |
| | In Out | In Out | In Out | In Out | In Out | In Out |
| All Periods | 50.0% 50.0% | N/A N/A | 50.0% 50.0% | N/A N/A | 50.0% 50.0% | 50.0% 50.0% |

## Table 13-7 (cont'd)
## Transportation Planning Factors

| Land Use: | Destination Retail | | Auto Dealership | | Warehouse | | Arts and Cultural Center | | Light Industrial | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Trip Generation:** | (1) | | (8)(17) | | (19)(20) | | (12) | | (17) | |
| Weekday | 78.2 | | 13 | | 2.36 | | 76 | | 14.7 | |
| Saturday | 92.5 | | 2.63 | | 0.20 | | 50.74 | | 2.2 | |
| | per 1,000 sf | | per 1,000 sf | | per 1,000 sf | | per 1,000 sf | | per 1,000 sf | |
| **Temporal Distribution:** | (1) | | (8)(17) | | (19) | | (12) | | (17) | |
| AM | 3.0% | | 1.0% | | 10.0% | | 3.0% | | 13.2% | |
| MD | 9.0% | | 10.0% | | 9.0% | | 10.3% | | 11.0% | |
| PM | 9.0% | | 9.0% | | 11.0% | | 10.2% | | 14.2% | |
| Saturday | 11.0% | | 12.0% | | 33.0% | | 12.5% | | 10.7% | |
| | (2) | | (17) | | (5) | | (12) | | (5) | |
| **Modal Splits:** | Weekday | SAT | | | | | | | | |
| Auto | 37.4% | 40.4% | 100.0% | | 41.7% | | 36.0% | | 41.7% | |
| Taxi | 0.0% | 0.6% | 0.0% | | 0.2% | | 12.0% | | 0.2% | |
| Subway | 32.0% | 21.3% | 0.0% | | 32.5% | | 25.0% | | 32.5% | |
| Bus | 7.5% | 9.6% | 0.0% | | 9.5% | | 25.0% | | 9.5% | |
| Walk/Other | 23.1% | 28.1% | 0.0% | | 16.1% | | 2.0% | | 16.1% | |
| | 100.0% | 100.0% | 100.0% | | 100.0% | | 100.0% | | 100.0% | |
| | (1) | | (8)(17) | | (19) | | (12) | | (17) | |
| **In/Out Splits:** | In | Out | In | Out | In | Out | In | Out | In | Out |
| AM | 63% | 37% | 78% | 22% | 77% | 23% | 56% | 44% | 88% | 12% |
| MD | 53% | 47% | 50% | 50% | 53% | 47% | 14% | 86% | 50% | 50% |
| PM | 49% | 51% | 35% | 65% | 27% | 73% | 5% | 95% | 12% | 88% |
| Saturday | 52% | 48% | 50% | 50% | 64% | 36% | 25% | 75% | 47% | 53% |
| **Vehicle Occupancy:** | (2)(6) | | (17) | | (5)(17) | | (12) | | (5)(17) | |
| | Weekday | SAT | | | | | Weekday | Weekend | | |
| Auto | 1.98 | 2.35 | 1.30 | | 1.12 | | 2.00 | 3.00 | 1.12 | |
| Taxi | 2.60 | 2.60 | 1.50 | | 1.30 | | 2.00 | 3.00 | 1.20 | |
| **Truck Trip Generation:** | (6) | | (17) | | (19)(20)(21) | | (12) | | (17) | |
| | Weekday | Weekend | Weekday | Weekend | Weekday | Weekend | Weekday | Weekend | Weekday | Weekend |
| | 0.35 | 0.35 | 0.15 | 0.15 | 0.91 | 0.08 | 0.35 | 0.02 | 0.67 | 0.67 |
| | per 1,000 sf | | per 1,000 sf | | per 1,000 sf | | per 1,000 sf | | per 1,000 sf | |
| | (6) | | (17) | | (19)(22) | | (12) | | (17) | |
| AM | 7.7% | | 9.6% | | 9.9% | | 7.9% | | 14.0% | |
| MD | 11.0% | | 11.0% | | 8.0% | | 14.7% | | 9.0% | |
| PM | 1.0% | | 1.0% | | 7.0% | | 1.1% | | 1.0% | |
| Saturday | 0.0% | | 11.0% | | 28.0% | | 14.7% | | 0.0% | |
| | In | Out | In | Out | In | Out | In | Out | In | Out |
| All Periods | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |

## Table 13-7 (cont'd)
## Transportation Planning Factors

**Notes :**

(1) *2021 City Environmental Quality Review (CEQR) Technical Manual.*

(2) Based on data from a PHA survey conducted at Rego Park Center 2 on May 26, 2010 & June 5, 2010.

(3) Modal split and vehicle occupancy data based on 2015 -2019 ACS journey-to-work data for Queens census tracts 51, 55, 57, 59, 155, 157, and 159. Modal split adjusted for 7-9 AM peak period.

(4) Based on data cited in Loews Elmhurst Multiplex FEIS (2000).

(5) Based on AASHTO CTPP Reverse journey-to-work 5-Year (2012-2016) data for Queens census tracts 51, 55, 57, 59, 155, 157, and 159.

(6) Souce: *Dutch Kills Rezoning And Related Actions FEIS* (2008).

(7) Source: *Astoria Cove FEIS* (2014).

(8) Based on data provided by NYCDOT.

(9) Based on NYCDOT medical office trip generation and mode choice survey data.

(10) Source: *Hunter's Point South Rezoning and Related Actions FEIS* (2008).

(11) Assumes Saturday truck trip generation rates and temporal distributions are similar to those applied to the weekday midday.

(12) Source: *Industry City DEIS* (2019).

(13) Source: *Jamaica Plan FEIS* (2007).

(14) Based on NYCDOT Local Retail Mode Choice Surveys.

(15) Source: *Hunter's Point South Parcels F and G EAS* (2019).

(16) Source: *Spofford Campus FEIS* (2018).

(17) Source: *East New York Rezoning FEIS* (2016).

(18) Based on NYCDOT Office Mode Choice Surveys (employees only) for 41-21 27th St, LIC.

(19) Based on data from *ITE Trip Generation Handbook,* 10th Edtion, Land use code 150 (Warehousing).

(20) Trip generation rate includes a 1.51 adjustment factor per NYCDOT Trip Generation Survey.

(21) Adjusted as per the ratio between weekday and Saturday based on the information from *ITE Trip Generation Handbook, 10th Edition* , Land use code 150 (Warehousing).

(22) Based on NYCDOT Trip Generation Survey.

(23) Both inbound and outbound vehicle trips take place during the same peak hour.

(24) Source: *Lighthouse Point EAS* (2013).

(25) Based on NYCDOT Trip Generation Surveys.

(26) Based on data from ITE Trip Generation Manual, 10th Edition, Land Use Code 495 (Recreational Community Center). Assumes weekday midday in/out splits are similar to those applied to the Saturday.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-8
## RWCDS Travel Demand Forecast

| Land Use: | | Residential | | Local Retail | | | | | | Office | | Cinema | | Community Center | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size/Units: | | 3,643 | DU | 89,909 gsf | | | | | | 250,070 | gsf | 50 | seats | 70,820 | gsf |
| Peak Hour Person Trips: | | | | Non-Linked | | Diverted | | Total | | | | | | | |
| | AM | 2,771 | | 718 | | 428 | | 1,146 | | 558 | | 2 | | 236 | |
| | MD | 1,667 | | 1,190 | | 876 | | 2,066 | | 495 | | 5 | | 259 | |
| | PM | 2,532 | | 1,618 | | 1,146 | | 2,764 | | 472 | | 13 | | 309 | |
| | Saturday | 2,778 | | 1,886 | | 1,470 | | 3,356 | | 137 | | 16 | | 145 | |
| **Person Trips:** | | | | | | | | | | | | | | | |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| **AM** | **Auto** | 82 | 292 | 42 | 37 | 0 | 0 | 42 | 37 | 70 | 8 | 1 | 0 | 8 | 4 |
| | **Taxi** | 18 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 2 | 1 | 0 | 1 | 1 |
| | **Subway** | 466 | 1,661 | 15 | 14 | 0 | 0 | 15 | 14 | 366 | 46 | 0 | 0 | 5 | 2 |
| | **Bus** | 17 | 60 | 10 | 10 | 0 | 0 | 10 | 10 | 10 | 2 | 0 | 0 | 9 | 5 |
| | **Walk/Other** | 27 | 86 | 314 | 276 | 226 | 202 | 540 | 478 | 40 | 4 | 0 | 0 | 132 | 69 |
| | **Total** | 610 | 2,161 | 381 | 337 | 226 | 202 | 607 | 539 | 496 | 62 | 2 | 0 | 155 | 81 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| **MD** | **Auto** | 111 | 112 | 65 | 65 | 0 | 0 | 65 | 65 | 4 | 6 | 3 | 1 | 7 | 7 |
| | **Taxi** | 25 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 |
| | **Subway** | 640 | 640 | 24 | 24 | 0 | 0 | 24 | 24 | 16 | 18 | 0 | 0 | 5 | 3 |
| | **Bus** | 24 | 24 | 18 | 18 | 0 | 0 | 18 | 18 | 16 | 18 | 0 | 0 | 8 | 8 |
| | **Walk/Other** | 33 | 33 | 488 | 488 | 438 | 438 | 926 | 926 | 199 | 214 | 1 | 0 | 118 | 101 |
| | **Total** | 833 | 834 | 595 | 595 | 438 | 438 | 1,033 | 1,033 | 237 | 258 | 4 | 1 | 139 | 120 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| **PM** | **Auto** | 213 | 125 | 90 | 90 | 0 | 0 | 90 | 90 | 12 | 55 | 4 | 3 | 8 | 8 |
| | **Taxi** | 46 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 1 | 0 | 1 | 1 |
| | **Subway** | 1,227 | 718 | 33 | 33 | 0 | 0 | 33 | 33 | 59 | 289 | 2 | 1 | 5 | 5 |
| | **Bus** | 44 | 27 | 24 | 24 | 0 | 0 | 24 | 24 | 2 | 8 | 0 | 1 | 9 | 9 |
| | **Walk/Other** | 67 | 37 | 662 | 662 | 573 | 573 | 1,235 | 1,235 | 6 | 31 | 1 | 0 | 123 | 140 |
| | **Total** | 1,597 | 935 | 809 | 809 | 573 | 573 | 1,382 | 1,382 | 81 | 391 | 8 | 5 | 146 | 163 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| **Saturday** | **Auto** | 191 | 183 | 74 | 74 | 0 | 0 | 74 | 74 | 10 | 10 | 4 | 4 | 3 | 2 |
| | **Taxi** | 41 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 |
| | **Subway** | 1,088 | 1,046 | 66 | 66 | 0 | 0 | 66 | 66 | 48 | 49 | -1 | 2 | 1 | 1 |
| | **Bus** | 40 | 39 | 38 | 38 | 0 | 0 | 38 | 38 | 2 | 2 | 2 | 1 | 5 | 4 |
| | **Walk/Other** | 56 | 54 | 765 | 765 | 735 | 735 | 1,500 | 1,500 | 6 | 6 | 1 | 1 | 70 | 59 |
| | **Total** | 1,416 | 1,362 | 943 | 943 | 735 | 735 | 1,678 | 1,678 | 68 | 69 | 7 | 9 | 79 | 66 |
| **Vehicle Trips :** | | | | | | | | | | | | | | | |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| **AM** | **Auto (Total)** | 74 | 258 | 31 | 27 | 0 | 0 | 31 | 27 | 62 | 8 | 0 | 0 | 6 | 3 |
| | **Taxi Balanced** | 57 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 2 | 2 |
| | **Truck** | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 1 | 1 |
| | **Total** | 143 | 327 | 31 | 27 | 0 | 0 | 31 | 27 | 76 | 22 | 0 | 0 | 9 | 6 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| **MD** | **Auto (Total)** | 100 | 101 | 45 | 45 | 0 | 0 | 45 | 45 | 4 | 6 | 2 | 0 | 5 | 5 |
| | **Taxi Balanced** | 38 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 2 | 2 |
| | **Truck** | 8 | 8 | 1 | 1 | 0 | 0 | 1 | 1 | 4 | 4 | 0 | 0 | 1 | 1 |
| | **Total** | 146 | 147 | 46 | 46 | 0 | 0 | 46 | 46 | 12 | 14 | 2 | 0 | 8 | 8 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| **PM** | **Auto (Total)** | 187 | 111 | 65 | 65 | 0 | 0 | 65 | 65 | 10 | 49 | 2 | 1 | 6 | 6 |
| | **Taxi Balanced** | 54 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 2 | 2 |
| | **Truck** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Total** | 241 | 165 | 65 | 65 | 0 | 0 | 65 | 65 | 18 | 57 | 2 | 1 | 8 | 8 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| **Saturday** | **Auto (Total)** | 168 | 162 | 52 | 52 | 0 | 0 | 52 | 52 | 8 | 8 | 2 | 1 | 2 | 1 |
| | **Taxi Balanced** | 61 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 | 2 | 0 | 0 |
| | **Truck** | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Total** | 231 | 225 | 52 | 52 | 0 | 0 | 52 | 52 | 12 | 12 | 4 | 3 | 2 | 1 |

**Notes:** 50% credit applied to local retail trips to account for linked, pass-by, and diverted trips.

## Table 13-8 (cont'd)
## RWCDS Travel Demand Forecast

| Land Use: | | Supermarket | | Medical Office | | Daycare (Staff) | | Daycare (Students) | | Daycare (Parents) | | PCE (Physical Cultural Establishment) | | Open Space | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size/Units: | | 0 | gsf | 5,000 | gsf | 10,000 | gsf | 10,000 | gsf | 10,000 | gsf | 30,000 | gsf | 2.17 | acre |
| Peak Hour Person Trips: | | | | | | | | | | | | | | | |
| | AM | 0 | | 41 | | 15 | | 55 | | 110 | | 139 | | 10 | |
| | MD | 0 | | 47 | | 2 | | 0 | | 0 | | 114 | | 42 | |
| | PM | 0 | | 32 | | 15 | | 55 | | 110 | | 139 | | 42 | |
| | Saturday | 0 | | 31 | | 0 | | 0 | | 0 | | 191 | | 68 | |
| Person Trips: | | | | | | | | | | | | | | | |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| AM | Auto | 0 | 0 | 5 | 4 | 6 | 0 | 8 | 0 | 0 | 0 | 3 | 3 | 0 | 0 |
| | Taxi | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 6 | 0 | 0 |
| | Subway | 0 | 0 | 4 | 2 | 6 | 0 | 3 | 0 | 3 | 3 | 9 | 7 | 0 | 0 |
| | Bus | 0 | 0 | 7 | 4 | 1 | 0 | 3 | 0 | 3 | 3 | 4 | 3 | 0 | 0 |
| | Walk/Other | 0 | 0 | 7 | 5 | 2 | 0 | 41 | 0 | 49 | 49 | 55 | 42 | 6 | 4 |
| | Total | 0 | 0 | 25 | 16 | 15 | 0 | 55 | 0 | 55 | 55 | 78 | 61 | 6 | 4 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| MD | Auto | 0 | 0 | 5 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 |
| | Taxi | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 |
| | Subway | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 6 | 0 | 0 |
| | Bus | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 |
| | Walk/Other | 0 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 34 | 24 | 18 |
| | Total | 0 | 0 | 23 | 24 | 1 | 1 | 0 | 0 | 0 | 0 | 65 | 49 | 24 | 18 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| PM | Auto | 0 | 0 | 3 | 4 | 0 | 6 | 0 | 8 | 0 | 0 | 3 | 3 | 0 | 0 |
| | Taxi | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 |
| | Subway | 0 | 0 | 2 | 3 | 0 | 6 | 0 | 3 | 3 | 3 | 9 | 8 | 0 | 0 |
| | Bus | 0 | 0 | 3 | 5 | 0 | 1 | 0 | 3 | 3 | 3 | 3 | 3 | 0 | 0 |
| | Walk/Other | 0 | 0 | 3 | 7 | 0 | 2 | 0 | 41 | 49 | 49 | 52 | 46 | 23 | 19 |
| | Total | 0 | 0 | 12 | 20 | 0 | 15 | 0 | 55 | 55 | 55 | 73 | 66 | 23 | 19 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| Saturday | Auto | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 |
| | Taxi | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 9 | 0 | 0 |
| | Subway | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 12 | 1 | 0 |
| | Bus | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 1 | 0 |
| | Walk/Other | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 76 | 35 | 31 |
| | Total | 0 | 0 | 15 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 106 | 37 | 31 |
| Vehicle Trips : | | | | | | | | | | | | | | | |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| AM | Auto (Total) | 0 | 0 | 3 | 3 | 5 | 0 | 8 | 8 | 0 | 0 | 2 | 2 | 0 | 0 |
| | Taxi Balanced | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 0 | 0 |
| | Truck | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 5 | 5 | 5 | 0 | 8 | 8 | 0 | 0 | 11 | 11 | 0 | 0 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| MD | Auto (Total) | 0 | 0 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 |
| | Taxi Balanced | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 0 | 0 |
| | Truck | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 5 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 9 | 9 | 0 | 0 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| PM | Auto (Total) | 0 | 0 | 2 | 3 | 0 | 5 | 8 | 8 | 0 | 0 | 2 | 2 | 0 | 0 |
| | Taxi Balanced | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 |
| | Truck | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 4 | 5 | 0 | 5 | 8 | 8 | 0 | 0 | 10 | 10 | 0 | 0 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| Saturday | Auto (Total) | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 |
| | Taxi Balanced | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 12 | 0 | 0 |
| | Truck | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 15 | 0 | 0 |

**Notes:** 25% credit applied to supermarket trips.

## Table 13-8 (cont'd)
## RWCDS Travel Demand Forecast

| Land Use: | | Destination Retail | | Auto Dealership | | Warehouse | | Arts and Cultural Center | | Light Industrial | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size/Units: | | -32,736 | gsf | -33,300 | gsf | -67,806 | gsf | 21,900 | gsf | -82,909 | gsf | | |
| Peak Hour Person Trips: | | | | | | | | | | | | | |
| | AM | -77 | | -4 | | -16 | | 50 | | -161 | | 4,875 | |
| | MD | -230 | | -43 | | -14 | | 171 | | -133 | | 4,448 | |
| | PM | -230 | | -39 | | -18 | | 170 | | -172 | | 6,194 | |
| | Saturday | -333 | | -11 | | -4 | | 139 | | -20 | | 6,493 | |
| Person Trips: | | | | | | | | | | | | | |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| AM | Auto | -17 | -11 | -3 | -1 | -5 | -2 | 9 | 8 | -60 | -8 | 149 | 334 |
| | Taxi | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 42 | 75 |
| | Subway | -16 | -9 | 0 | 0 | -4 | -1 | 7 | 6 | -48 | -7 | 816 | 1,724 |
| | Bus | -4 | -2 | 0 | 0 | -1 | 0 | 7 | 6 | -14 | -1 | 52 | 90 |
| | Walk/Other | -11 | -7 | 0 | 0 | -2 | -1 | 1 | 0 | -22 | -1 | 865 | 728 |
| | Total | -48 | -29 | -3 | -1 | -12 | -4 | 27 | 23 | -144 | -17 | 1,924 | 2,951 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| MD | Auto | -46 | -40 | -21 | -22 | -3 | -3 | 9 | 52 | -28 | -28 | 110 | 158 |
| | Taxi | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 18 | 0 | 0 | 39 | 52 |
| | Subway | -39 | -35 | 0 | 0 | -2 | -2 | 6 | 37 | -22 | -21 | 639 | 673 |
| | Bus | -9 | -8 | 0 | 0 | -1 | -1 | 6 | 37 | -7 | -7 | 64 | 98 |
| | Walk/Other | -28 | -25 | 0 | 0 | -1 | -1 | 0 | 3 | -10 | -10 | 1,314 | 1,301 |
| | Total | -122 | -108 | -21 | -22 | -7 | -7 | 24 | 147 | -67 | -66 | 2,166 | 2,282 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| PM | Auto | -43 | -45 | -14 | -25 | -2 | -6 | 3 | 58 | -8 | -63 | 269 | 221 |
| | Taxi | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 19 | 0 | 0 | 58 | 63 |
| | Subway | -36 | -38 | 0 | 0 | -2 | -4 | 2 | 41 | -7 | -52 | 1,297 | 1,016 |
| | Bus | -8 | -9 | 0 | 0 | 0 | -1 | 2 | 41 | -1 | -15 | 81 | 100 |
| | Walk/Other | -25 | -26 | 0 | 0 | -1 | -2 | 0 | 3 | -1 | -25 | 1,532 | 1,557 |
| | Total | -112 | -118 | -14 | -25 | -5 | -13 | 8 | 162 | -17 | -155 | 3237 | 2957 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| Saturday | Auto | -70 | -65 | -5 | -6 | -2 | -1 | 13 | 37 | -3 | -5 | 221 | 241 |
| | Taxi | -1 | -1 | 0 | 0 | 0 | 0 | 4 | 13 | 0 | 0 | 56 | 65 |
| | Subway | -36 | -34 | 0 | 0 | -1 | 0 | 9 | 25 | -4 | -6 | 1,183 | 1,163 |
| | Bus | -17 | -15 | 0 | 0 | 0 | 0 | 9 | 26 | 0 | 0 | 88 | 104 |
| | Walk/Other | -49 | -45 | 0 | 0 | 0 | 0 | 1 | 2 | -1 | -1 | 1,684 | 1,688 |
| | Total | -173 | -160 | -5 | -6 | -3 | -1 | 36 | 103 | -8 | -12 | 3232 | 3261 |
| Vehicle Trips : | | | | | | | | | | | | | |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| AM | Auto (Total) | -9 | -6 | -2 | -1 | -4 | -2 | 5 | 4 | -53 | -8 | 128 | 296 |
| | Taxi Balanced | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 84 | 84 |
| | Truck | 0 | 0 | 0 | 0 | -3 | -3 | 0 | 0 | -3 | -3 | 11 | 11 |
| | Total | -9 | -6 | -2 | -1 | -7 | -5 | 9 | 8 | -56 | -11 | 223 | 391 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| MD | Auto (Total) | -23 | -20 | -16 | -17 | -3 | -3 | 5 | 26 | -27 | -27 | 98 | 122 |
| | Taxi Balanced | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 64 | 64 |
| | Truck | -1 | -1 | 0 | 0 | -2 | -2 | 1 | 1 | -1 | -1 | 11 | 11 |
| | Total | -24 | -21 | -16 | -17 | -5 | -5 | 17 | 38 | -28 | -28 | 173 | 197 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| PM | Auto (Total) | -22 | -23 | -11 | -19 | -2 | -5 | 2 | 29 | -8 | -56 | 241 | 176 |
| | Taxi Balanced | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 85 | 85 |
| | Truck | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 |
| | Total | -22 | -23 | -11 | -19 | -4 | -7 | 13 | 40 | -8 | -56 | 324 | 259 |
| | | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| Saturday | Auto (Total) | -30 | -28 | -4 | -5 | -2 | -1 | 4 | 12 | -3 | -5 | 201 | 203 |
| | Taxi Balanced | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 86 | 86 |
| | Truck | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Total | -30 | -28 | -4 | -5 | -3 | -2 | 9 | 17 | -3 | -5 | 288 | 290 |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

**Table 13-9** summarizes the number of additional trips that would be generated by the Proposed Actions during the weekday AM, midday, PM, and Saturday peak hours by various modes of travel. Since these numbers of peak hour trips would exceed the *CEQR Technical Manual* analysis thresholds for vehicular traffic, transit and pedestrians, a Level 2 screening assessment was undertaken to identify specific locations where additional detailed analyses would be warranted.

**Table 13-9**
**Summary of Net Incremental Peak Hour Trips Generated Under the RWCDS**

| Mode/Description | Trip Type | Weekday AM | Weekday Midday | Weekday PM | Saturday |
|---|---|---|---|---|---|
| Auto/Taxi/Truck | vehicle trips | 614 | 370 | 583 | 578 |
| Subway | person trips | 2,540 | 1,312 | 2,313 | 2,346 |
| Local Bus | person trips | 142 | 162 | 181 | 192 |
| Walk/Other | person trips | 1,593 | 2,615 | 3,089 | 3,372 |

## E. LEVEL 2 SCREENING ASSESSMENT

A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network, pedestrian elements, and transit facilities, and the identification of specific locations where the incremental increase in demand may potentially exceed *CEQR Technical Manual* analysis thresholds and therefore require a quantitative analysis.

### VEHICULAR TRAFFIC

Based on the amount of projected development associated with the Proposed Actions, there would be ~~610~~614 additional vehicle trips during the weekday AM peak hour, ~~457~~370 during the midday peak hour, ~~689~~583 during the PM peak hour, and ~~569~~578 during the Saturday peak hour. These traffic volumes would exceed the *CEQR Technical Manual* threshold of 50 peak hour vehicle trips for Level 1 screening and, therefore, a Level 2 screening was performed to help identify intersections for detailed analysis.

The *CEQR Technical Manual* Level 2 screening threshold for detailed analysis is also 50 vehicles, but this threshold applies to individual intersections during the peak hours (rather than total trips generated). Peak hour project increment traffic volumes were first assigned to the Project Area street network to identify the intersections that would potentially exceed the 50-trip threshold during one or more periods. The assignments of auto and taxi trips to the street network in proximity to the Project Area were based on the anticipated origins and destinations of vehicle trips associated with the different land uses projected under the RWCDS. The origins/destinations for residential uses were based on 2012–2016 American Community Survey (ACS) journey-to-work data, while those for the office/daycare (staff), warehouse, and light industrial uses were based on 2012–2016 ACS reverse journey-to-work data. The origins/destinations of trips generated by local retail, community center, daycare (students) and physical cultural establishment uses, which are typically local trips within the surrounding neighborhood, were based on the population density within a 0.5-mile radius of the Project Area. Similarly, origins/destinations for the cinema, supermarket, medical office, destination retail, auto dealership, and arts and cultural center uses were based on population density in proximity to the

Project Area and surrounding neighborhoods within a two-mile radius. (Additional data on the distributions of auto and taxi trips by land use are presented in the *Transportation Planning Factors and Travel Demand Forecast (TPF/TDF) Technical Memorandum* included in Appendix D.) Based on the O-D data, auto and taxi trips were first assigned to various portals on the periphery of Astoria, and from there via the most direct route to the Project Area. As the RWCDS includes on-site accessory parking, auto trips were assigned directly to the proposed parking garage entrances on 37th Street and 38th Street for Projected Development Site A, 38th Street for Projected Development Site B, 41st Street for Projected Development Sites C and D, and 43rd Street for Projected Development Site E. Similarly, vehicle trips for the non-applicant-controlled sites (Sites F–K) were assigned to their respective frontages. Although some drivers may park at off-site public parking facilities, assigning all trips to the Project Area can be considered a conservative approach with respect to the traffic impact analysis as it concentrates project traffic at analyzed intersections in proximity to the site rather than dispersing it to outlying parking facilities.

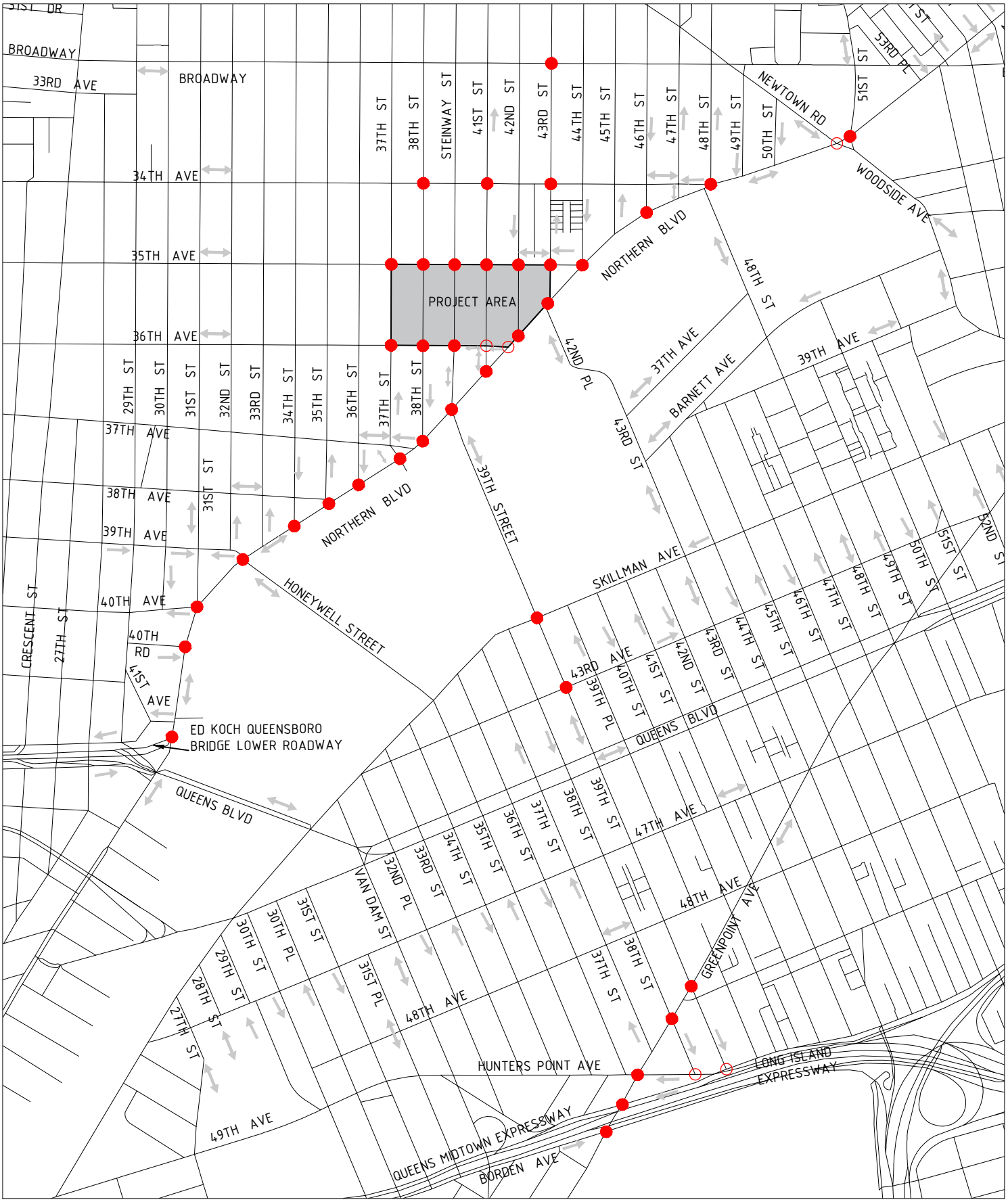
Taxi trips were generally assigned to the building frontages. Truck trips were assigned to Northern Boulevard and Astoria Boulevard, which are the primary DOT-designated Through Truck Routes in proximity to the Project Area, and to Broadway, which is a DOT-designated Local Truck Route. From these designated truck route, truck trips were assigned to the proposed loading berths on 37th Street for Projected Development Site A, 38th Street for Projected Development Site B, 41st Street for Project Development Site C, 42nd Street for Projected Development Site D, and 42nd Street and 43rd Street for Projected Development Site E. Similarly, truck trips for the non-applicant-controlled sites (Sites F–K) were assigned to their respective frontages.

Representative intersections most likely to be used by concentrations of action-generated vehicles traveling to and from the Project Area projected development sites were then selected for detailed analysis. Existing bottleneck locations and prevailing travel patterns in the study area were also taken into consideration. **Figure 13-1** shows the locations of the 42 intersections (37 signalized and 5 unsignalized) that were selected for detailed analysis. Most of the analyzed intersections are located along corridors providing direct access to the Project Area, including Northern Boulevard (19 intersections), 35th Avenue (seven intersections), 36th Avenue (five intersections), and 34th Avenue (four intersections). Analyzed intersections are also located along corridors connecting the Project Area to the Long Island Expressway and Queens Midtown Tunnel, including Greenpoint Avenue (five intersections), 39th Street (four intersections) and 38th Street (one intersection). There is also one analyzed intersection along Broadway.

**TRANSIT**

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

Traffic Study Area




**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location

*SUBWAY*

*Subway Stations*

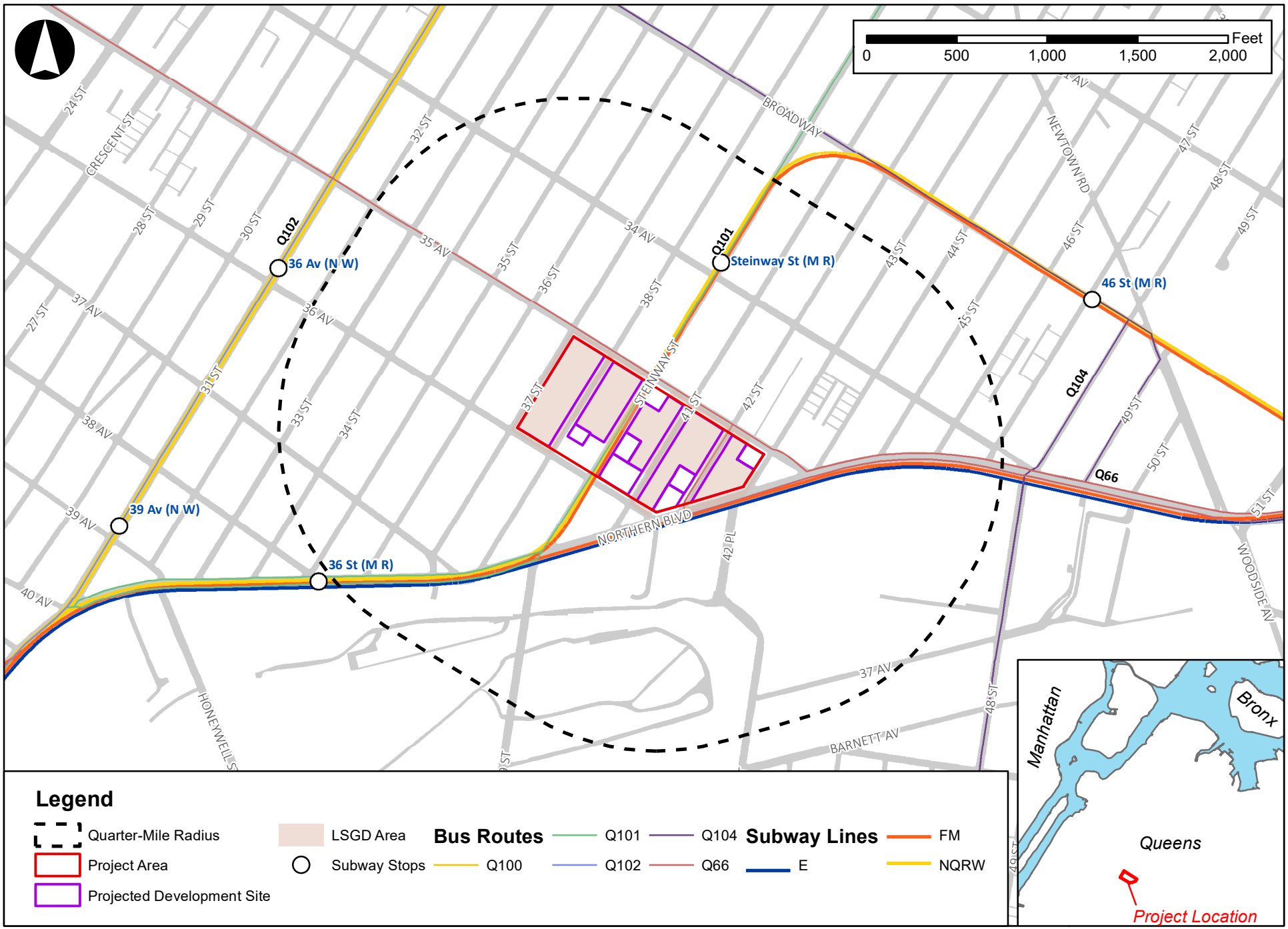
Three NYCT subway stations located in proximity to the Project Area are expected to experience new demand as a result of the Proposed Actions. These stations are presented in **Figure 13-2** and **Table 13-10**, along with the subway routes serving each facility. Two of these stations are served by M trains (weekdays only) and R trains operating on the Queens Boulevard Line—the 36th Street station located below Northern Boulevard, and the Steinway Street station located below Steinway Street. The third station, the 36th Avenue station, is located on an elevated structure above 31st Street and is served by N trains (at all times) and W trains (weekdays only) operating on the Astoria Line.

As shown in **Table 13-9**, under the RWCDS, the Proposed Actions would generate a net increment of approximately 2,~~642~~540 and 2,~~958~~313 subway trips during the weekday AM and PM commuter peak hours, respectively. These trips were assigned to the three stations serving the Project Area based on census origin/destination data and each station's proximity to individual projected development sites. Subway riders expected to use M and R trains were distributed between the Steinway Street and 36th Street stations based on proximity, while riders traveling via N and W trains were assigned to the 36th Avenue station. **Table 13-10** shows the estimated net incremental subway trips expected to be generated by the Proposed Actions during the weekday AM and PM peak hours at each of these three subway stations. As shown in **Table 13-10**, the highest number of peak hour subway trips are expected to occur at Steinway Street (M/R) station, which would experience an estimated 1,~~352~~302 incremental trips (in and out combined) in the AM peak hour and 1,~~516~~184 in the PM peak hour. The second highest number of trips would occur at the 36th Avenue (N/W) station, which would experience an estimated ~~951~~912 incremental trips in the AM peak hour and ~~1,063~~832 in the PM peak hour. The 36th Street (M/R) station would experience an estimated ~~339~~326 incremental trips in the AM peak hour and ~~379~~297 in the PM peak hour.

**Table 13-10**
**RWCDS Net Incremental Peak Hour Subway Trips by Station**

| Subway Station | AM Peak Hour Trips | | | PM Peak Hour Trips | | |
|---|---|---|---|---|---|---|
| | Into Project | Out of Project | Total | Into Project | Out of Project | Total |
| **Project Summary** | | | | | | |
| Peak Hour Project Increment Person Trips | 1,924 | 2,951 | 4,875 | 3,237 | 2,957 | 6,194 |
| Peak Hour Project Increment Subway Trips | 816 | 1,724 | 2,540 | 1,297 | 1,016 | 2,313 |
| **Subway Station Summary** | | | | | | |
| Steinway Street (M/R) | 430 | 872 | 1,302 | 657 | 527 | 1,184 |
| 36th Street (M/R) | 108 | 218 | 326 | 165 | 132 | 297 |
| 36th Avenue (N/W) | 278 | 634 | 912 | 475 | 357 | 832 |
| **Total** | **816** | **1,724** | **2,540** | **1,297** | **1,016** | **2,313** |

As shown in **Table 13-10**, incremental demand from the Proposed Actions would exceed the 200-trip *CEQR Technical Manual* analysis threshold in one or both peak hours at all three of the subway stations serving the Project Area. Therefore, all of these stations are included for detailed analysis. At each of these facilities, key circulation elements (e.g., stairs and fare arrays) expected to be used by concentrations of new demand from the Proposed Actions are analyzed.




Source: NYCDCP (PLUTO 2020, Version VIII); DOITT (2020)

**Innovation QNS**

**Figure 13-2**
**Project Area Transit Services**

*Subway Line Haul*

As discussed above, the Project Area is currently served by a total of four NYCT subway routes, including the M, N, R and W. The peak direction of travel is typically Manhattan-bound (southbound) in the AM peak hour and Queens-bound (northbound) in the PM peak hour. As the Proposed Actions are expected to generate 200 or more new peak hour subway trips in one direction on one or more of these lines, an analysis of subway line haul conditions on these routes is included in the EIS. The analysis uses existing maximum load point subway service and ridership data provided by NYCT to assess existing, future No Action, and future With Action conditions at the peak load points of each analyzed subway line during the weekday AM and PM peak hours.

*BUS*

Four MTA Bus Company local bus services operate within approximately 1/4-mile of the Project Area—the Q66, Q101, Q102, and Q104. These services and the principal corridors on which they operate are shown in **Figure 13-2** and described in **Table 13-11**.

As shown in **Table 13-9**, projected development sites are expected to generate a total of approximately 142 and ~~197~~181 incremental trips by local bus during the weekday AM and PM peak hours, respectively. These local bus trips were assigned to each route based on proximity to projected development sites and current ridership patterns. **Table 13-12** shows the anticipated numbers of new riders expected on each local bus route in the AM and PM peak hours. According to the general thresholds used by the MTA and specified in the *CEQR Technical Manual*, a detailed analysis of bus conditions is generally not required if a proposed action is projected to result in fewer than 50 peak hour trips being assigned to a single bus route (in one direction), as this level of new demand is considered unlikely to result in significant adverse impacts. As shown in **Table 13-12**, only the Q66 bus route is expected to experience 50 or more new trips in ~~one~~the eastbound direction in ~~one or both~~each peak ~~hours and~~hour. Therefore, a detail analysis of local bus conditions along the Q66 bus route is ~~therefore~~ analyzed in this EIS.

**Table 13-11**
**Bus Routes Serving the Project Area**

| Route | Operating Agency | Route Endpoints | Corridors Served in Proximity to the Rezoning Area |
|---|---|---|---|
| Q66 | MTA Bus | Flushing, Queens – Long Island City | 35th Avenue |
| Q101 | MTA Bus | East Midtown – Steinway | Steinway Street |
| Q102 | MTA Bus | Astoria – Roosevelt Island | 31st Street |
| Q104 | MTA Bus | Sunnyside – Long Island City | Broadway/48th Street |

**Table 13-12**
**Net Incremental Bus Trips by Route**

| Route | Direction | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total |
| Q66 | EB | 3 | 50 | **53** | 5 | 56 | **61** |
| | WB | 29 | 6 | 35 | 43 | 6 | 49 |
| Q101 | NB | 4 | 7 | 11 | 8 | 9 | 17 |
| | SB | 4 | 8 | 12 | 8 | 8 | 16 |
| Q102 | NB | 3 | 5 | 8 | 5 | 6 | 11 |
| | SB | 4 | 6 | 10 | 5 | 6 | 11 |
| Q104 | NB | 3 | 3 | 6 | 5 | 3 | 8 |
| | SB | 2 | 5 | 7 | 2 | 6 | 8 |
| Total | | 52 | 90 | 142 | 81 | 100 | 181 |

**Note: Bold** denotes greater than 50 incremental trips per direction.

## CITYWIDE FERRY SERVICE

Based on *CEQR Technical Manual* guidance, a quantified analysis of conditions on CWFS routes and landings is typically required if a proposed action would generate 25 or more peak hour ferry trips in a single direction on a single route or 50 or more at a ferry landing. As there are no ferry landings proximate to the Project Site, the Proposed Actions are not expected to generate appreciable numbers of new trips on the CWFS. Therefore, a detailed analysis of CWFS conditions under the Proposed Actions is not warranted and not included in the EIS.

## PEDESTRIANS

Under *CEQR Technical Manual* criteria, detailed pedestrian analyses are generally warranted if a proposed action is projected to result in 200 or more peak hour pedestrians at any sidewalk, corner area, or crosswalk. As shown in **Table 13-9**, the Proposed Actions are expected to generate approximately ~~920~~1,593 walk-only trips (in and out combined) in the weekday AM peak hour, ~~3,037~~2,615 in the midday, ~~1,786~~3,089 in the PM, and ~~1,651~~3,372 in the Saturday peak hour. Persons en route to and from subway station entrances and bus stops would add approximately 2,~~784~~682, 1,~~438, 3,155~~474, 2,494 and 2,~~552~~538 additional pedestrian trips to sidewalks and crosswalks in the vicinity of the Project Area during these same periods, respectively. In the weekday AM and PM peak hours, new pedestrian trips would be most concentrated on sidewalks and crosswalks adjacent to projected development sites as well as along corridors connecting these sites to nearby subway station entrances and bus stops. In the midday and Saturday periods, pedestrian trips would tend to be more dispersed, as people travel throughout the area for lunch, shopping, and/or errands.

Given the numbers of incremental pedestrian trips that would be generated by the Proposed Actions during the weekday AM, midday and PM peak hours and the Saturday peak hour, a detailed analysis of pedestrian conditions in each of these periods under the Proposed Actions is warranted. Based on pedestrian count data collected in proximity to the Project Area, the weekday 7:45–8:45 a.m., 1:00–2:00 p.m., and 5:00–6:00 p.m. peak hours, and Saturday 2:00–3:00 p.m. peak hour, have been selected for analysis.

Based on an assignment of incremental peak hour pedestrian trips, a total of 138 pedestrian elements (40 sidewalks, 33 crosswalks and 65 corner areas) ~~are expected to experience a net increase of 200 or more trips in one or more peak hours and~~ have ~~therefore~~ been selected for

analysis.[2] As shown in **Figure 13-3**, these elements are primarily located in the immediate proximity of the Project Area, along Northern Boulevard, 36th Avenue and 36th and Steinway streets which connect the Project Area to nearby subway station entrances, and along 34th Avenue and 41st, 42nd, and 43rd Streets.

### PARKING

Parking demand from the proposed local retail, supermarket, office, and community facility uses would typically peak in the midday and would decline during the late afternoon and evening. By contrast, demand from the cinema and physical cultural establishment uses would typically peak in the evening hours, and residential demand would peak overnight. Therefore, some of the spaces used by residents would be available to accommodate commercial and community facility demand during daytime hours.

As shown in **Table 13-1**, under the Proposed Actions, a total of 1,633 accessory parking spaces would be provided on projected development sites—1,390 on Applicant-controlled sites A through E, and 243 on non-Applicant-controlled sites F through K. A parking demand forecast is provided to document the ability of the on-site accessory parking to accommodate all of the projected demand from the With Action RWCDS and assess the potential for a significant parking shortfall.

## F. TRANSPORTATION ANALYSES METHODOLOGIES

### TRAFFIC

*ANALYSIS METHODOLOGY*

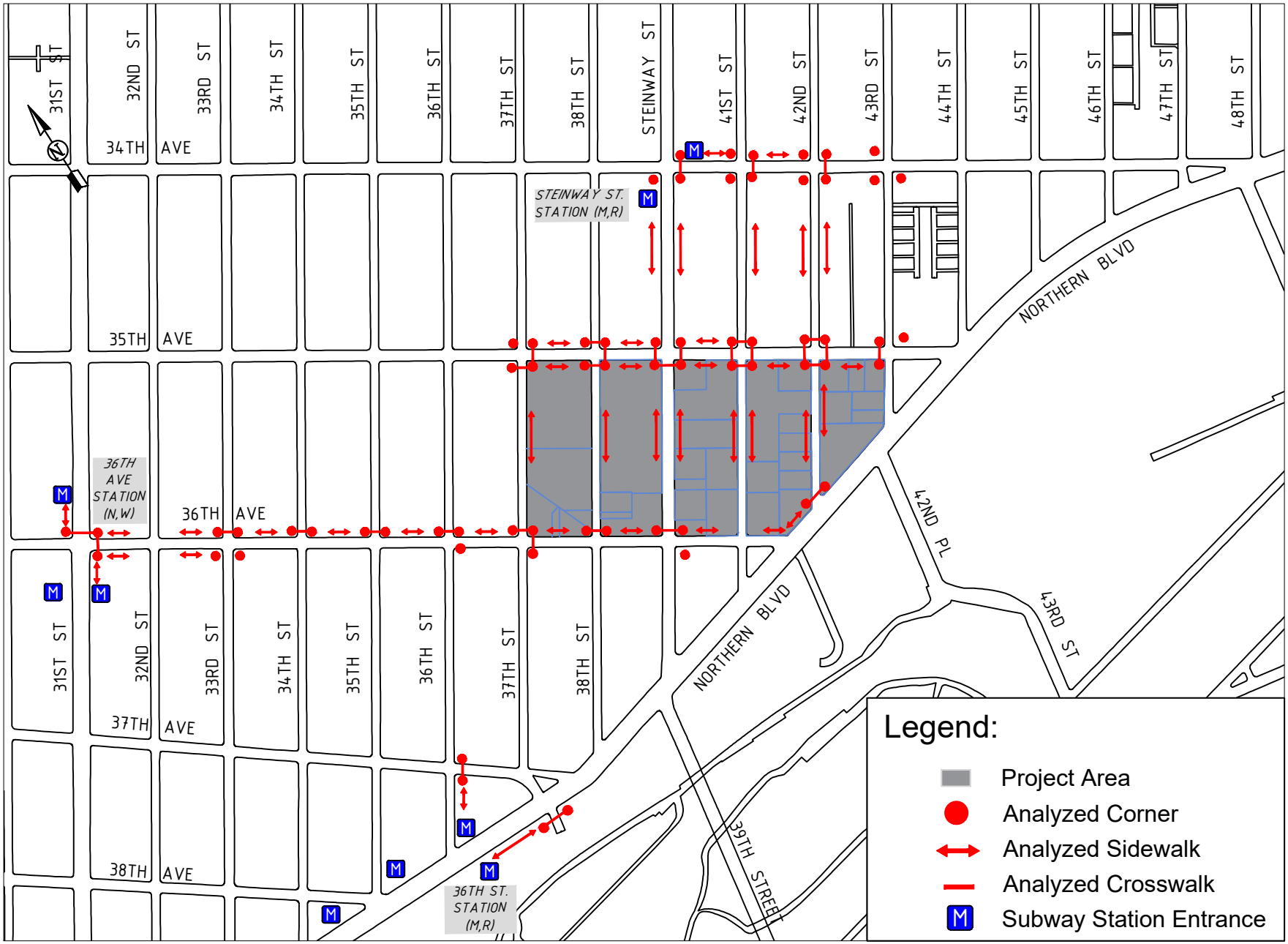
The traffic analysis examines conditions in the weekday AM, midday, PM, and Saturday peak hours when the increased travel demand attributable to the Proposed Actions is expected to be the greatest. The peak hours selected for analysis are the weekday 7:45–8:45 a.m., 1:00–2:00 p.m. (midday), 4:00–5:00 p.m., and Saturday 2:00–3:00 p.m. period. These peak hours were selected based on existing traffic volumes in the study area as reflected in automatic traffic recorder (ATR) count data.[3]

The capacity analyses at intersections are based on the methodology presented in the *Highway Capacity Manual* (HCM) and were conducted using the Synchro 11 software application. Traffic data required for these analyses include the hourly volumes on each approach, turning movements, the percentage of trucks and buses, and pedestrian volumes at crosswalks. Field inventories are also necessary to document the physical layout and street widths, lane markings, curbside parking regulations, and other relevant characteristics needed for the analysis.

The HCM methodology produces a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the ratio of traffic volume on an approach to the approach's

[2] These elements include those expected to experience a net increase of 200 or more trips in one or more peak hours based on the assignment prepared for the DEIS. Although fewer elements are now expected to experience 200 or more incremental peak hour trips, all elements analyzed in the DEIS are also analyzed in the FEIS.

[3] To account for the ongoing effects of the Covid-19 Pandemic on study area traffic volumes, pre-pandemic secondary source data from DOT's Traffic Information System (TIMS) were used to develop adjustment factors for the 2021 count data.


31ST ST
32ND ST
33RD ST
34TH ST
35TH ST
36TH ST
37TH ST
38TH ST
STEINWAY ST
41ST ST
42ND ST
43RD ST
44TH ST
45TH ST
46TH ST
47TH ST
48TH ST
34TH AVE
35TH AVE
36TH AVE
37TH AVE
38TH AVE
STEINWAY ST. STATION (M,R)
36TH AVE STATION (N,W)
36TH ST. STATION (M,R)
NORTHERN BLVD
42ND PL
43RD ST
39TH STREET
Legend:
Project Area
Analyzed Corner
Analyzed Sidewalk
Analyzed Crosswalk
Subway Station Entrance

carrying capacity. A v/c ratio of less than 0.90 is generally considered indicative of non-congested conditions in dense urban areas; when higher than this value, the ratio reflects increasing congestion. At a v/c ratio between 0.95 and 1.0, near-capacity conditions are reached and delays can become substantial. Ratios of greater than 1.0 indicate saturated conditions with queuing. The HCM methodology also expresses the quality of traffic flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. Levels of service range from A, representing minimal delay (10 seconds or less per vehicle), to F, which represents long delays (greater than 80 seconds per vehicle).

For unsignalized intersections, the HCM methodology generally assumes that traffic on major streets is not affected by traffic flows on minor streets. Left turns from a major street are assumed to be affected by the opposing, or oncoming, traffic flow on that major street. Traffic on minor streets is affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of traffic flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. Level of service definitions used to characterize traffic flows at unsignalized intersections differ somewhat from those used for signalized intersections, primarily because drivers anticipate different levels of performance from the two different kinds of intersections. For unsignalized intersections, LOS ranges from A, representing minimal delay (10 seconds or less per vehicle, as it is for signalized intersections), to F, which represents long delays (greater than 50 seconds per vehicle, compared to greater than 80 seconds per vehicle for signalized intersections).

**Table 13-13** shows the LOS/delay relationship for signalized and unsignalized intersections using the HCM methodology. Levels of service A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E is considered to be the limit of acceptable delay, and LOS F is considered to be unacceptable to most drivers. In these traffic impact analyses, a signalized lane grouping operating at LOS E or F or a v/c ratio of 0.90 or more is identified as congested. For unsignalized intersections, a movement with LOS E or F is also identified as congested.

**Table 13-13**
**Intersection Level of Service Criteria**

| LOS | Description | Average Delay per Vehicle (seconds) | |
|---|---|---|---|
| | | Signalized Intersections | Unsignalized Intersections |
| A | Satisfactory—Little/No Delay | Less than 10.1 | Less than 10.1 |
| B | Satisfactory—Minor Delay | 10.1 to 20.0 | 10.1 to 15.0 |
| C | Satisfactory—With Some Delay | 20.1 to 35.0 | 15.1 to 25.0 |
| D | Borderline Congestion | 35.1 to 55.0 | 25.1 to 35.0 |
| E | Marginally Acceptable Congestion | 55.1 to 80.0 | 35.1 to 50.0 |
| F | Unsatisfactory—Highly Congested | Greater than 80.0 | Greater than 50.0 |

**Source**: 2000 *Highway Capacity Manual*

*SIGNIFICANT IMPACT CRITERIA*

The identification of significant adverse traffic impacts at analyzed intersections is based on criteria presented in the *CEQR Technical Manual*. For signalized intersections, if a lane group in the With Action condition would be LOS A, B, ~~or~~ C, or ~~marginally acceptable LOS~~ D (i.e., delay less than or equal to ~~45~~55.0 seconds/vehicle ~~for signalized intersections and 30.0 seconds/vehicle~~

~~for unsignalized intersections~~), the impact is not considered significant. ~~If the~~For a lane group ~~LOS~~that would ~~deteriorate from LOS A, B, or C in the No Action condition to worse than mid-LOS D or to~~operate at LOS E ~~or F in~~under the With Action condition, ~~a significant traffic impact is identified. For a lane group that would operate at LOS D in the No Action condition,~~ an increase in delay of 5.0 or more seconds ~~in~~compared to the ~~With~~No Action condition is considered a significant impact ~~if the With Action delay would exceed mid-LOS D. For a lane group that would operate at LOS E in the No Action condition, a projected With Action increase in delay of 4.0 or more seconds is considered a significant impact.~~. For a lane group that would operate at LOS F in the ~~No Action condition, a projected~~ With Action condition, an increase in projected delay of ~~3~~4.0 or more seconds compared to the No Action is considered a significant impact.

The same criteria apply to signalized and unsignalized intersections. However, for traffic on a minor street at an unsignalized intersection to result in a significant impact, a total approach volume of 90 passenger car equivalents (PCEs) must be projected in the future With Action condition in any peak hour.

## TRANSIT

*ANALYSIS METHODOLOGY*

*Subway Stations*

To determine existing conditions at analyzed subway station elements, subway ridership data were collected at analyzed subway stations in October 2020 and June 2021. The methodology for assessing subway station pedestrian circulation elements (stairs, escalators, and passageways), and fare control elements (regular turnstiles, high entry/exit turnstiles [HEETs], and high exit turnstiles [HXTs]) compares existing and projected pedestrian volumes with the element's design capacity to yield a volume-to-capacity (v/c) ratio. All analyses reflect pedestrian flow volumes over a 15-minute interval during each peak hour. Peak volumes for each of the three analyzed subway stations during the 7:00–9:00 a.m. and 4:30–6:30 p.m. peak periods were determined from the count data. (As noted previously, transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus systems is usually highest.)

Under *CEQR Technical Manual* guidelines, the capacity of a stairway or passageway is determined based on four factors: the NYCT guideline capacity, the effective width, and surging and counter-flow factors, if applicable. NYCT guideline capacity is ten passengers per minute per foot-width (pmf) for stairs and 15 pmf for passageways. The effective width of a stair or passageway is the actual width adjusted to reflect pedestrian avoidance of sidewalls and for center handrails, if present. A surging factor is applied to existing pedestrian volumes to reflect conditions where pedestrian flows tend to be concentrated (or surged) during shorter periods within the 15-minute analysis interval. This factor, which is based on the size of the station and the proximity of the pedestrian element to the station platforms, can reduce the calculated capacity by up to 25 percent. Lastly, a friction (or counter-flow) factor reducing calculated capacity by 10 percent is applied where opposing pedestrian flows use the same stair or passageway. No friction factor is applied if the flow is all or predominantly in one direction.

By contrast with stairways and passageways, under *CEQR Technical Manual* guidelines the capacity of an escalator or turnstile is determined based on only two factors: the NYCT guideline capacity for a 15-minute interval and a surging factor of up to 25 percent. **Table 13-14** shows the

*CEQR Technical Manual* level of service criteria for all subway station elements. As shown in **Table 13-14**, six levels of service are defined with letters A through F. LOS A is representative of free flow conditions without pedestrian conflicts and LOS F depicts severe congestion and queuing.

**Table 13-14**
**Level of Service Criteria for Subway Station Elements**

| LOS | Description | V/C Ratio |
|---|---|---|
| A | Free Flow | 0.00 to 0.45 |
| B | Fluid Flow | 0.45 to 0.70 |
| C | Fluid, somewhat restricted | 0.70 to 1.00 |
| D | Crowded, walking speed restricted | 1.00 to 1.33 |
| E | Congested, some shuffling and queuing | 1.33 to 1.67 |
| F | Severely congested, queued | > 1.67 |
| **Source**: 2021 *CEQR Technical Manual* | | |

*Subway Line Haul*

Line haul capacity is based on the guideline capacity per subway car multiplied by the number of subway cars crossing the maximum load point in the peak hour. Maximum guideline capacities established by NYCT for each car class are 110 passengers/car for a 51-foot subway car, 145 passengers/car for a 60-foot car, and 175 passengers/car for a 75-foot car. The v/c ratio is determined by dividing the number of peak-hour passengers traveling through the maximum load point by the line haul capacity. Maximum load point subway service and ridership data were provided by NYCT. The subway line haul analysis focuses on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway system is usually highest.

*Bus*

The operating conditions for bus service are measured in terms of the number of passengers carried per bus at the maximum load point for each route. This is determined by dividing the peak hour passenger count by the number of buses during that hour. The bus load levels are compared with the NYCT loading guidelines of 54 passengers for a 40-foot standard bus and 85 passengers for a 60-foot articulated bus. The bus analysis focuses on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the bus system is usually highest.

*SIGNIFICANT IMPACT CRITERIA*

*Subway Stations*

The *CEQR Technical Manual* identifies a significant impact for stairways and passageways in terms of the minimum width increment threshold (WIT) based on the minimum amount of additional capacity that would be required to restore conditions to either their No Action v/c ratio or to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Stairways that are substantially degraded in level of service or which experience the formation of extensive queues are classified as significantly impacted. Significant adverse stairway or passageway impacts are typically considered to have occurred once the thresholds shown in **Table 13-15** are reached or exceeded.

**Table 13-15**
**Significant Impact Thresholds for Stairways and Passageways**

| With Action V/C Ratio | WIT for Significant Impact (inches) | |
|---|---|---|
| | Stairway | Passageway |
| 1.00-1.09 | 8 | 13 |
| 1.10-1.19 | 7 | 11.5 |
| 1.20-1.29 | 6 | 10 |
| 1.30-1.39 | 5 | 8.5 |
| 1.40-1.49 | 4 | 6 |
| 1.50-1.59 | 3 | 4.5 |
| >1.6 | 2 | 3 |
| **Source:** 2021 *CEQR Technical Manual* | | |

For turnstiles, escalators, and high-wheel exit gates, the *CEQR Technical Manual* defines a significant impact as an increase from a No Action v/c ratio of below 1.00 to a v/c ratio of 1.00 or greater. Where a facility is already at a v/c ratio of 1.00 or greater, a 0.01 change in v/c ratio is also considered significant.

*Subway Line Haul*

For subway line haul conditions, *CEQR Technical Manual* criteria specify that any increases in load levels that remain within practical capacity limits are generally not considered significant. However, significant adverse subway line haul impacts can occur if a proposed action is expected to generate an incremental increase averaging five or more riders per subway car on lines projected to carry loads exceeding guideline capacity. This is based on the general assumption that when subways are at or above practical capacity, the addition of even five or more riders per car is perceptible.

*Bus*

According to the *CEQR Technical Manual* and NYCT guidelines, additional bus service along a route is recommended when load levels exceed maximum capacity at the route's maximum load point. A significant impact is considered at the route's maximum load point where an increase in bus load levels would exceed the maximum capacity. NYCT's general policy is to provide additional bus service where demand warrants increased service, taking into account fiscal and operational constraints.

## PEDESTRIANS

*ANALYSIS METHODOLOGY*

Data on peak period pedestrian flow volumes were collected along analyzed sidewalks, corner areas, and crosswalks in the vicinity of the Project Area in May 2021 and June 2021. Peak hours were determined by comparing rolling hourly averages, and the highest 15-minute volumes within the selected peak hours were used for analysis. Based on existing peak pedestrian volumes along major corridors in the study area, the peak hours selected for analysis include the weekday

7:45–8:45 a.m., 1:00–2:00 p.m. (midday), and 5:00–6:00 p.m., and Saturday 2:00–3:00 p.m. periods.[4]

Peak 15-minute pedestrian flow conditions during the weekday AM, midday, and PM peak hours are analyzed using *2000 Highway Capacity Manual* methodology and procedures outlined in the *CEQR Technical Manual*. Using this methodology, the congestion level of pedestrian facilities is determined by considering pedestrian volume, measuring the sidewalk or crosswalk width, determining the available pedestrian capacity, and developing a ratio of volume flows to capacity conditions. The resulting ratio is then compared with LOS standards for pedestrian flow, which define a qualitative relationship at a certain pedestrian traffic concentration level. The evaluation of street crosswalks and corners is more complicated as these spaces cannot be treated as corridors due to the time incurred waiting for traffic lights. To effectively evaluate these facilities a "time-space" analysis methodology is employed which takes into consideration the traffic light cycle at intersections.

LOS standards are based on the average area available per pedestrian during the analysis period, typically expressed as a 15-minute peak period. LOS grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. **Table 13-16** defines the LOS criteria for pedestrian crosswalk/corner area and sidewalk conditions, as based on *Highway Capacity Manual* methodology.

The analysis of sidewalk conditions includes a "platoon" factor in the calculation of pedestrian flow to more accurately estimate the dynamics of walking. "Platooning" is the tendency of pedestrians to move in bunched groups or "platoons" once they cross a street where cross traffic required them to wait. ~~Platooning generally results in a level of service one level poorer than that determined for average flow rates.~~Platooned flow is more representative of pedestrian activities within New York City.

**Table 13-16**
**Pedestrian Crosswalk/Corner Area and Sidewalk Levels of Service Descriptions**

| LOS | Crosswalk/Corner | Crosswalk/Corner Area Criteria (sf/ped) | Platoon Sidewalk Criteria (sf/ped) |
|---|---|---|---|
| A | (Unrestricted) | > 60 | > 530 |
| B | (Slightly Restricted) | > 40 to 60 | > 90 to 530 |
| C | (Restricted but fluid) | > 24 to 40 | > 40 to 90 |
| D | (Restricted, necessary to continuously alter walking stride and direction) | > 15 to 24 | > 23 to 40 |
| E | (Severely restricted) | > 8 to 15 | > 11 to 23 |
| F | (Forward progress only by shuffling; no reverse movement possible) | < 8 | < 11 |

**Notes:**
Based on average conditions for 15 minutes
sf/ped—square feet of area per pedestrian
**Source:** 2021 *CEQR Technical Manual*

[4] To account for the ongoing effects of the COVID-19 pandemic on study area pedestrian volumes, pre-pandemic secondary source data from the 2019 *44-01 Northern Boulevard Rezoning EAS* were utilized for some analysis locations and to develop adjustment factors for the 2021 count data where needed.

*SIGNIFICANT IMPACT CRITERIA*

*Sidewalks*

The *CEQR Technical Manual* impact criteria for a Central Business District (CBD) location are used to identify significant adverse impacts due to the proposed rezoning. These criteria define a significant adverse sidewalk impact to have occurred under platoon conditions if the average pedestrian space under the No Action condition is greater than ~~39.2~~34.7 square feet/pedestrian (sf/ped), and the average pedestrian space under the With Action condition is 31.~~5~~4 sf/ped or less (worse than mid-LOS D). If the average pedestrian space under the With Action condition is greater than or equal to 31.5 sf/ped (mid-LOS D or better), the impact should not be considered significant. If the No Action pedestrian space is between 6.4 and ~~39.2~~34.6 sf/ped, a reduction in pedestrian space under the With Action condition should be considered significant based on **Table 13-17**, which shows a sliding scale that identifies what decrease in pedestrian space is considered a significant impact for a given pedestrian space value in the No Action condition. If the reduction in pedestrian space is less than the value in **Table 13-17**, the impact is not considered significant. If the average pedestrian space under the No Action condition is ~~less than~~ 6.~~4~~3 sf/ped or less, then a reduction in pedestrian space greater than or equal to 0.3 sf/ped, under the With Action condition, should be considered significant.

**Table 13-17**
**Significant Impact Criteria for Sidewalks in a CBD Location**

| No Action Condition Pedestrian Flow ($ft^2$/ped) | | | With Action Condition Pedestrian Flow Increment to be Considered a Significant Impact ($ft^2$/ped) |
|---|---|---|---|
| ≥ 34.7 | | | With Action Condition ≤ 31.4 |
| 34.0 | to | 34.6 | Reduction ≥ 3.3 |
| 33.0 | to | 33.9 | Reduction ≥ 3.2 |
| 32.1 | to | 32.9 | Reduction ≥ 3.1 |
| 31.1 | to | 32.0 | Reduction ≥ 3.0 |
| 30.2 | to | 31.0 | Reduction ≥ 2.9 |
| 29.2 | to | 30.1 | Reduction ≥ 2.8 |
| 28.3 | to | 29.1 | Reduction ≥ 2.7 |
| 27.3 | to | 28.2 | Reduction ≥ 2.6 |
| 26.4 | to | 27.2 | Reduction ≥ 2.5 |
| 25.4 | to | 26.3 | Reduction ≥ 2.4 |
| 24.5 | to | 25.3 | Reduction ≥ 2.3 |
| 23.5 | to | 24.4 | Reduction ≥ 2.2 |
| 22.6 | to | 23.4 | Reduction ≥ 2.1 |
| 21.6 | to | 22.5 | Reduction ≥ 2.0 |
| 20.7 | to | 21.5 | Reduction ≥ 1.9 |
| 19.7 | to | 20.6 | Reduction ≥ 1.8 |
| 18.8 | to | 19.6 | Reduction ≥ 1.7 |
| 17.8 | to | 18.7 | Reduction ≥ 1.6 |
| 16.9 | to | 17.7 | Reduction ≥ 1.5 |
| 15.9 | to | 16.8 | Reduction ≥ 1.4 |
| 15.0 | to | 15.8 | Reduction ≥ 1.3 |
| 14.0 | to | 14.9 | Reduction ≥ 1.2 |
| 13.1 | to | 13.9 | Reduction ≥ 1.1 |
| 12.1 | to | 13.0 | Reduction ≥ 1.0 |
| 11.2 | to | 12.0 | Reduction ≥ 0.9 |
| 10.2 | to | 11.1 | Reduction ≥ 0.8 |
| 9.3 | to | 10.1 | Reduction ≥ 0.7 |
| 8.3 | to | 9.2 | Reduction ≥ 0.6 |
| 7.4 | to | 8.2 | Reduction ≥ 0.5 |
| 6.4 | to | 7.3 | Reduction ≥ 0.4 |
| ≤6.3 | | | Reduction ≥ 0.3 |

**Source:** 2021 *CEQR Technical Manual*

*Corner Areas and Crosswalks*

For CBD areas, *CEQR Technical Manual* criteria define a significant adverse corner area or crosswalk impact to have occurred if the average pedestrian space under the No Action condition is greater than or equal to 21.5 sf/ped and, under the With Action condition, the average pedestrian space decreases to 19.~~5~~4 sf/ped or less (worse than mid-LOS D). If the pedestrian space under the With Action condition is greater than or equal to 19.5 sf/ped (mid-LOS D or better), the impact should not be considered significant. If the average pedestrian space under the No Action condition is between 5.1 and 21.~~5~~4 sf/ped, a decrease in pedestrian space under the With Action condition should be considered significant based on **Table 13-18** which shows a sliding scale that identifies what decrease in pedestrian space is considered a significant impact for a given amount of pedestrian space in the No Action condition. If the decrease in pedestrian space is less than the value in **Table 13-18**, the impact is not considered significant. If the average pedestrian space under the No Action condition is less than 5.~~1~~0 sf/ped or less, then a decrease in pedestrian space greater than or equal to 0.2 sf/ped should be considered significant.

**Table 13-18**
**Significant Impact Criteria for Corners and Crosswalks in a CBD Location**

| No Action Condition Pedestrian Space ($ft^2$/ped) | | | With Action Condition Pedestrian Space Reduction to be Considered a Significant Impact ($ft^2$/ped) |
|---|---|---|---|
| ≥ 21.5 | | | With Action Condition ≤ 19.4 |
| 21.3 | to | 22.4 | Reduction ≥ 2.1 |
| 20.4 | to | 21.2 | Reduction ≥ 2.0 |
| 19.5 | to | 20.3 | Reduction ≥ 1.9 |
| 18.6 | to | 19.4 | Reduction ≥ 1.8 |
| 17.7 | to | 18.5 | Reduction ≥ 1.7 |
| 16.8 | to | 17.6 | Reduction ≥ 1.6 |
| 15.9 | to | 16.7 | Reduction ≥ 1.5 |
| 15 | to | 15.8 | Reduction ≥ 1.4 |
| 14.1 | to | 14.9 | Reduction ≥ 1.3 |
| 13.2 | to | 14.0 | Reduction ≥ 1.2 |
| 12.3 | to | 13.1 | Reduction ≥ 1.1 |
| 11.4 | to | 12.2 | Reduction ≥ 1.0 |
| 10.5 | to | 11.3 | Reduction ≥ 0.9 |
| 9.6 | to | 10.4 | Reduction ≥ 0.8 |
| 8.7 | to | 9.5 | Reduction ≥ 0.7 |
| 7.8 | to | 8.6 | Reduction ≥ 0.6 |
| 6.9 | to | 7.7 | Reduction ≥ 0.5 |
| 6 | to | 6.8 | Reduction ≥ 0.4 |
| 5.1 | to | 5.9 | Reduction ≥ 0.3 |
| ≤ 5.0 | | | Reduction ≥ 0.2 |
| **Source:** 2021 *CEQR Technical Manual* | | | |

~~Vehicular and Pedestrian~~

**STREET USER SAFETY EVALUATION**

Under *CEQR Technical Manual* ~~guidelines~~guidance, an evaluation of ~~vehicular and pedestrian~~street user safety ~~is needed~~should be performed for actions that would geometrically or operationally redesign or reconfigure one or more study corridors and/or intersections as part of the proposed action; are located near sensitive land uses, such as hospitals, schools, parks, nursing homes, or senior housing; or analysis locations ~~within the traffic and pedestrian study areas that have been~~which are identified as high crash locations~~. These are~~, or are part of Vision Zero corridors/intersections, within Senior Pedestrian Focus Areas (SPFAs) or on Truck Priority Safety Corridors that could be affected by increased traffic, pedestrian, and bicyclist volumes generated by the proposed project. High crash locations are defined as locations ~~with 48 or more total reportable and non-reportable crashes or~~ where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, crash trends would be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic and pedestrian volumes, crash types and severity, and other contributing

factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with DOT.

### PARKING

*ANALYSIS METHODOLOGY*

Parking demand forecasts for the Proposed Development and the Additional Affected Area are provided to document the projected demand at on-site accessory parking and to determine whether any demand would need to be accommodated on-street or at nearby off-street public parking facilities.

*SIGNIFICANT IMPACT CRITERIA*

Should a proposed action generate the need for more parking than it provides, a shortfall of spaces may be considered significant. The availability of off-street and on-street parking spaces within a convenient walking distance (about ¼-mile)—as well as the availability of alternative modes of transportation—is considered in making this determination.

Under *CEQR Technical Manual* guidance, different criteria for determining significance are applied based on whether or not a proposed project is located in residential or commercial areas designated as Parking Zones 1 and 2 as shown in Map 16-2 ("CEQR Parking Zones, May 2010") in the *CEQR Technical Manual*. As the Project Area is located within Zone 2 as shown in Map 16-2, the inability of the Proposed Actions or the surrounding area to accommodate future parking demands would be considered a parking shortfall, but would generally not be considered significant due to the magnitude of available alternative modes of transportation.

## G. TRAFFIC

### EXISTING CONDITIONS

*STUDY AREA STREET NETWORK*

As shown in **Figure 13-1**, the street network in proximity to the Project Area is comprised of an irregular grid pattern of collector and local streets. Most intersections in the study area are signalized.

The Project Area itself is bounded by 37th Street on the west, 43rd Street and Northern Boulevard on the east, 35th Avenue on the north and 36th Avenue on the south. **37th Street** and **43rd Street** are both one-way northbound local streets that typically operate with one moving lane and parking along both curbs. **Northern Boulevard (NY 25A)** is a principal arterial that operates with three moving lanes in each direction in the vicinity of the Project Area. At its western end, it connects to the Ed Koch Queensboro Bridge to midtown Manhattan, and to the east, it connects to the Brooklyn-Queens Expressway (I-278). Northern Boulevard is a DOT-designated through truck route and is traversed by MTA Bus Q66 local buses (east of 42nd Street) and Q101 local buses (west of Steinway Street). It is also used by QM2, QM3, QM20 and QM32 express buses for access to/from the Ed Koch Queensboro Bridge. **35th Avenue** is a major collector that operates as a one-way westbound street between Northern Boulevard and 43rd Street and as a two-way street with parking along both curbs to the west of 43rd Street. **36th Avenue** is a minor arterial that also operates as a one-way westbound street between Northern Boulevard and 41st Street, and as a two-way street with parking along both curbs to the west of 41st Street.

Other study area corridors of note include Steinway Street, Broadway, 34th Avenue, 36th Street, Queens Boulevard and Greenpoint Avenue. **Steinway Street and Broadway** are both principal arterials that typically operate with one moving lane in each direction and parking along both curbs. Both are DOT-designated Local Truck Routes. Steinway Street is traversed by MTA Bus Q101 local buses while Broadway is traversed by Q104 local buses. **34th Avenue** is a two-way local street with one moving lane (striped as a shared bicycle lane) in each direction and parking along both curbs. **36th Street** is a one-way southbound local street with one moving lane and parking along both curbs. There is also a dedicated bicycle lane north of 34th Avenue. **Queens Boulevard (NY 25)** is a principal arterial roadway that extends from the Ed Koch Queensboro Bridge to Jamaica, Queens. In the vicinity of the study area it typically operates with four to five moving lanes in each direction separated by a wide median that is used for parking. NYCT No. 7 trains on the Flushing Line operate on an elevated structure above this median area. Queens Boulevard is a DOT-designated Through Truck Route and is traversed by MTA Bus Q32 and Q60 local buses, along with express buses operating on eleven routes that enter Queens via the Ed Koch Queensboro Bridge. **Greenpoint Avenue** is a principal arterial that typically operates with one to two moving lanes including a shared bicycle lane in each direction, plus parking along both curbs. It is a DOT-designated Through Truck Route that provides access to the Queens Midtown/Long Island Expressway and is also traversed by NYC Transit B24 buses. En route to and from Greenpoint, Brooklyn via the Greenpoint Avenue Bridge over Newtown Creek.

Regional arteries providing access to the Project Area include the Brooklyn-Queens Expressway (I-278) and the Queens Midtown Expressway/Long Island Expressway (I-495). The **Brooklyn-Queens Expressway or BQE**, located approximately one mile to the east of the Project Area, traverses northern Brooklyn and Queens and connects to the RFK Triborough Bridge to Manhattan and the Bronx. Northern Boulevard is the primary access corridor between the Project Area and the BQE. The **Queens Midtown Expressway**, located approximately 1.5 miles to the south of the Project Area, extends from the Queens-Midtown Tunnel to midtown Manhattan eastward to Queens Boulevard where it becomes the **Long Island Expressway or LIE** and continues for approximately 70 miles to Riverhead on Long Island. The combination of 39th Avenue and Greenpoint Avenue provides the primary access route between the Project Area and the Queens Midtown Expressway and LIE.

*Bus Routes*

MTA bus routes primarily operate along the following study area corridors:

- Borden Avenue (Q67)
- Broadway (Q104)
- 48th Avenue (Q39)
- Greenpoint Avenue (B24)
- Northern Boulevard (Q66, Q101, QM2, QM3, QM20, QM32)
- Queens Boulevard (Q32, Q60, QM1, QM4, QM5, QM6, QM31, QM35, QM36, QM44, X63, X64, X68)
- Steinway Street (Q101)
- 31st Street (Q102)
- 35th Avenue (Q66)

*Truck Routes*

The City has established local and through truck routes to manage the flow of trucks and improve the quality of neighborhoods. The City defines a truck as "a vehicle which is designed for transportation of property, which has either of the following characteristics: two axles and six tires or three or more axles." Trucks must generally travel on local truck routes to reach the intersection nearest their destinations. Through trucks are defined as having neither an origin nor a destination within the Borough of Queens. In proximity to the Project Area, Steinway Street and Broadway have been designated as local truck routes, and Astoria Boulevard, Northern Boulevard, Queens Boulevard, Greenpoint Avenue, the BQE, the LIE and the Queens Midtown Express have been designated as Through Truck Routes.

*Bicycle Lanes*

As shown in **Figure 13-4**, bicycle lanes have been installed along several corridors in proximity to the traffic study area. These include protected bicycle lanes along portions of Queens Boulevard and Skillman and 43rd avenues; conventional bicycle lanes along 35th and 36th streets north of 34th Avenue and along portions of Honeywell, 39th and 48th streets, and Northern Boulevard; and shared lanes along portions of 31st, 34th, 47th, 50th, Skillman and Greenpoint avenues, and 39th and 48th streets.

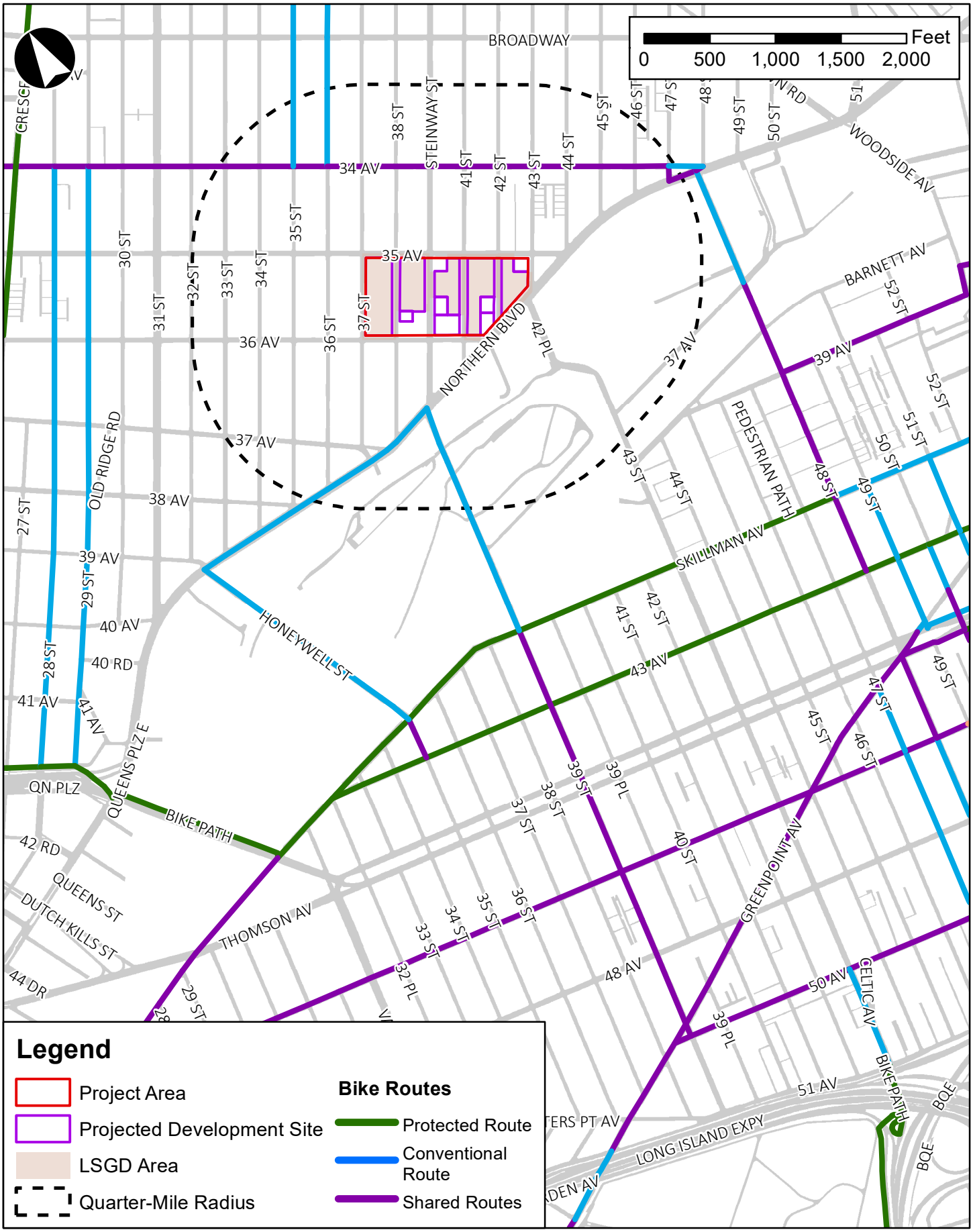
*TRAFFIC CONDITIONS*

To establish the existing conditions traffic network, an extensive traffic data collection program—including ATR counts, turning movement counts, and vehicle classification counts—was undertaken in June 2021. Physical inventory data needed for operational analysis—e.g., the number of traffic lanes, lane widths, pavement markings, turn prohibitions, bus stops, and typical parking regulations—were collected in June 2021. Signal timing plans for signalized intersections within the study area were obtained from DOT. **Figures 13-5 through 13-8** show existing traffic volumes during weekday AM, midday, PM, and Saturday peak hours.

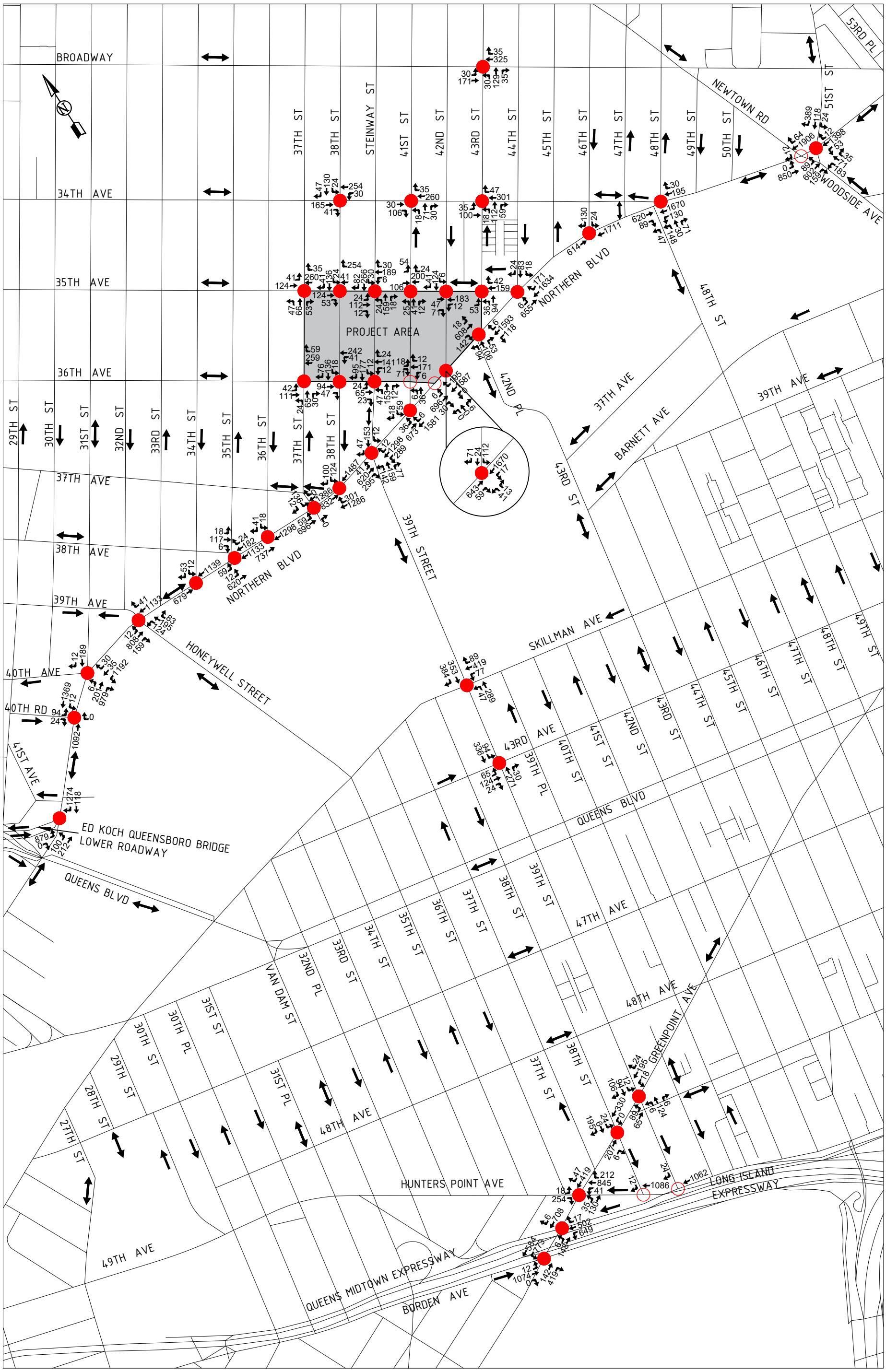
*INTERSECTION CAPACITY ANALYSIS*

The v/c ratios, delays, and levels of service for the individual lane groups experiencing congestion in one or more peak hours under existing conditions are shown in **Table 13-19**. A lane group is considered congested and is included in **Table 13-19** if it operates at LOS E or F and/or with a v/c ratio of 0.90 or above. A v/c ratio of 1.00 or above reflects capacity conditions. As shown in **Table 13-19**, a total of 21 analyzed intersections (all signalized) currently have at least one congested lane group in one or more peak hours. Fourteen of the 21 congested intersections are located along Northern Boulevard. Greenpoint Avenue has three congested intersections, and there is one each along Broadway and along 35th, 35th and 43rd avenues. A total of 14 intersections currently have one or more lane groups operating at or over capacity (v/c ratio $\geq$ 1.0) in the weekday AM peak hour, 9 in the midday, 8 in the PM and 11 in the Saturday peak hour. Overall, the data in **Table 13-19** indicate that congestion at analyzed intersections is most evident during the weekday commuter peak periods and the Saturday peak period, and least evident during the weekday midday period. V/c ratios, delays, and levels of service for all lane groups at all analyzed intersections in all peak periods under existing conditions are provided in Table D-1 in Appendix D.

**Study Area Bicycle Routes**



Existing AM Peak Hour Traffic Volumes



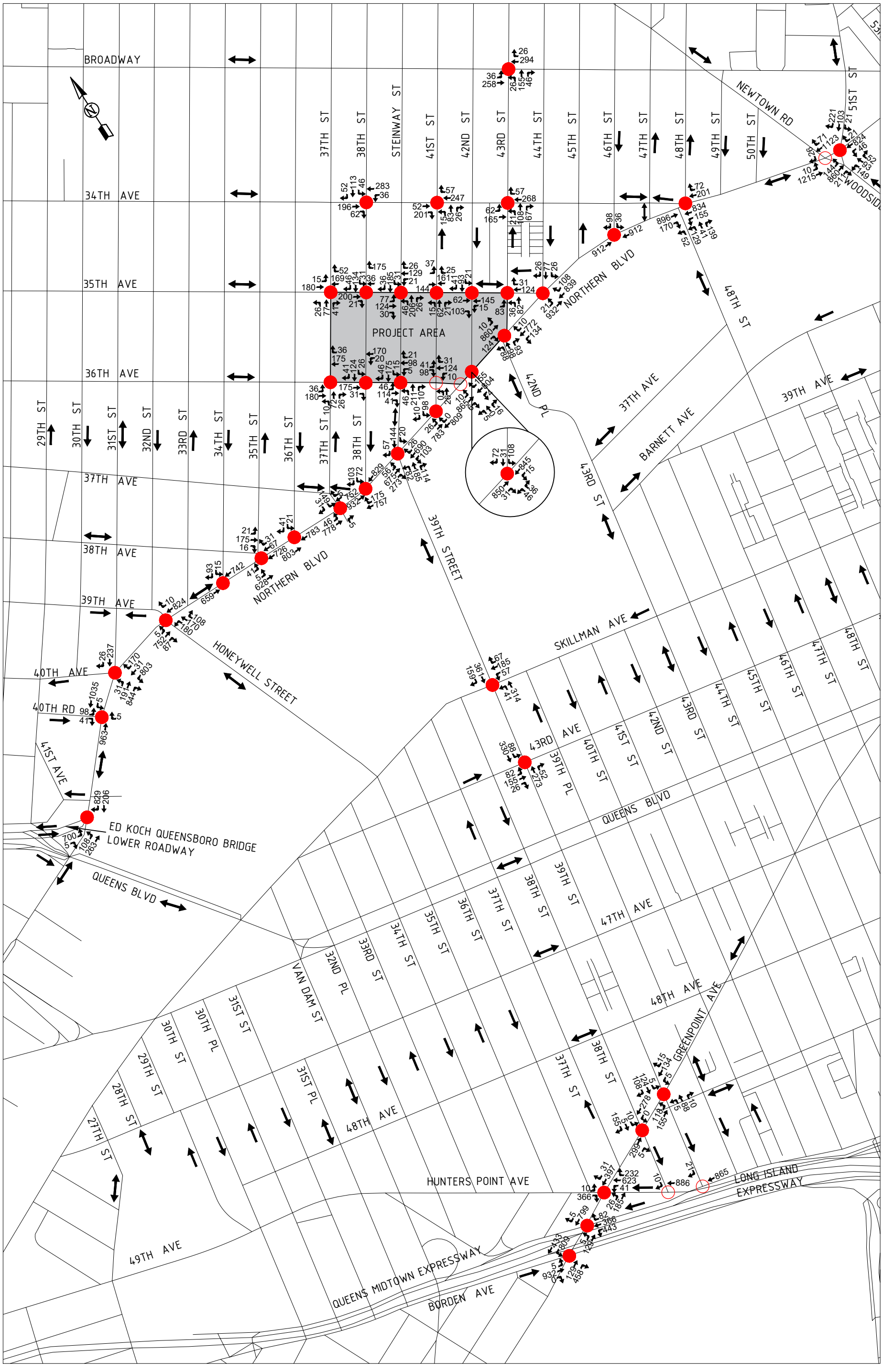

**Legend**

Signalized Analysis Location

Unsignalized Analysis Location

2 = Weekday AM Peak Hour Volume

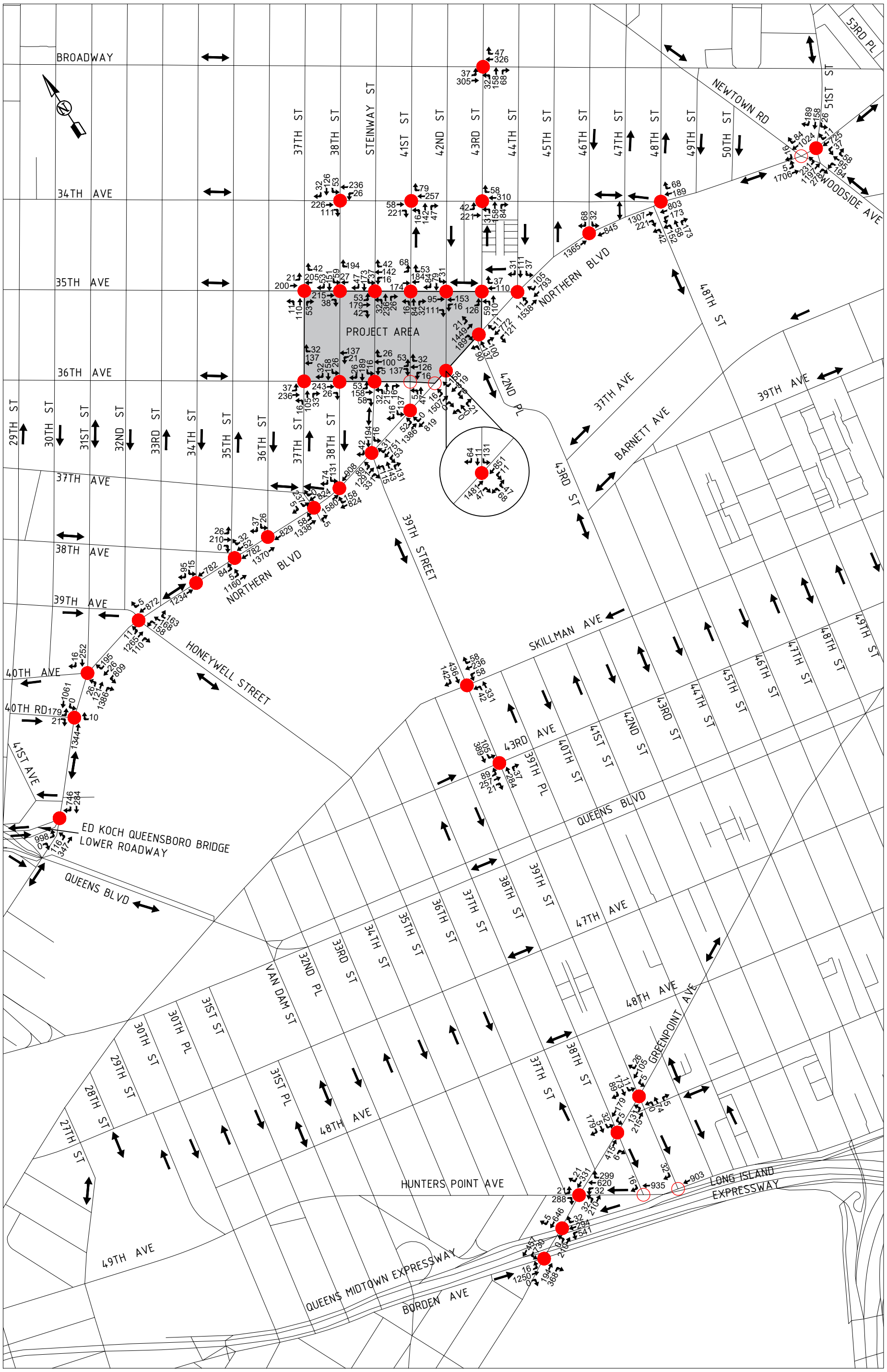
Existing Midday Peak Hour Traffic Volumes




**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday MD Peak Hour Volume

Existing PM Peak Hour Traffic Volumes




**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday PM Peak Hour Volume

Existing Saturday Peak Hour Traffic Volumes




**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Saturday Peak Hour Volume

## Table 13-19
## Congested Lane Groups at Analyzed Intersections Under Existing Conditions

| Intersection | Approach | Lane Group | Existing AM v/c Ratio | Existing AM Delay (sec/veh) | Existing AM LOS | Existing Midday v/c Ratio | Existing Midday Delay (sec/veh) | Existing Midday LOS | Existing PM v/c Ratio | Existing PM Delay (sec/veh) | Existing PM LOS | Existing Saturday v/c Ratio | Existing Saturday Delay (sec/veh) | Existing Saturday LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Broadway (E-W) & 43rd St (N) | NB | LTR | 1.05 | 91.5 | F | 1.03 | 89.2 | F | 1.05 | 89.9 | F | 1.05 | 93.5 | F |
| 35th Ave (E-W) & Steinway St (N-S) | EB | LTR | | | | 0.91 | 62.3 | E | 0.94 | 64.8 | E | | | |
| 36th Ave (E-W) & Steinway St (N-S) | EB | LTR | | | | | | | 0.92 | 69.9 | E | | | |
| Northern Blvd (E-W) & Queensboro Bridge (S) | WB | R | 1.05 | 49.6 | D | 0.99 | 65.2 | E | 0.99 | 39.5 | D | 1.05 | 76.5 | E |
| | SB | L | | | | | | | 0.95 | 52.7 | D | | | |
| Northern Blvd (E-W) & 40th Rd / Driveway (N-S) | WB | T | 0.91 | 15.4 | B | | | | | | | | | |
| | SB | LTR | | | | 0.65 | 55.0 | E | 0.88 | 78.2 | E | | | |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | EB | LTR | | | | | | | 0.94 | 8.0 | A | | | |
| | NB | L | | | | | | | | | | 0.96 | 84.2 | F |
| | NB | TR | 0.92 | 75.5 | E | 1.05 | 112.3 | F | 1.05 | 105.6 | F | 0.98 | 88.3 | F |
| Northern Blvd (E-W) & 35th St/38th Ave (S) | EB | L | 1.01 | 112.8 | F | | | | | | | | | |
| | WB | TR | 0.93 | 8.7 | A | | | | | | | | | |
| | SB | LTR | | | | 0.88 | 75.0 | E | 0.95 | 85.3 | F | | | |
| Northern Blvd (E-W) & 37th St (S) / Standard Ln (N) | EB | L | 0.80 | 69.5 | E | | | | | | | | | |
| | SB | LTR | | | | | | | 0.95 | 87.0 | F | | | |
| Northern Blvd (E-W) & 38th St (S) | EB | T | | | | | | | 0.96 | 23.5 | C | | | |
| | WB | T | 0.95 | 13.6 | B | | | | | | | | | |
| | SB | LR | 0.80 | 59.1 | E | 0.64 | 59.3 | E | | | | 0.63 | 58.8 | E |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | TR | | | | | | | 1.05 | 39.6 | D | | | |
| | WB | L | 1.05 | 36.9 | D | 1.00 | 89.3 | F | 1.05 | 149.8 | F | | | |
| | WB | TR | 1.05 | 29.7 | C | 1.01 | 42.5 | D | 0.96 | 38.9 | D | | | |
| | NB | L | 0.69 | 57.3 | E | | | | | | | | | |
| | NB | TR | 1.04 | 108.6 | F | 0.98 | 82.5 | F | 1.05 | 107.5 | F | 0.95 | 72.4 | E |
| | SB | LTR | 1.05 | 121.4 | F | 1.05 | 119.3 | F | 1.05 | 128.4 | F | 1.05 | 114.6 | F |
| Northern Blvd (E-W) & 41st St (S) | EB | L | 0.85 | 73.0 | E | | | | | | | | | |
| | WB | TR | 1.04 | 30.8 | C | | | | | | | | | |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | EB | TR | | | | | | | 0.93 | 16.1 | B | | | |
| | WB | T | 1.05 | 33.7 | C | | | | | | | | | |
| | NB | LTR | | | | | | | | | | 0.73 | 67.9 | E |
| | SB | LTR | | | | 1.01 | 103.9 | F | 0.77 | 60.7 | E | 1.05 | 112.3 | F |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | EB | LTR | | | | | | | 1.05 | 41.1 | D | | | |
| | WB | L | | | | | | | 1.05 | 107.5 | F | 0.95 | 58.0 | E |
| | WB | TR | 1.02 | 20.9 | C | | | | 0.93 | 33.8 | C | | | |
| | NB | LTR | 0.84 | 62.8 | E | 0.92 | 77.0 | E | 0.97 | 82.9 | F | 1.05 | 106.7 | F |
| Northern Blvd (E-W) & 44th St (S) / 35th Ave (N) | EB | TR | | | | | | | 0.92 | 4.9 | A | | | |
| | WB | TR | 1.05 | 27.2 | C | | | | | | | | | |
| | SB | LTR | 0.67 | 55.9 | E | 0.68 | 56.7 | E | 0.97 | 96.6 | F | 1.05 | 118.6 | F |
| Northern Blvd (E-W) & 46th St (S) | WB | T | 1.05 | 27.0 | C | | | | | | | | | |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | EB | TR | | | | 0.92 | 24.7 | C | 1.05 | 39.8 | D | 1.03 | 46.0 | D |
| | WB | L | | | | 0.98 | 91.9 | F | 1.05 | 117.3 | F | 1.05 | 94.8 | F |
| | WB | TR | 1.05 | 28.1 | C | 1.05 | 45.0 | D | 1.05 | 46.6 | D | 1.05 | 36.0 | D |
| | NB | L | 0.88 | 75.8 | E | 0.94 | 89.6 | F | 1.05 | 122.6 | F | 1.05 | 118.8 | F |
| | NB | TR | | | | 0.87 | 75.5 | E | 1.05 | 115.3 | F | 1.01 | 103.1 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | L | 0.92 | 95.8 | F | | | | 1.05 | 73.0 | E | | | |
| | EB | TR | | | | | | | 1.05 | 37.3 | D | | | |
| | WB | TR | 1.05 | 67.3 | E | | | | | | | | | |
| | NB | LTR | 1.05 | 108.5 | F | 1.05 | 105.9 | F | 1.05 | 98.7 | F | 1.05 | 106.0 | F |
| | SB | R | 1.05 | 99.9 | F | | | | | | | 1.03 | 99.6 | F |
| 43rd Ave (E) & 39th St (N-S) | SB | LT | 1.05 | 72.6 | E | 1.03 | 59.3 | E | 1.05 | 76.1 | E | 1.05 | 70.9 | E |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW/NB) | SE | LTR | 0.88 | 58.5 | E | | | | | | | | | |
| | NW (NB) | LTR | 1.05 | 77.6 | E | 1.05 | 79.2 | E | 0.92 | 47.2 | D | 1.05 | 79.4 | E |
| Greenpoint Ave (NE-SW) & Queens Midtown Expressway (W) | WB | LTR | 0.91 | 28.1 | C | | | | | | | | | |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 1.01 | 66.4 | E | 0.90 | 40.3 | D | 0.95 | 48.1 | D | 1.00 | 56.6 | E |
| | NE | R | 1.05 | 101.1 | F | 1.05 | 90.0 | F | 1.05 | 108.8 | F | 1.05 | 95.2 | F |
| | SW | L | 1.05 | 81.0 | F | 1.05 | 70.3 | E | 1.00 | 69.9 | E | 1.03 | 63.3 | E |

## THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO ACTION CONDITION)

*FUTURE NO ACTION TRAFFIC GROWTH*

Between 2021 and 2032, it is expected that transportation demands in the vicinity of the Project Area will increase due to long-term background growth as well as development that could occur pursuant to existing zoning. The No Action RWCDS reflects a total of approximately nine dwelling units, 264,852 gsf of commercial uses and 150,715 gsf of industrial uses in the Project Area, a net increase of approximately 61,281 gsf of commercial uses and a net decrease of approximately 46,144 gsf of industrial uses compared to the existing condition. It is also expected that there would be approximately 700 parking spaces, a net increase of approximately 150 spaces compared to the existing condition.

In order to forecast future traffic conditions without the Proposed Actions (the No Action condition), development on projected development sites was considered, as were other developments within 1/2-mile of the Project Area including those listed in Table 2-1 in Chapter 2, "Land Use, Zoning, and Public Policy." The Future No Action traffic volumes also reflect annual background growth rates of 0.5 percent per year for the 2021 through 2026 period and 0.25 percent for the 2026 through 2032 period. These background growth rates, recommended in the *CEQR Technical Manual* for projects in Queens outside of Long Island City, are applied to account for smaller projects and as-of-right developments not reflected in Table 2-1, and general increases in travel demand not attributable to specific development projects. **Figures 13-9 through 13-12** show total No Action traffic volumes during weekday AM, midday, PM, and Saturday peak hours.

*INTERSECTION CAPACITY ANALYSIS*

The v/c ratios, delays, and levels of service for those individual lane groups experiencing congestion in one or more peak hours under No Action conditions are shown in **Tables 13-20 through 13-23**. As shown in **Tables 13-20 through 13-23**, a total of 27 intersections (all signalized) would have at least one congested lane group in one or more peak hours in the No Action condition, compared to 21 intersections (all signalized) under existing conditions. Northern Boulevard would continue to have the most congested intersections with 17 (compared to 14 under existing conditions), followed by Greenpoint Avenue with three intersections (unchanged from existing conditions) and 35th Avenue with three intersections (one under existing conditions). Broadway and 36th and 43rd avenues would each have one congested intersection (unchanged from the existing conditions), as would Skillman Avenue (none under existing conditions). A total of ~~16~~15 intersections would have one or more lane groups operating at or over capacity (v/c > 1.0) in the weekday AM peak hour, ~~14~~13 in the midday, ~~17~~16 in the PM, and 15 in the Saturday peak hour. This compares to 14, 9, 8 and 11 intersections operating at or over capacity during these same periods, respectively, under existing conditions. V/c ratios, delays, and levels of service for all lane groups at all analyzed intersections in all peak periods under No Action conditions are provided in Table D-2 in Appendix D.

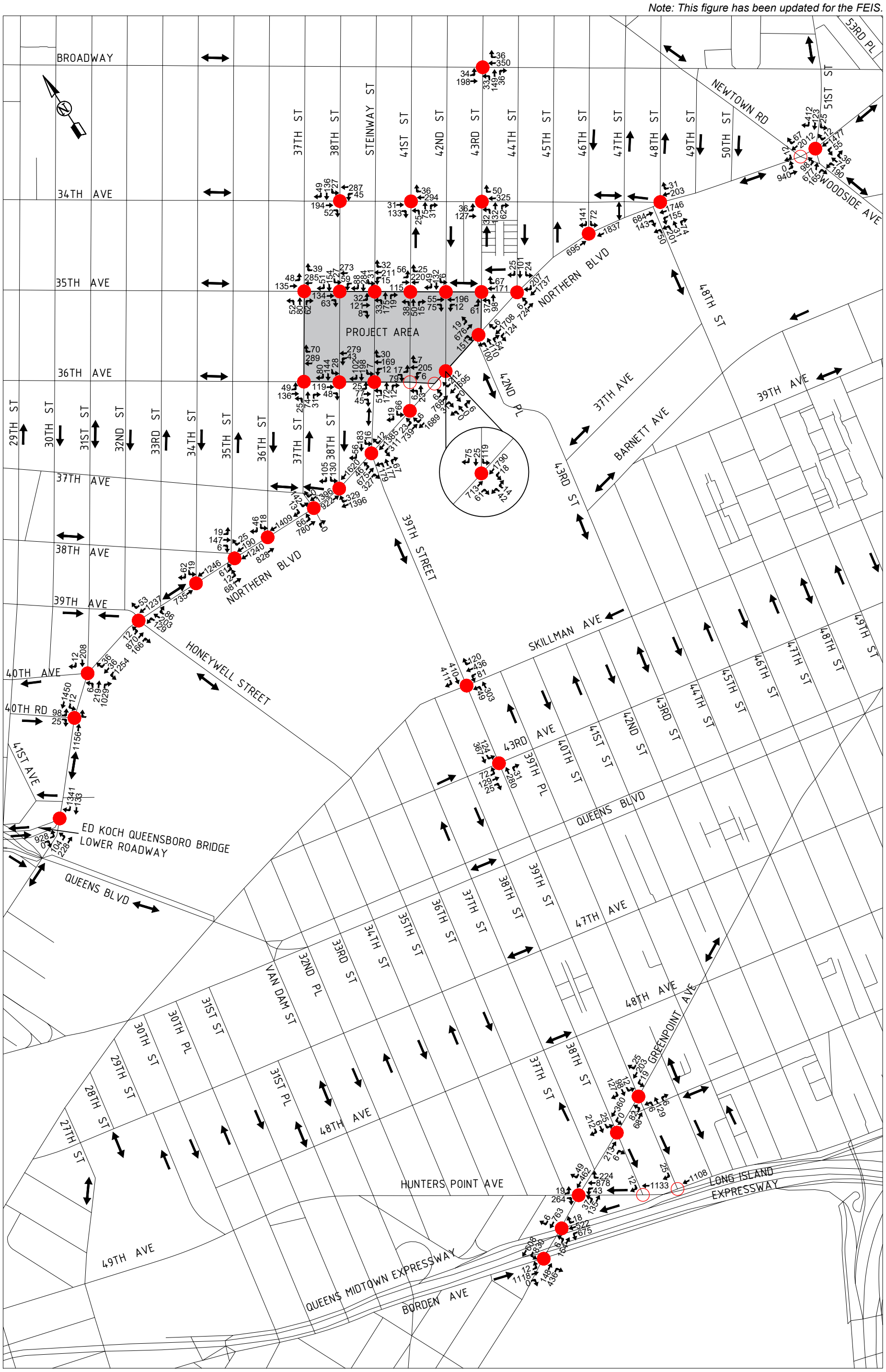
## THE FUTURE WITH THE PROPOSED ACTIONS (WITH ACTION CONDITION)

*FUTURE WITH ACTION TRAFFIC GROWTH*

As shown in **Table 13-9**, based on projected development associated with the Proposed Actions, there would be a net total of approximately ~~610, 457, 689~~614, 370, 583, and ~~569~~578 additional vehicle trips (auto, taxi, and truck) during the weekday AM, midday, PM, and Saturday peak hours, respectively.

# No Action AM Peak Hour Traffic Volumes

*Note: This figure has been updated for the FEIS.*

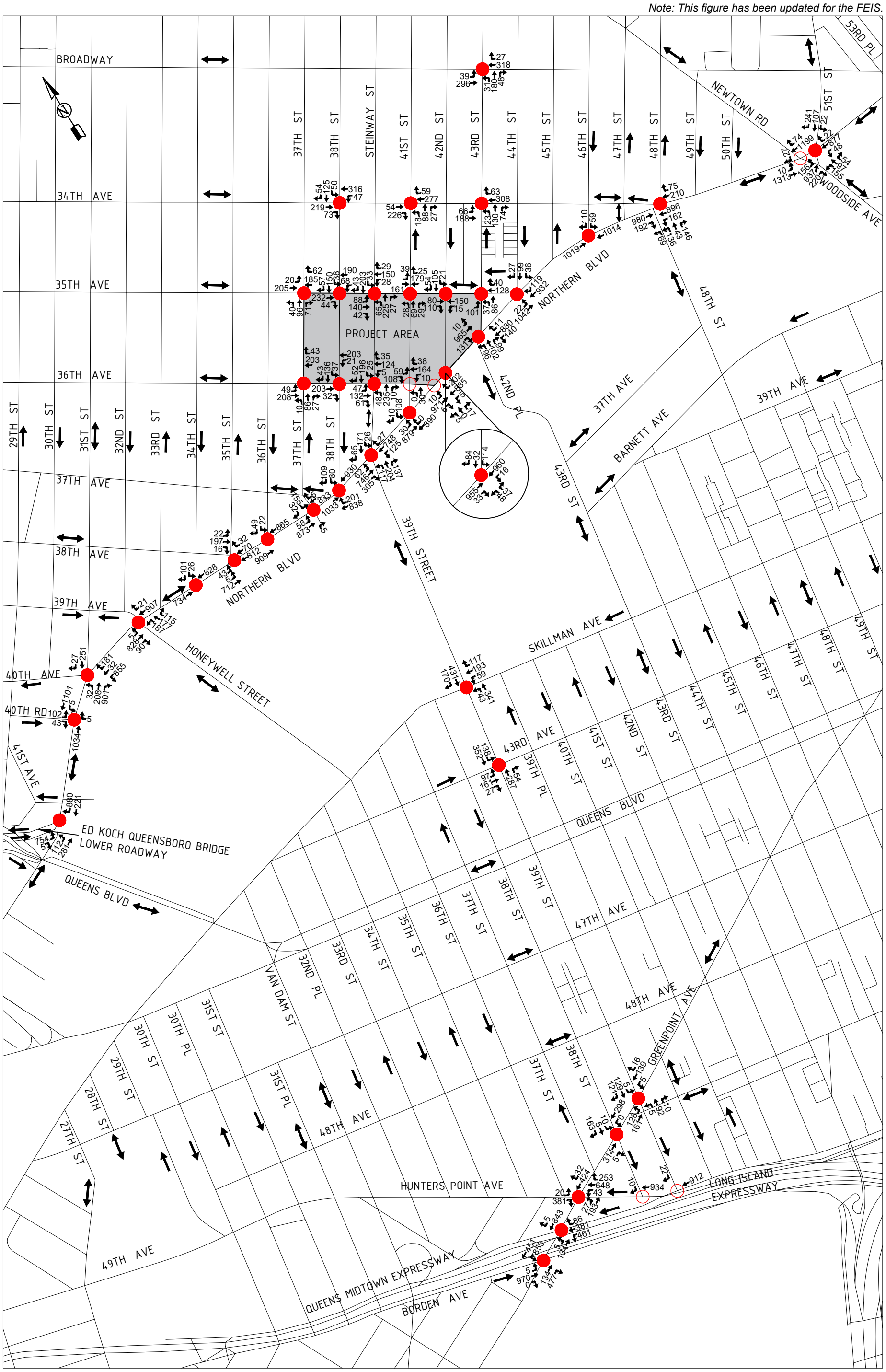



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday AM Peak Hour Volume

# No Action Midday Peak Hour Traffic Volumes

*Note: This figure has been updated for the FEIS.*

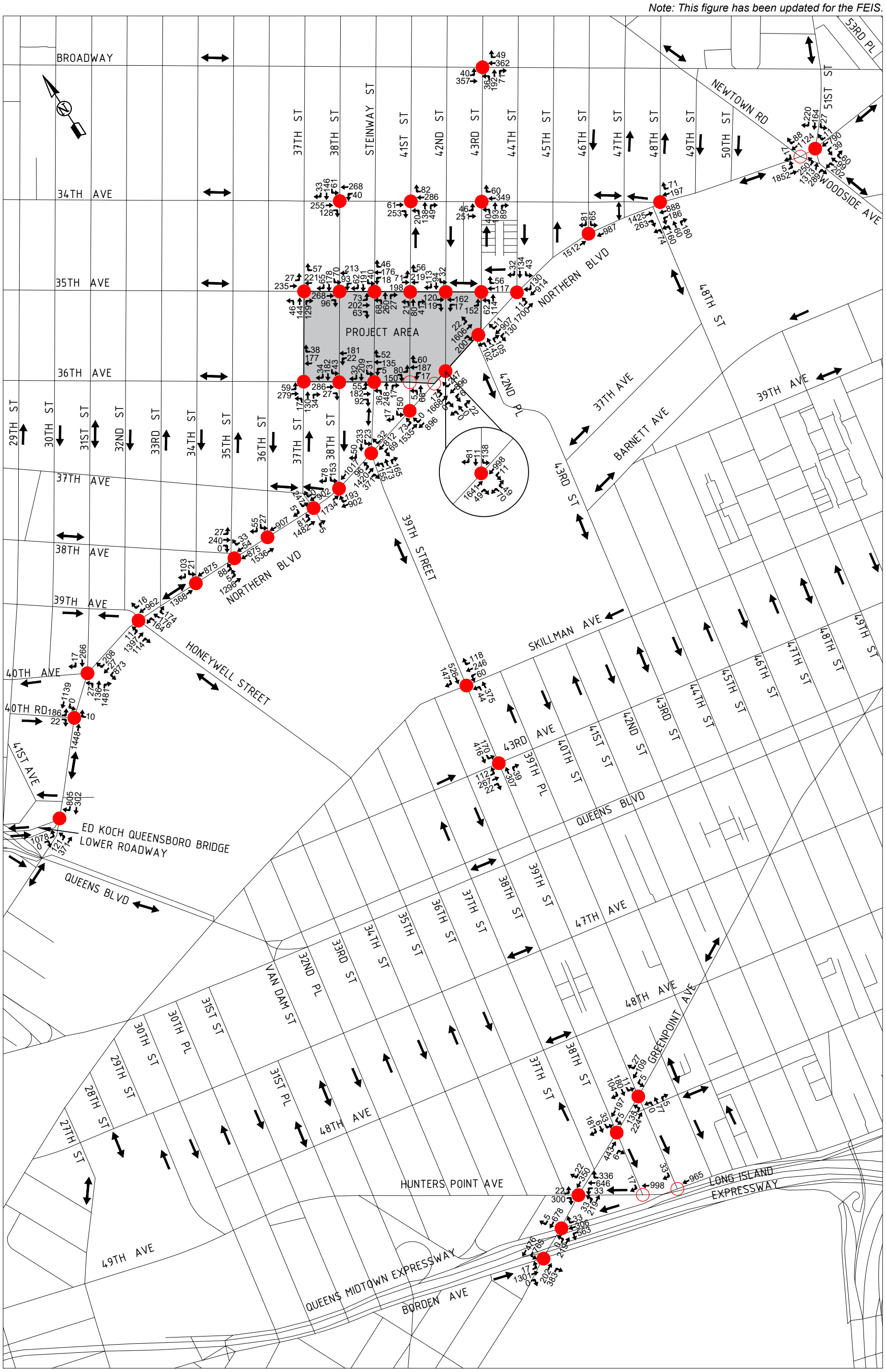



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday MD Peak Hour Volume

# No Action PM Peak Hour Traffic Volumes

*Note: This figure has been updated for the FEIS.*

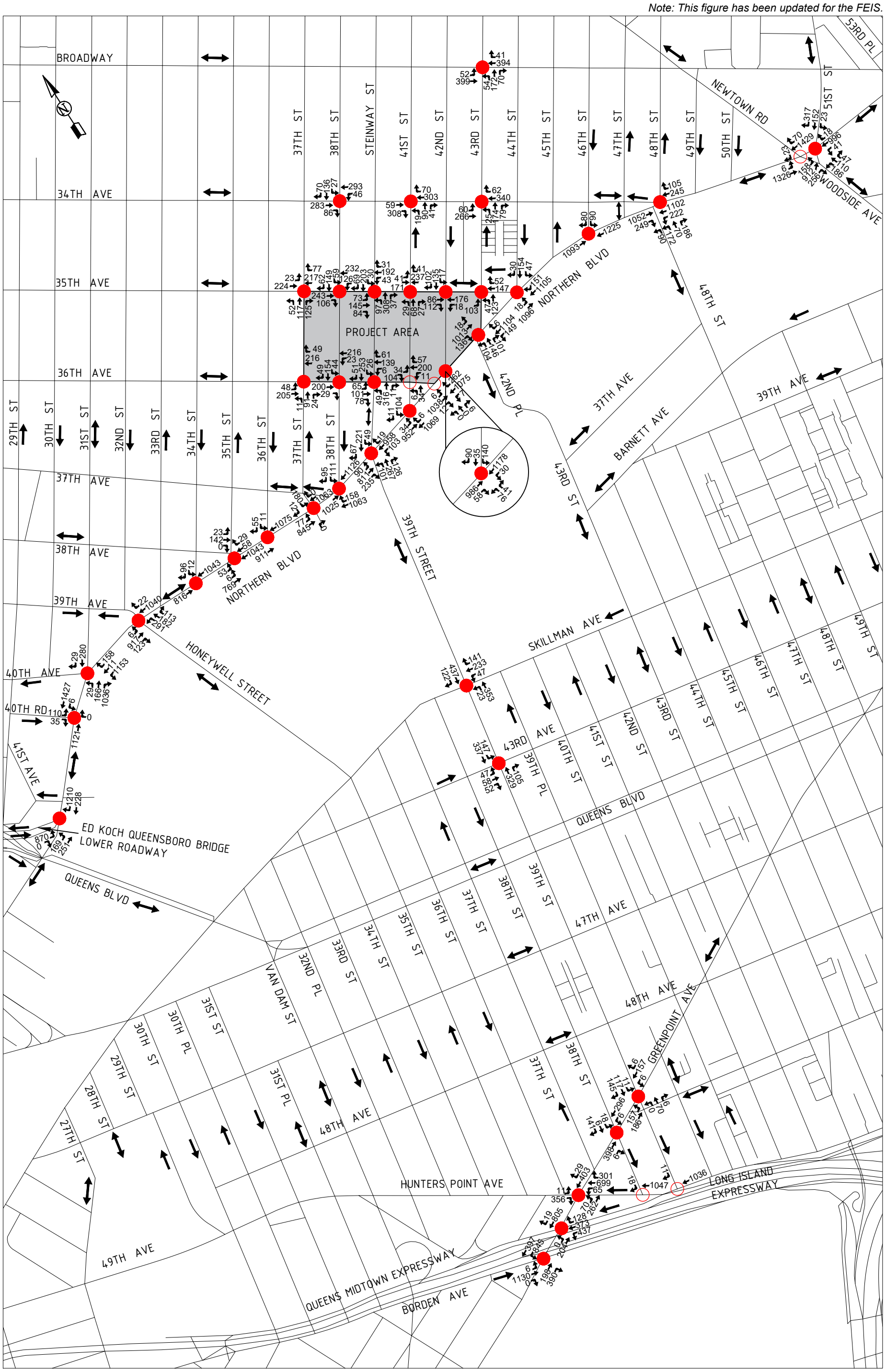



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday PM Peak Hour Volume

# No Action Saturday Peak Hour Traffic Volumes

*Note: This figure has been updated for the FEIS.*




**Legend**

- Signalized Analysis Location
- Unsignalized Analysis Location
- 2 = Saturday Peak Hour Volume

## Table 13-20
## Congested Lane Groups at Analyzed Intersections Under No Action Conditions—Weekday AM Peak Hour

| Intersection | Approach | Lane Group | Existing AM v/c Ratio | Existing AM Delay (sec/veh) | Existing AM LOS | No Action AM v/c Ratio | No Action AM Delay (sec/veh) | No Action AM LOS |
|---|---|---|---|---|---|---|---|---|
| Broadway (E-W) & 43rd St (N) | NB | LTR | 1.05 | 91.5 | F | 1.20 | 139.1 | F |
| 35th Ave (E-W) & Steinway St (N-S) | SB | LTR | 0.86 | 48.7 | D | 0.94 | 60.6 | E |
| Northern Blvd (E-W) & Queensboro Bridge (S) | WB | R | 1.05 | 49.6 | D | 1.11 | 70.9 | E |
| Northern Blvd (E-W) & 40th Rd / Driveway (N-S) | WB | T | 0.91 | 15.4 | B | 0.96 | 21.2 | C |
| Northern Blvd (E-W) & 40th Ave (N) / 31st St (N-S) | WB | T | 0.86 | 8.0 | A | 0.90 | 8.5 | A |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | WB | TR | 0.85 | 9.2 | A | 0.94 | 13.4 | B |
| | NB | TR | 0.92 | 75.5 | E | 0.97 | 86.5 | F |
| Northern Blvd (E-W) & 35th St / 38th Ave (S) | EB | L | 1.01 | 112.8 | F | 1.41 | 263.8 | F |
| | WB | TR | 0.93 | 8.7 | A | 1.02 | 20.7 | C |
| | SB | LTR | 0.57 | 46.7 | D | 0.75 | 57.8 | E |
| Northern Blvd (E-W) & 36th St (S) | WB | T | 0.89 | 4.2 | A | 0.97 | 7.4 | A |
| Northern Blvd (E-W) & 37th St (S)/Standard Ln (N) | EB | L | 0.80 | 69.5 | E | 1.18 | 186.4 | F |
| | WB | LT | 0.89 | 8.7 | A | 0.97 | 12.3 | B |
| Northern Blvd (E-W) & 38th St (S) | WB | T | 0.95 | 13.6 | B | 1.03 | 31.3 | C |
| | SB | LR | 0.80 | 59.1 | E | 0.84 | 62.7 | E |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | L | 0.67 | 52.7 | D | 0.95 | 116.7 | F |
| | WB | L | 1.05 | 36.9 | D | 1.13 | 69.8 | E |
| | WB | TR | 1.05 | 29.7 | C | 1.12 | 60.3 | E |
| | NB | L | 0.69 | 57.3 | E | 0.87 | 73.5 | E |
| | NB | TR | 1.04 | 108.6 | F | 1.07 | 115.4 | F |
| | SB | LTR | 1.05 | 121.4 | F | 1.27 | 197.0 | F |
| Northern Blvd (E-W) & 41st St (S) | WB | TR | 1.04 | 30.8 | C | 1.12 | 57.8 | E |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | WB | T | 1.05 | 33.7 | C | 1.13 | 64.5 | E |
| | SB | LTR | 0.76 | 53.6 | D | 0.81 | 57.7 | E |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | WB | TR | 1.02 | 20.9 | C | 1.09 | 52.0 | D |
| | NB | LTR | 0.84 | 62.8 | E | 0.88 | 68.0 | E |
| Northern Blvd (E-W) & 44th St (S)/35th Ave (N) | WB | TR | 1.05 | 27.2 | C | 1.13 | 65.1 | E |
| | SB | LTR | 0.67 | 55.9 | E | 0.82 | 71.2 | E |
| Northern Blvd (E-W) & 46th St (S) | WB | T | 1.05 | 27.0 | C | 1.13 | 62.8 | E |
| | SB | LR | 0.60 | 48.9 | D | 0.87 | 70.6 | E |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | WB | TR | 1.05 | 28.1 | C | 1.10 | 51.8 | D |
| | NB | L | 0.88 | 75.8 | E | 1.32 | 217.4 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | L | 0.92 | 95.8 | F | 0.79 | 60.1 | E |
| | WB | TR | 1.05 | 67.3 | E | 1.13 | 96.9 | F |
| | NB | LTR | 1.05 | 108.5 | F | 1.20 | 161.2 | F |
| | SB | R | 1.05 | 99.9 | F | 1.18 | 147.3 | F |
| 43rd Ave (E) & 39th St (N-S) | SB | LT | 1.05 | 72.6 | E | 1.38 | 202.4 | F |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW-SE) | WB | TR | 0.77 | 29.7 | C | 0.95 | 49.5 | D |
| | NW | LTR | 1.05 | 77.6 | E | 0.97 | 49.3 | D |
| Greenpoint Ave (NE-SW) & Queens Midtown Expressway (W) | WB | LTR | 0.91 | 28.1 | C | 0.95 | 30.3 | C |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 1.01 | 66.4 | E | 1.05 | 78.1 | E |
| | NE | R | 1.05 | 101.1 | F | 1.10 | 114.6 | F |
| | SW | L | 1.05 | 81.0 | F | 1.12 | 107.2 | F |

Shading denotes lane groups which are not congested in the Existing condition but are shown for comparison purposes.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-21
## Congested Lane Groups at Analyzed Intersections Under No Action Conditions—Weekday Midday Peak Hour

| Intersection | Approach | Lane Group | Existing Midday | | | No Action Midday | | |
|---|---|---|---|---|---|---|---|---|
| | | | v/c Ratio | Delay (sec/veh) | LOS | v/c Ratio | Delay (sec/veh) | LOS |
| Broadway (E-W) & 43rd St (N) | NB | LTR | 1.03 | 89.2 | F | 1.27 | 173.4 | F |
| 35th Ave (E-W) & Steinway St (N-S) | EB | LTR | 0.91 | 62.3 | E | 1.30 | 190.9 | F |
| 36th Ave (E-W) & Steinway St (N-S) | EB | LTR | 0.74 | 43.1 | D | 0.94 | 70.2 | E |
| Northern Blvd (E-W) & Queensboro Bridge (S) | WB | R | 0.99 | 65.2 | E | 1.05 | 82.9 | F |
| Northern Blvd (E-W) & 40th Rd (S) / Driveway (N) | SB | LTR | 0.65 | 55.0 | E | 0.67 | 56.7 | E |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | NB | TR | 1.05 | 112.3 | F | 1.13 | 138.0 | F |
| Northern Blvd (E-W) & 35th St / 38th Ave (S) | SB | LTR | 0.88 | 75.0 | E | 1.11 | 135.7 | F |
| Northern Blvd (E-W) & 38th St (S) | SB | LR | 0.64 | 59.3 | E | 0.69 | 61.8 | E |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | TR | 0.86 | 18.2 | B | 0.96 | 28.2 | C |
| | WB | L | 1.00 | 89.3 | F | 1.60 | 321.4 | F |
| | WB | TR | 1.01 | 42.5 | D | 1.09 | 66.9 | E |
| | NB | TR | 0.98 | 82.5 | F | 1.14 | 127.1 | F |
| | SB | LTR | 1.05 | 119.3 | F | 1.26 | 191.0 | F |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | NB | LTR | 0.53 | 53.5 | D | 0.56 | 55.1 | E |
| | SB | LTR | 1.01 | 103.9 | F | 1.09 | 128.6 | F |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | WB | L | 0.81 | 38.5 | D | 1.03 | 86.3 | F |
| | NB | LTR | 0.92 | 77.0 | E | 0.99 | 92.4 | F |
| Northern Blvd (E-W) & 44th St (S)/35th Ave (N) | SB | LTR | 0.68 | 56.7 | E | 0.94 | 92.7 | F |
| Northern Blvd (E-W) & 46th St (S) | SB | LR | 0.45 | 43.8 | D | 0.69 | 55.6 | E |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | EB | TR | 0.92 | 24.7 | C | 1.06 | 56.2 | E |
| | WB | L | 0.98 | 91.9 | F | 1.18 | 162.2 | F |
| | WB | TR | 1.05 | 45.0 | D | 1.16 | 83.4 | F |
| | NB | L | 0.94 | 89.6 | F | 1.60 | 343.6 | F |
| | NB | TR | 0.87 | 75.5 | E | 0.91 | 83.5 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | TR | 0.85 | 42.0 | D | 0.93 | 46.5 | D |
| | NB | LTR | 1.05 | 105.9 | F | 1.19 | 158.0 | F |
| | SB | R | 0.75 | 52.1 | D | 0.86 | 66.8 | E |
| 43rd Ave (E) & 39th St (N-S) | SB | LT | 1.03 | 59.3 | E | 1.48 | 241.2 | F |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW-SE) | | | 0.86 | 49.7 | D | 1.18 | 137.3 | F |
| | NW | LTR | 1.05 | 79.2 | E | 1.12 | 104.5 | F |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 0.90 | 40.3 | D | 0.93 | 44.7 | D |
| | NE | R | 1.05 | 90.0 | F | 1.10 | 104.5 | F |
| | SW | L | 1.05 | 70.3 | E | 1.11 | 89.6 | F |

Shading denotes lane groups which are not congested in the Existing condition but are shown for comparison purposes.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-22
## Congested Lane Groups at Analyzed Intersections Under No Action Conditions—Weekday PM Peak Hour

| Intersection | Approach | Lane Group | Existing PM | | | No Action PM | | |
|---|---|---|---|---|---|---|---|---|
| | | | v/c Ratio | Delay (sec/veh) | LOS | v/c Ratio | Delay (sec/veh) | LOS |
| Broadway (E-W) & 43rd St (N) | NB | LTR | 1.05 | 89.9 | F | 0.96 | 56.1 | E |
| 35th Ave (E-W) & 37th St (N) | NB | LTR | 0.44 | 15.5 | B | 0.90 | 40.4 | D |
| 35th Ave (E-W) & Steinway St (N-S) | EB | LTR | 0.94 | 64.8 | E | 1.46 | 255.8 | F |
| 36th Ave (E-W) & Steinway St (N-S) | EB | LTR | 0.92 | 69.9 | E | 1.28 | 189.3 | F |
| Northern Blvd (E-W) & Queensboro Bridge (S) | WB | R | 0.99 | 39.5 | D | 1.07 | 61.4 | E |
| | SB | L | 0.95 | 52.7 | D | 1.02 | 69.7 | E |
| Northern Blvd (E-W) & 40th Rd / Driveway (N-S) | SB | LTR | 0.88 | 78.2 | E | 0.93 | 86.0 | F |
| Northern Blvd (E-W) & 40th Ave (N) / 31st St (N-S) | EB | T | 0.88 | 12.9 | B | 0.94 | 16.2 | B |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | EB | LTR | 0.94 | 8.0 | A | 1.03 | 26.6 | C |
| | NB | TR | 1.05 | 105.6 | F | 1.15 | 138.4 | F |
| Northern Blvd (E-W) & 34th St (S) | EB | T | 0.81 | 31.0 | C | 0.90 | 34.8 | C |
| Northern Blvd (E-W) & 35th St / 38th Ave (S) | SB | LTR | 0.95 | 85.3 | F | 1.27 | 195.4 | F |
| Northern Blvd (E-W) & 36th St (S) | EB | T | 0.84 | 13.8 | B | 0.94 | 17.4 | B |
| Northern Blvd (E-W) & 37th St (S)/Standard Ln (N) | EB | TR | 0.82 | 3.8 | A | 0.91 | 4.8 | A |
| | SB | LTR | 0.95 | 87.0 | F | 1.02 | 103.2 | F |
| Northern Blvd (E-W) & 38th St (S) | EB | T | 0.96 | 23.5 | C | 1.05 | 43.6 | D |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | TR | 1.05 | 39.6 | D | 1.16 | 83.8 | F |
| | WB | L | 1.05 | 149.8 | F | 1.38 | 259.5 | F |
| | WB | TR | 0.96 | 38.9 | D | 1.03 | 56.3 | E |
| | NB | L | 0.52 | 49.1 | D | 0.70 | 55.4 | E |
| | NB | TR | 1.05 | 107.5 | F | 1.34 | 214.2 | F |
| | SB | LTR | 1.05 | 128.4 | F | 1.29 | 204.7 | F |
| Northern Blvd (E-W) & 41st St (S) | EB | T | 0.82 | 6.6 | A | 0.91 | 9.3 | A |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | EB | TR | 0.93 | 16.1 | B | 1.03 | 32.7 | C |
| | SB | LTR | 0.77 | 60.7 | E | 0.87 | 68.8 | E |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | EB | LTR | 1.05 | 41.1 | D | 1.16 | 84.0 | F |
| | WB | L | 1.05 | 107.5 | F | 1.14 | 126.8 | F |
| | WB | TR | 0.93 | 33.8 | C | 1.10 | 76.1 | E |
| | NB | LTR | 0.97 | 82.9 | F | 1.04 | 103.0 | F |
| Northern Blvd (E-W) & 44th St (S)/35th Ave (N) | EB | TR | 0.92 | 4.9 | A | 1.01 | 14.6 | B |
| | SB | LTR | 0.97 | 96.6 | F | 1.25 | 193.1 | F |
| Northern Blvd (E-W) & 46th St (S) | EB | T | 0.85 | 7.2 | A | 0.94 | 10.6 | B |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | EB | TR | 1.05 | 39.8 | D | 1.22 | 107.2 | F |
| | WB | L | 1.05 | 117.3 | F | 1.13 | 137.4 | F |
| | WB | TR | 1.05 | 46.6 | D | 1.18 | 97.1 | F |
| | NB | L | 1.05 | 122.6 | F | 1.50 | 299.7 | F |
| | NB | TR | 1.05 | 115.3 | F | 1.09 | 128.6 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | L | 1.05 | 73.0 | E | 1.12 | 103.9 | F |
| | EB | TR | 1.05 | 37.3 | D | 1.14 | 71.8 | E |
| | NB | LTR | 1.05 | 98.7 | F | 1.19 | 150.5 | F |
| Skillman Ave (W) & 39th St (N-S) | NB | LT | 0.75 | 20.5 | C | 1.03 | 62.2 | E |
| 43rd Ave (E) & 39th St (N-S) | SB | LT | 1.05 | 76.1 | E | 1.57 | 289.6 | F |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW-SE) | NW | LTR | 0.92 | 47.2 | D | 0.98 | 58.4 | E |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 0.95 | 48.1 | D | 0.98 | 55.5 | E |
| | NE | R | 1.05 | 108.8 | F | 1.10 | 123.3 | F |
| | SW | L | 1.00 | 69.9 | E | 1.04 | 82.3 | F |

Shading denotes lane groups which are not congested in the Existing condition but are shown for comparison purposes.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

**Table 13-23**
**Congested Lane Groups at Analyzed Intersections**
**Under No Action Conditions—Saturday Peak Hour**

| Intersection | Approach | Lane Group | Existing Saturday | | | No Action Saturday | | |
|---|---|---|---|---|---|---|---|---|
| | | | v/c Ratio | Delay (sec/veh) | LOS | v/c Ratio | Delay (sec/veh) | LOS |
| Broadway (E-W) & 43rd St (N) | NB | LTR | 1.05 | 93.5 | F | 1.32 | 191.1 | F |
| 35th Ave (E-W) & 38th St (S) | WB | LT | 0.44 | 13.2 | B | 1.08 | 86.9 | F |
| 35th Ave (E-W) & Steinway St (N-S) | EB | LTR | 0.80 | 44.9 | D | 1.42 | 239.6 | F |
| 36th Ave (E-W) & Steinway St (N-S) | EB | LTR | 0.79 | 49.9 | D | 1.23 | 167.4 | F |
| Northern Blvd (E-W) & Queensboro Bridge (S) | WB | R | 1.05 | 76.5 | E | 1.12 | 104.3 | F |
| Northern Blvd (E-W) & 40th Rd / Driveway (N-S) | SB | LTR | 0.65 | 54.6 | D | 0.67 | 55.9 | E |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | NB | L | 0.96 | 84.2 | F | 1.07 | 115.0 | F |
| | NB | TR | 0.98 | 88.3 | F | 1.05 | 107.1 | F |
| Northern Blvd (E-W) & 35th St / 38th Ave (S) | SB | LTR | 0.52 | 46.7 | D | 0.75 | 61.3 | E |
| Northern Blvd (E-W) & 38th St (S) | SB | LR | 0.63 | 58.8 | E | 0.72 | 63.9 | E |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | L | 0.84 | 52.3 | D | 1.05 | 105.0 | F |
| | EB | TR | 0.81 | 15.2 | B | 0.90 | 20.9 | C |
| | WB | L | 0.88 | 51.9 | D | 1.43 | 241.5 | F |
| | NB | TR | 0.95 | 72.4 | E | 1.17 | 136.1 | F |
| | SB | LTR | 1.05 | 114.6 | F | 1.33 | 214.3 | F |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | NB | LTR | 0.73 | 67.9 | E | 0.78 | 73.6 | E |
| | SB | LTR | 1.05 | 112.3 | F | 1.16 | 147.1 | F |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | WB | L | 0.95 | 58.0 | E | 1.27 | 162.7 | F |
| | WB | TR | 0.80 | 16.1 | B | 0.92 | 20.6 | C |
| | NB | LTR | 1.05 | 106.7 | F | 1.15 | 139.5 | F |
| Northern Blvd (E-W) & 44th St (S)/35th Ave (N) | SB | LTR | 1.05 | 118.6 | F | 1.44 | 271.1 | F |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | EB | TR | 1.03 | 46.0 | D | 1.20 | 112.8 | F |
| | WB | L | 1.05 | 94.8 | F | 1.10 | 97.0 | F |
| | WB | TR | 1.05 | 36.0 | D | 1.19 | 91.4 | F |
| | NB | L | 1.05 | 118.8 | F | 1.63 | 355.8 | F |
| | NB | TR | 1.01 | 103.1 | F | 1.05 | 113.6 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | TR | 0.82 | 34.6 | C | 0.90 | 39.2 | D |
| | NB | LTR | 1.05 | 106.0 | F | 1.22 | 167.2 | F |
| | SB | R | 1.03 | 99.6 | F | 1.22 | 167.4 | F |
| 43rd Ave (E) & 39th St (N-S) | SB | LT | 1.05 | 70.9 | E | 1.72 | 350.2 | F |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW-SE) | SE | LTR | 0.82 | 45.9 | D | 0.91 | 57.9 | E |
| | NW | LTR | 1.05 | 79.4 | E | 1.13 | 109.0 | F |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 1.00 | 56.6 | E | 1.04 | 67.4 | E |
| | NE | R | 1.05 | 95.2 | F | 1.10 | 109.9 | F |
| | SW | L | 1.03 | 63.3 | E | 1.09 | 83.8 | F |

Shading denotes lane groups which are not congested in the Existing condition but are shown for comparison purposes.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

The assignments of auto and taxi trips to the street network in proximity to the Project Area were based on the anticipated origins and destinations of vehicle trips associated with the different land uses projected under the RWCDS. The origins/destinations for residential uses were based on 2012–2016 American Community Survey (ACS) journey-to-work data, while those for the

office/daycare (staff), warehouse, and light industrial uses were based on 2012–2016 ACS reverse journey-to-work data. The origins/destinations of trips generated by local retail, community center, daycare (students) and physical cultural establishment uses, which are typically local trips within the surrounding neighborhood, were based on the population density within a 0.5-mile radius of the Project Area. Similarly, origins/destinations for the cinema, supermarket, medical office, destination retail, auto dealership, and arts and cultural center uses were based on population density in proximity to the Project Area and surrounding neighborhoods within a two-mile radius. (Additional data on the directional distributions of auto and taxi trips by land use are provided in the *Transportation Planning Factors and Travel Demand Forecast Technical Memorandum* included in Appendix D.)

Auto and taxi trips were first assigned to various portals on the periphery of Astoria, and from there via the most direct route to the Project Area. As the RWCDS includes on-site accessory parking, auto trips were assigned directly to the proposed parking garage entrances on 37th Street and 38th Street for Projected Development Site A, 38th Street for Projected Development Site B, 41st Street for Projected Development Sites C and D, and 43rd Street for Projected Development Site E. Similarly, vehicle trips for the non-applicant-controlled sites (Sites F–K) were assigned to their respective frontages. Although some drivers may park at off-site public parking facilities, assigning all trips to the Project Area can be considered a conservative approach with respect to the traffic impact analysis as it concentrates project traffic at analyzed intersections in proximity to the site rather than dispersing it to outlying parking facilities.

It should be noted that under the Proposed Actions the existing cinema use would be relocated from Projected Development Site A to Projected Development Site D, and expanded from 3,450 seats to 3,500 seats. As such, the traffic assignments also take into account the relocation of the existing cinema demand from Site A to Site D. With regard to the cinema use, it is also important to note that the travel demand forecast assumes 100 percent occupancy of all seats. However, multiplex cinemas typically operate at substantially lower occupancy levels.

Taxi trips were generally assigned to the building frontages. Truck trips were assigned to Northern Boulevard and Astoria Boulevard, which are the nearest DOT-designated Through Truck Routes in proximity to the Project Area, and to Broadway, which is a DOT-designated Local Truck Route. From these designated truck routes, truck trips were assigned to the proposed loading berths on 37th Street for Projected Development Site A, 38th Street for Projected Development Site B, 41st Street for Project Development Site C, 42nd Street for Projected Development Site D, and 42nd and 43rd streets for Projected Development Site E. Similarly, truck trips for the non-applicant-controlled sites (Sites F–K) were assigned to their respective frontages.

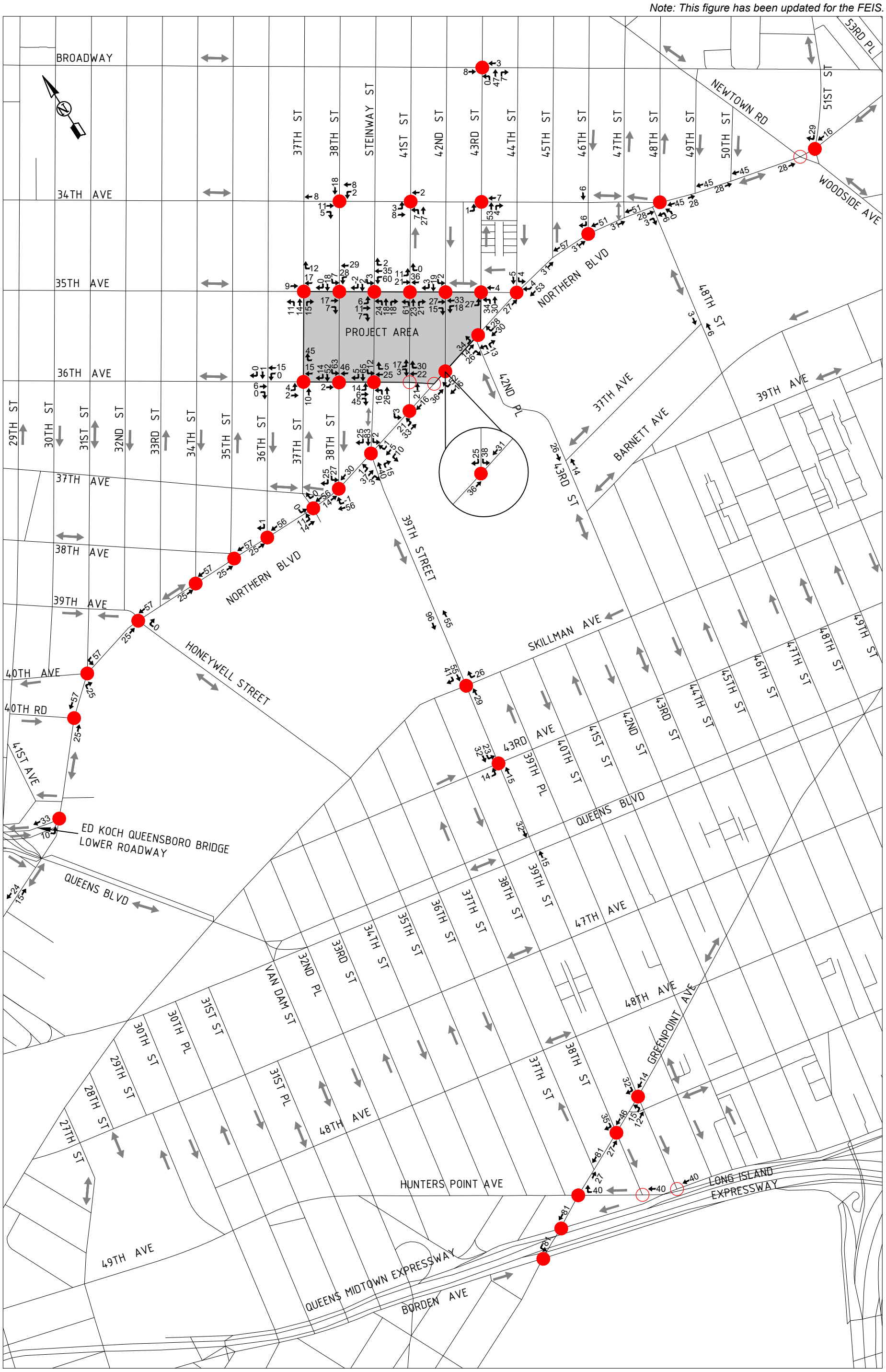
**Figures 13-13 through 13-16** show the assignment of incremental vehicle trips (auto, taxi, and truck) generated during the weekday AM, midday, PM, and Saturday peak hours under the Proposed Actions. **Figures 13-17 through 13-20** show the total weekday AM, midday, PM, and Saturday traffic volumes in the 2032 With Action condition. The volumes shown are the combination of the net incremental traffic generated by the Proposed Actions and the No Action volumes.

*INTERSECTION CAPACITY ANALYSIS*

The v/c ratios, delays, and levels of service for those individual lane groups experiencing congestion in one or more peak hours under With Action conditions are shown in **Tables 13-24**

# AM Peak Hour Project Increment Traffic Volumes

*Note: This figure has been updated for the FEIS.*

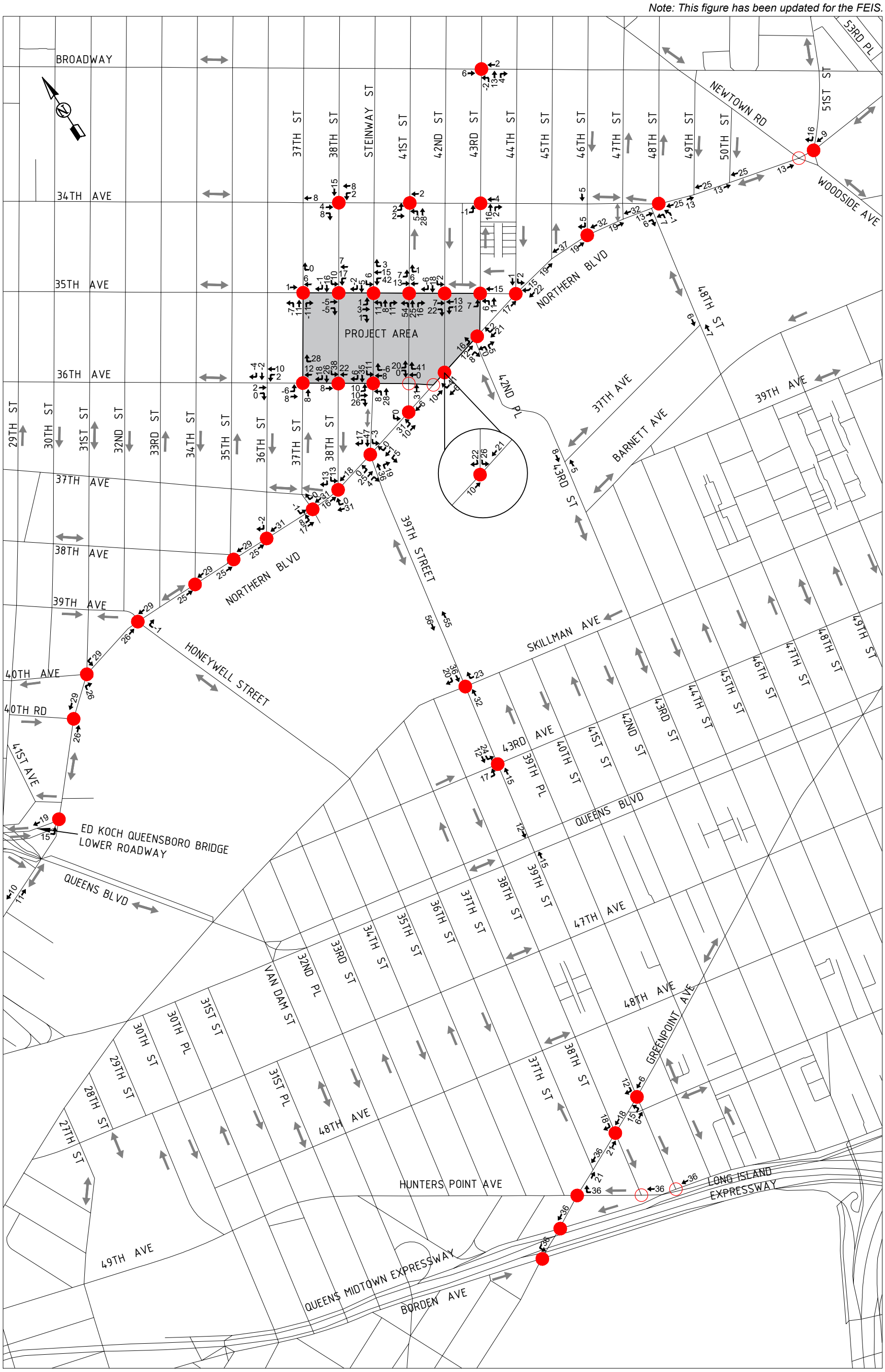



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday AM Peak Hour Volume

# Midday Peak Hour Project Increment Traffic Volumes

*Note: This figure has been updated for the FEIS.*

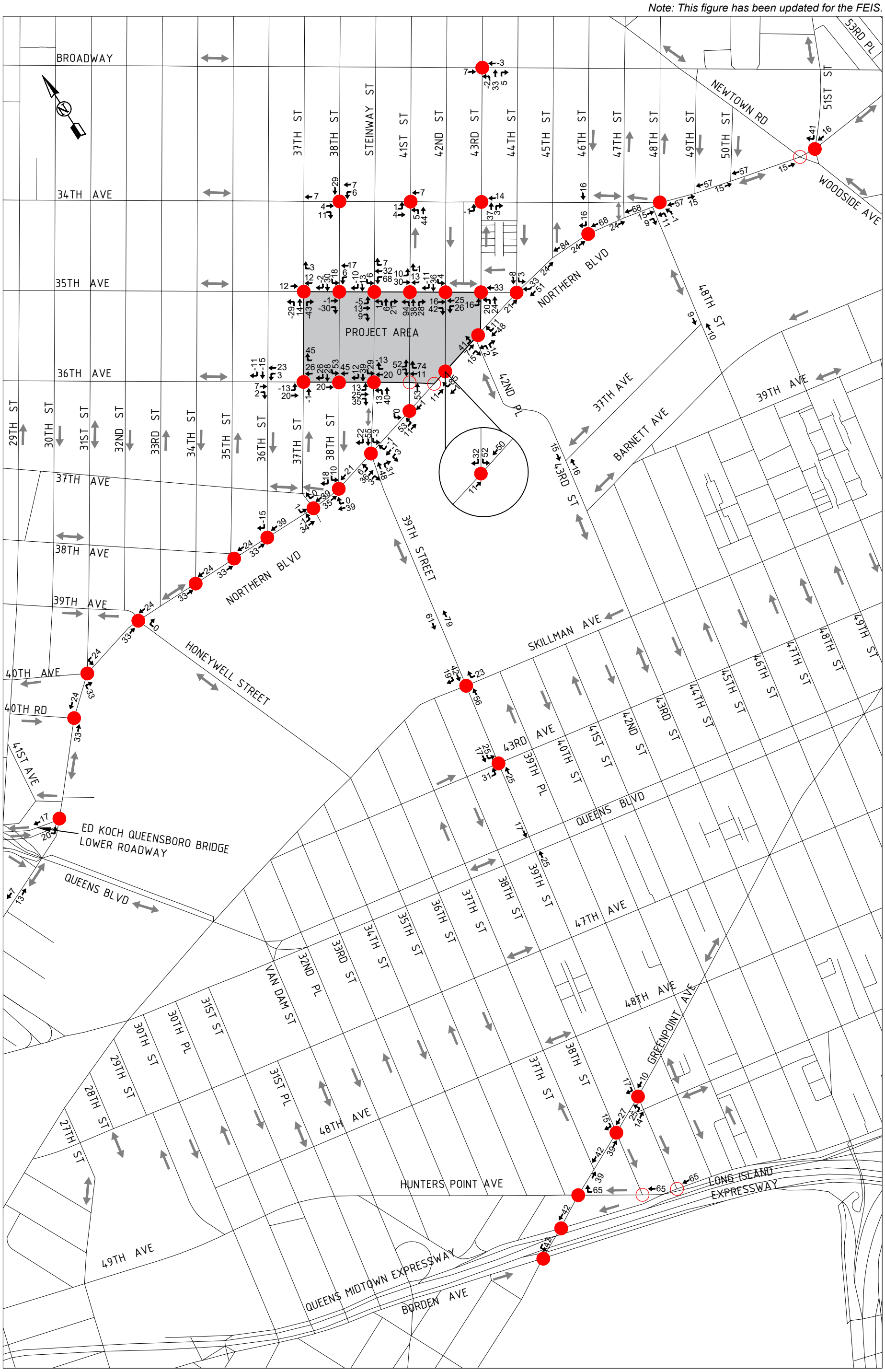



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday MD Peak Hour Volume

# PM Peak Hour Project Increment Traffic Volumes

*Note: This figure has been updated for the FEIS.*

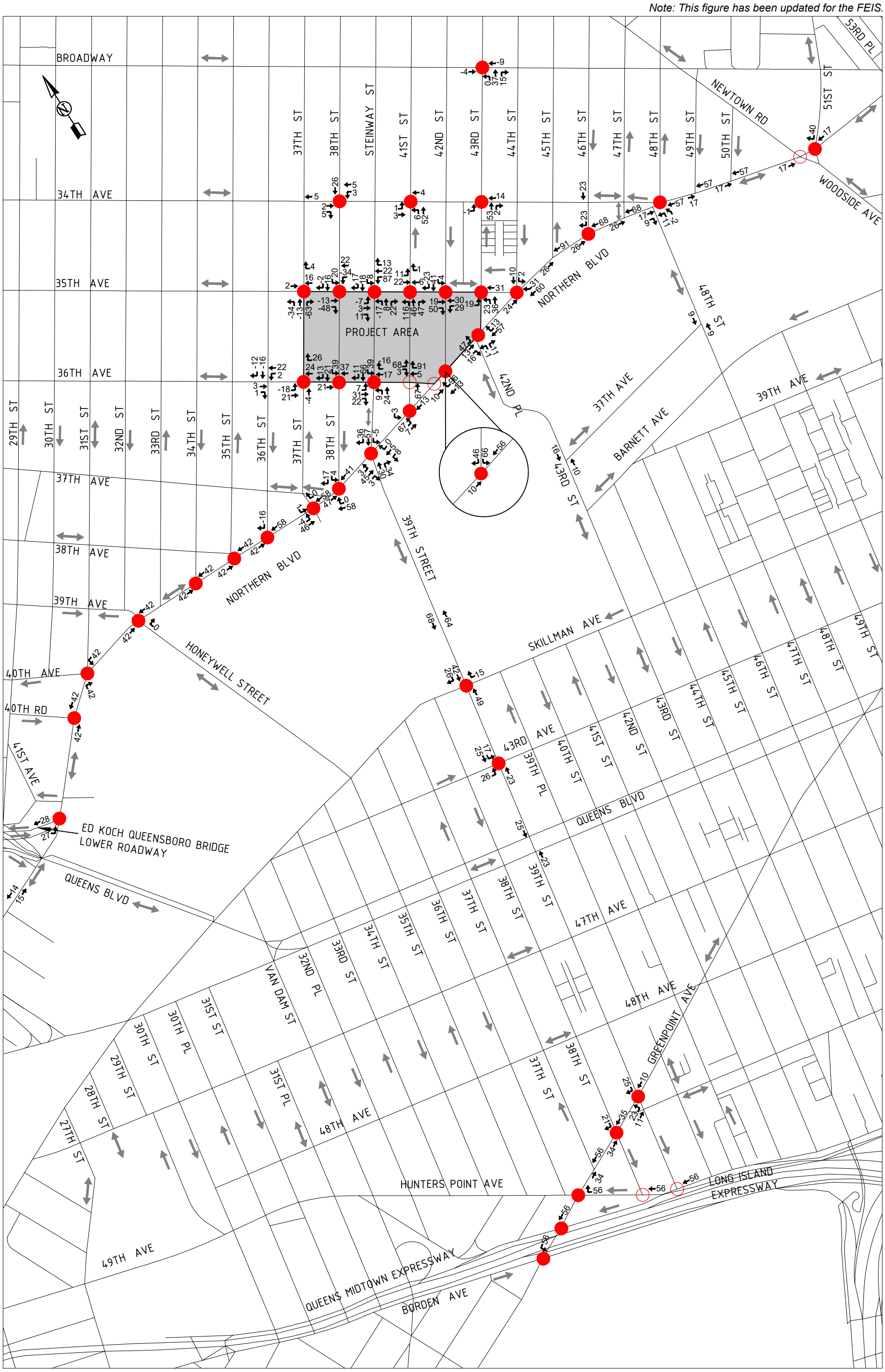



**Legend**

- ● Signalized Analysis Location
- ○ Unsignalized Analysis Location
- 2 = Weekday PM Peak Hour Volume

# Saturday Peak Hour Project Increment Traffic Volumes

*Note: This figure has been updated for the FEIS.*

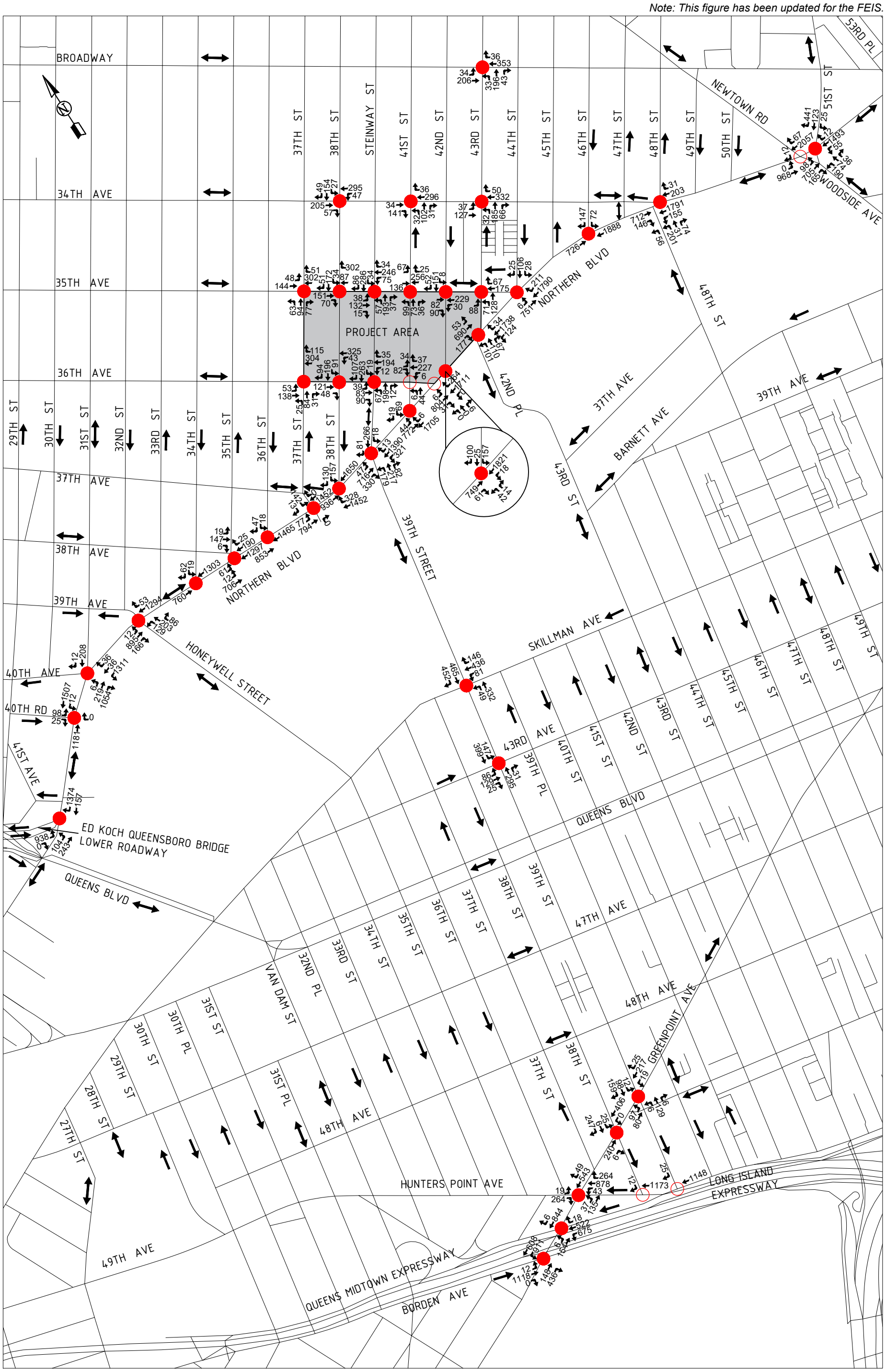



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Saturday Peak Hour Volume

# With Action AM Peak Hour Traffic Volumes

*Note: This figure has been updated for the FEIS.*

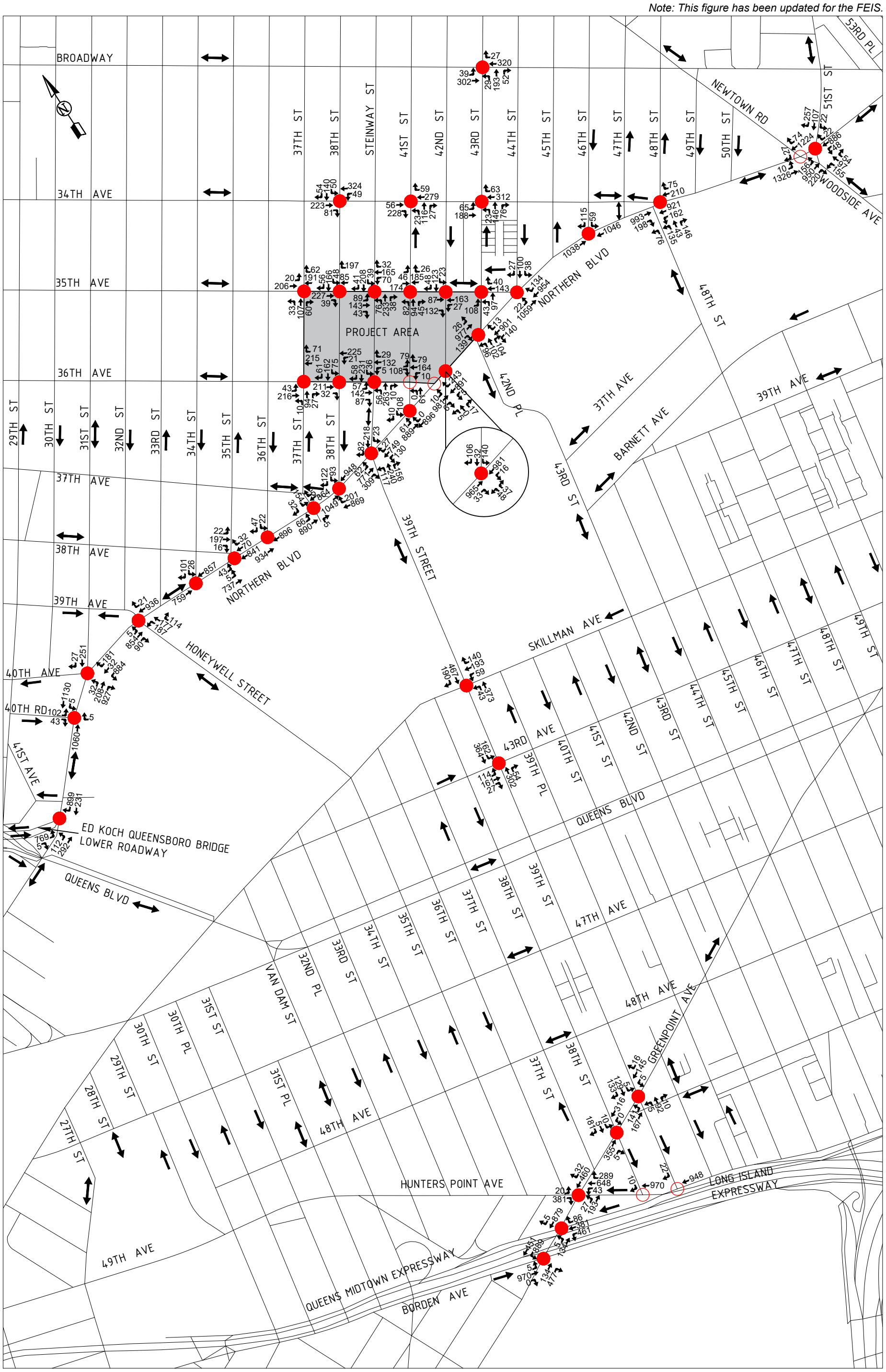



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday AM Peak Hour Volume

With Action Midday Peak Hour Traffic Volumes

*Note: This figure has been updated for the FEIS.*

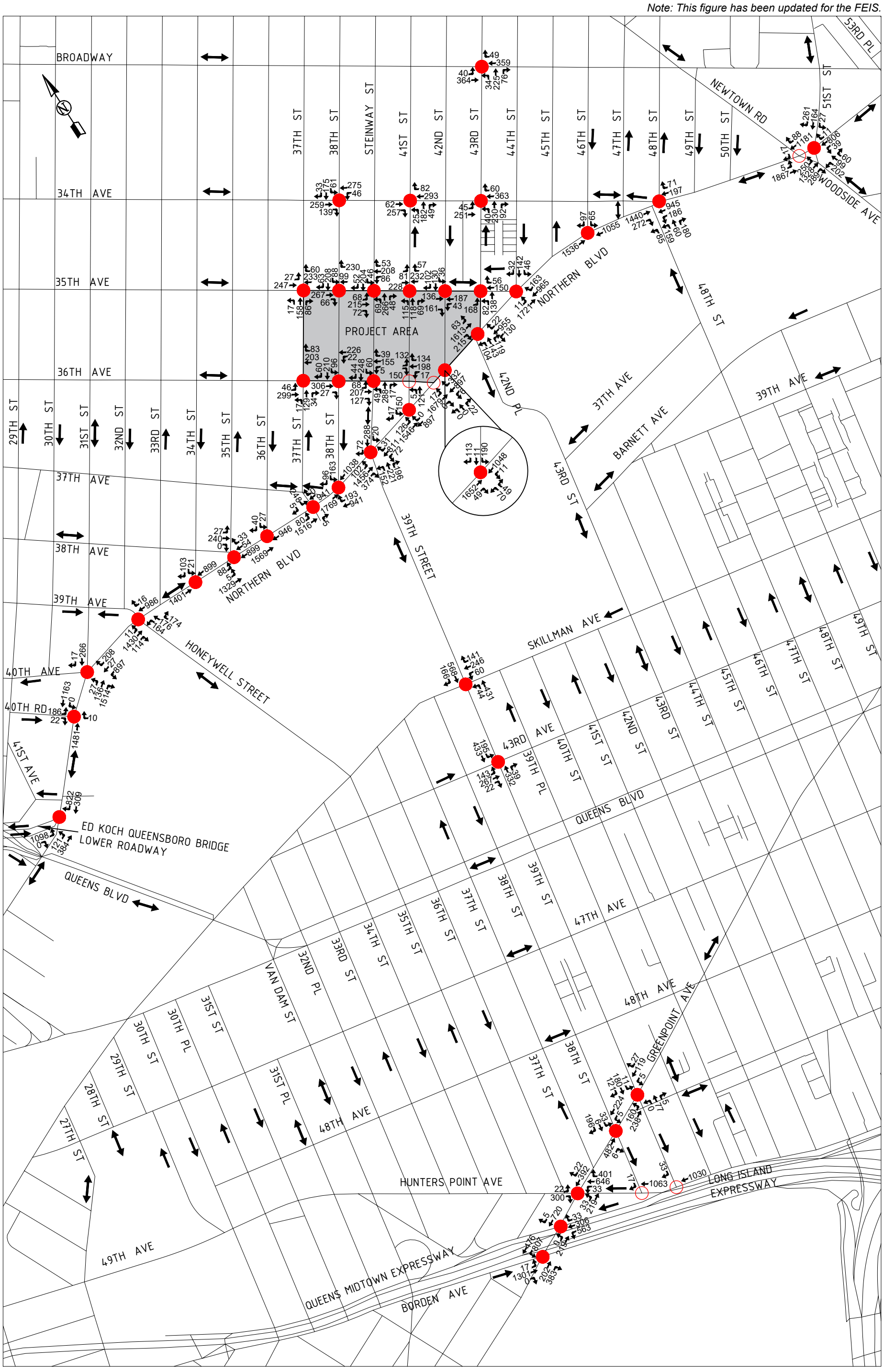



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday MD Peak Hour Volume

# With Action PM Peak Hour Traffic Volumes

*Note: This figure has been updated for the FEIS.*

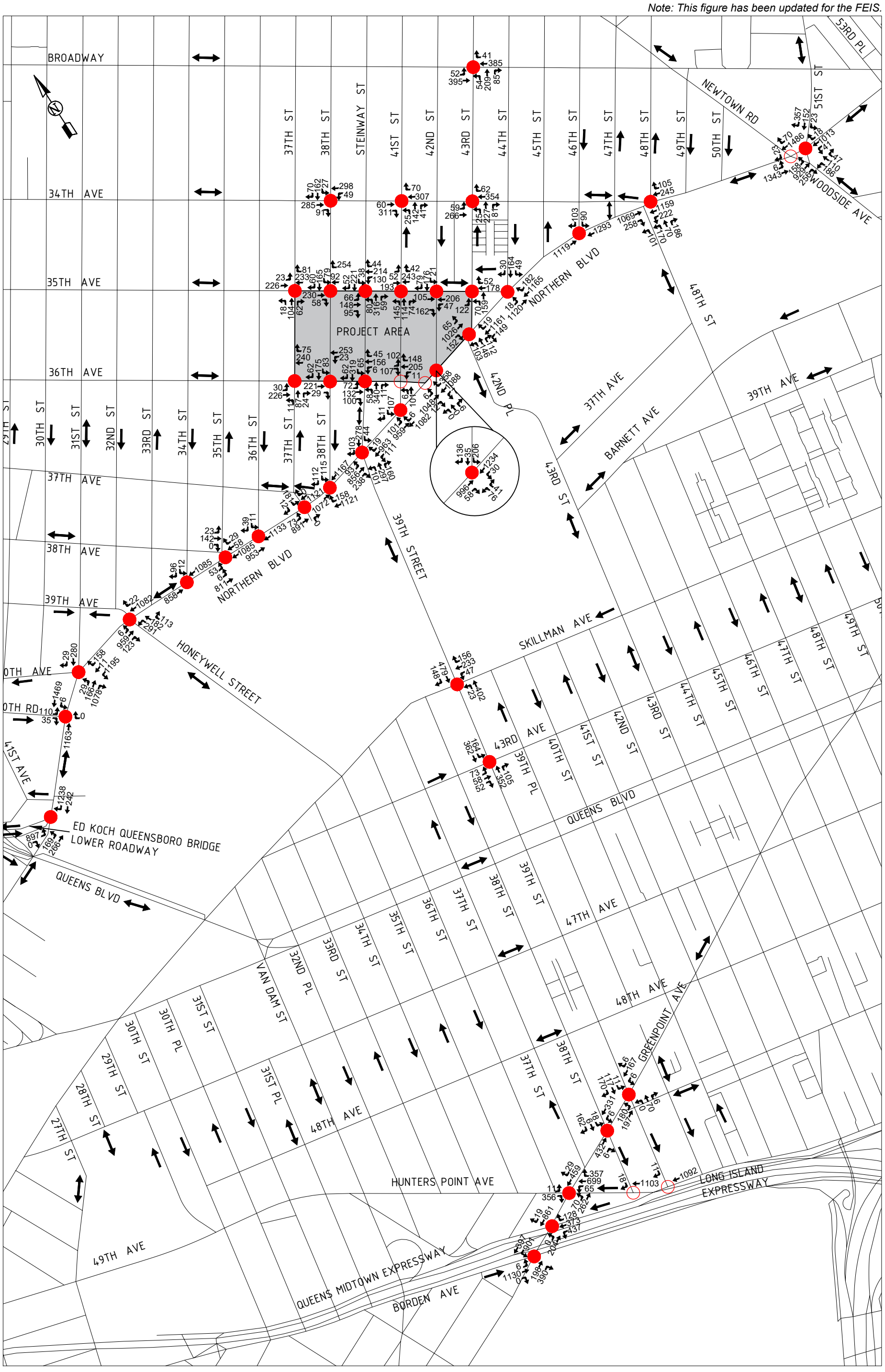



**Legend**

● Signalized Analysis Location ○ Unsignalized Analysis Location 2 = Weekday PM Peak Hour Volume

With-Action Saturday Peak Hour Traffic Volumes

*Note: This figure has been updated for the FEIS.*




**Legend**

- Signalized Analysis Location
- Unsignalized Analysis Location
- 2 = Saturday Peak Hour Volume

**through 13-27**. Lane groups with significant adverse impacts are highlighted. As shown in **Tables 13-24 through 13-27**, a total of ~~30~~29 intersections (all signalized) would have at least one congested lane group in one or more peak hours in the With Action condition. Seventeen of these intersections would be located along Northern Boulevard. By comparison, a total of 27 intersections (all signalized) would experience congestion in the No Action condition. All 17 of the Northern Boulevard intersections that would experience congestion with the Proposed Actions would also be congested in the No Action condition.

The traffic impact analysis indicates the potential for significant adverse impacts at ~~24~~23 intersections (all signalized) during one or more analyzed peak hours. (As noted above, many of these intersections would already be congested in the No Action condition.) Significant adverse impacts were identified to ~~33~~31 lane groups at ~~20~~19 intersections during the weekday AM peak hour, ~~24~~21 lane groups at ~~16~~13 intersections in the weekday midday peak hour, ~~32~~29 lane groups at ~~19~~18 intersections in the weekday PM peak hour, and 25 lane groups at 16 intersections during the Saturday peak hour. V/c ratios, delays, and levels of service for all lane groups at all analyzed intersections in all peak periods are provided in Table D-3 in Appendix D. Potential measures to mitigate the significant adverse traffic impacts identified in **Tables 13-24 through 13-27** are discussed in Chapter 20, "Mitigation."

## Table 13-24
## Congested Lane Groups at Analyzed Intersections Under With Action Conditions—Weekday AM Peak Hour

| | | | No Action AM | | | With Action AM | | |
|---|---|---|---|---|---|---|---|---|
| Intersection | Approach | Lane Group | V/C Ratio | Delay (sec/veh) | LOS | V/C Ratio | Delay (sec/veh) | LOS |
| Broadway (E-W) & 43rd St (N) | NB | LTR | 1.20 | 139.1 | F | 1.52 | 264.5 | F |
| 34th Ave(E-W) & 43rd St (N) | NB | LTR | 0.72 | 31.1 | C | 0.91 | 47.2 | D |
| 35th Ave (E-W) & Steinway St (N-S) | WB | LTR | 0.53 | 21.9 | C | 0.92 | 45.6 | D |
| | SB | LTR | 0.94 | 60.6 | E | 1.06 | 93.5 | F |
| 36th Ave (E-W) & 38th St (S) | SB | LTR | 0.68 | 27.4 | C | 1.04 | 70.0 | E |
| 36th Ave (E-W) & Steinway St (N-S) | EB | LTR | 0.56 | 37.9 | D | 1.02 | 96.4 | F |
| | WB | LTR | 0.69 | 47.9 | D | 0.85 | 63.3 | E |
| Northern Blvd (E-W) & Queensboro Bridge (S) | WB | R | 1.11 | 70.9 | E | 1.13 | 82.6 | F |
| Northern Blvd (E-W) & 40th Rd / Driveway (N-S) | WB | T | 0.96 | 21.2 | C | 1.00 | 27.9 | C |
| Northern Blvd (E-W) & 40th Ave (N) / 31st St (N-S) | WB | T | 0.90 | 8.5 | A | 0.94 | 9.9 | A |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | WB | TR | 0.94 | 13.4 | B | 0.98 | 17.3 | B |
| | NB | TR | 0.97 | 86.5 | F | 0.97 | 86.5 | F |
| Northern Blvd (E-W) & 35th St / 38th Ave (S) | EB | L | 1.41 | 263.8 | F | 1.67 | 377.8 | F |
| | WB | TR | 1.02 | 20.7 | C | 1.06 | 32.5 | C |
| | SB | LTR | 0.75 | 57.8 | E | 0.75 | 57.8 | E |
| Northern Blvd (E-W) & 36th St (S) | WB | T | 0.97 | 7.4 | A | 1.00 | 12.7 | B |
| Northern Blvd (E-W) & 37th St (S)/Standard Ln (N) | EB | L | 1.18 | 186.4 | F | 1.62 | 366.8 | F |
| | WB | LT | 0.97 | 12.3 | B | 1.00 | 18.8 | B |
| | SB | LTR | 0.69 | 54.3 | D | 0.71 | 55.9 | E |
| Northern Blvd (E-W) & 38th St (S) | WB | T | 1.03 | 31.3 | C | 1.05 | 40.0 | D |
| | SB | LR | 0.84 | 62.7 | E | 1.03 | 89.3 | F |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | L | 0.95 | 116.7 | F | 0.98 | 124.4 | F |
| | WB | L | 1.13 | 69.8 | E | 1.17 | 87.0 | F |
| | WB | TR | 1.12 | 60.3 | E | 1.12 | 63.2 | E |
| | NB | L | 0.87 | 73.5 | E | 0.87 | 71.8 | E |
| | NB | TR | 1.07 | 115.4 | F | 1.32 | 212.0 | F |
| | SB | LTR | 1.27 | 197.0 | F | 1.83 | 434.3 | F |
| Northern Blvd (E-W) & 41st St (S) | EB | L | 0.55 | 27.7 | C | 1.04 | 99.1 | F |
| | WB | TR | 1.12 | 57.8 | E | 1.13 | 62.9 | E |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | WB | T | 1.13 | 64.5 | E | 1.15 | 73.0 | E |
| | SB | LTR | 0.81 | 57.7 | E | 1.07 | 108.7 | F |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | EB | LTR | 0.85 | 22.8 | C | 1.61 | 141.1 | F |
| | WB | TR | 1.09 | 52.0 | D | 1.14 | 72.4 | E |
| | NB | LTR | 0.88 | 68.0 | E | 0.93 | 76.5 | E |
| Northern Blvd (E-W) & 44th St (S)/35th Ave (N) | WB | TR | 1.13 | 65.1 | E | 1.17 | 80.8 | F |
| | SB | LTR | 0.82 | 71.2 | E | 0.93 | 89.6 | F |
| Northern Blvd (E-W) & 46th St (S) | WB | T | 1.13 | 62.8 | E | 1.16 | 76.7 | E |
| | SB | LR | 0.87 | 70.6 | E | 0.89 | 74.6 | E |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | WB | L | 0.87 | 24.3 | C | 0.91 | 30.5 | C |
| | WB | TR | 1.10 | 51.8 | D | 1.13 | 65.4 | E |
| | NB | L | 1.32 | 217.4 | F | 1.35 | 229.8 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | L | 0.79 | 60.1 | E | 0.79 | 60.2 | E |
| | WB | TR | 1.13 | 96.9 | F | 1.14 | 101.8 | F |
| | NB | LTR | 1.20 | 161.2 | F | 1.20 | 161.2 | F |
| | SB | R | 1.18 | 147.3 | F | 1.26 | 179.6 | F |
| Skillman Ave (W) & 39th St (N-S) | SB | R | 0.82 | 20.0 | B | 0.90 | 19.7 | B |
| 43rd Ave (E) & 39th St (N-S) | SB | LT | 1.38 | 202.4 | F | 1.65 | 315.6 | F |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW-SE) | WB | TR | 0.95 | 49.5 | D | 1.10 | 90.3 | F |
| | NW | LTR | 0.97 | 49.3 | D | 1.01 | 58.4 | E |
| Greenpoint Ave (NE-SW) & Queens Midtown Expressway (W) | WB | LTR | 0.95 | 30.3 | C | 0.95 | 30.3 | C |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 1.05 | 78.1 | E | 1.05 | 78.1 | E |
| | NE | R | 1.10 | 114.6 | F | 1.10 | 114.6 | F |
| | SW | L | 1.12 | 107.2 | F | 1.23 | 150.9 | F |

*Shading denotes significant adverse impact.*

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-25
## Congested Lane Groups at Analyzed Intersections Under With Action Conditions—Weekday Midday Peak Hour

| | | | No Action Midday | | | With Action Midday | | |
|---|---|---|---|---|---|---|---|---|
| Intersection | Approach | Lane Group | V/C Ratio | Delay (sec/veh) | LOS | V/C Ratio | Delay (sec/veh) | LOS |
| Broadway (E-W) & 43rd St (N) | NB | LTR | 1.27 | 173.4 | F | 1.36 | 211.2 | F |
| 35th Ave (E-W) & Steinway St (N-S) | EB | LTR | 1.30 | 190.9 | F | 1.38 | 226.5 | F |
| | WB | LTR | 0.69 | 37.6 | D | 1.14 | 126.3 | F |
| 36th Ave (E-W) & Steinway St (N-S) | EB | LTR | 0.94 | 70.2 | E | 1.27 | 180.3 | F |
| Northern Blvd (E-W) & Queensboro Bridge (S) | WB | R | 1.05 | 82.9 | F | 1.08 | 91.1 | F |
| Northern Blvd (E-W) & 40th Rd (S) / Driveway (N) | SB | LTR | 0.67 | 56.7 | E | 0.67 | 56.7 | E |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | NB | TR | 1.13 | 138.0 | F | 1.13 | 136.8 | F |
| Northern Blvd (E-W) & 35th St / 38th Ave (S) | SB | LTR | 1.11 | 135.7 | F | 1.11 | 135.7 | F |
| Northern Blvd (E-W) & 38th St (S) | SB | LR | 0.69 | 61.8 | E | 0.78 | 66.7 | E |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | TR | 0.96 | 28.2 | C | 1.00 | 36.0 | D |
| | WB | L | 1.60 | 321.4 | F | 1.82 | 415.2 | F |
| | WB | TR | 1.09 | 66.9 | E | 1.10 | 68.3 | E |
| | NB | TR | 1.14 | 127.1 | F | 1.34 | 209.6 | F |
| | SB | LTR | 1.26 | 191.0 | F | 1.55 | 313.3 | F |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | NB | LTR | 0.56 | 55.1 | E | 0.56 | 55.6 | E |
| | SB | LTR | 1.09 | 128.6 | F | 1.35 | 225.0 | F |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | EB | LTR | 0.84 | 30.3 | C | 0.91 | 35.7 | D |
| | WB | L | 1.03 | 86.3 | F | 1.10 | 108.1 | F |
| | NB | LTR | 0.99 | 92.4 | F | 1.01 | 98.6 | F |
| Northern Blvd (E-W) & 44th St (S)/35th Ave (N) | SB | LTR | 0.94 | 92.7 | F | 1.04 | 121.4 | F |
| Northern Blvd (E-W) & 46th St (S) | SB | LR | 0.69 | 55.6 | E | 0.71 | 57.1 | E |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | EB | TR | 1.06 | 56.2 | E | 1.09 | 68.3 | E |
| | WB | L | 1.18 | 162.2 | F | 1.20 | 171.5 | F |
| | WB | TR | 1.16 | 83.4 | F | 1.20 | 104.0 | F |
| | NB | L | 1.60 | 343.6 | F | 1.65 | 365.3 | F |
| | NB | TR | 0.91 | 83.5 | F | 0.91 | 83.5 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | TR | 0.93 | 46.5 | D | 0.94 | 47.2 | D |
| | NB | LTR | 1.19 | 158.0 | F | 1.19 | 158.0 | F |
| | SB | R | 0.86 | 66.8 | E | 0.92 | 76.4 | E |
| Skillman Ave (W) & 39th St (N-S) | NB | LT | 0.84 | 34.8 | C | 0.97 | 54.5 | D |
| 43rd Ave (W) & 39th St (N-S) | SB | LT | 1.48 | 241.2 | F | 1.71 | 339.4 | F |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW-SE) | | | 1.18 | 137.3 | F | 1.23 | 161.5 | F |
| | NW | LTR | 1.12 | 104.5 | F | 1.17 | 122.2 | F |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 0.93 | 44.7 | D | 0.93 | 44.7 | D |
| | NE | R | 1.10 | 104.5 | F | 1.10 | 104.5 | F |
| | SW | L | 1.11 | 89.6 | F | 1.16 | 107.4 | F |

*Shading denotes significant adverse impact.*

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-26
## Congested Lane Groups at Analyzed Intersections Under With Action Conditions—Weekday PM Peak Hour

| | | | No Action PM | | | With Action PM | | |
|---|---|---|---|---|---|---|---|---|
| Intersection | Approach | Lane Group | V/C Ratio | Delay (sec/veh) | LOS | V/C Ratio | Delay (sec/veh) | LOS |
| Broadway (E-W) & 43rd St (N) | NB | LTR | 0.96 | 56.1 | E | 1.10 | 89.7 | F |
| 34th Ave (E-W) & 43rd St (N) | NB | LTR | 0.89 | 47.9 | D | 1.03 | 71.8 | E |
| 35th Ave (E-W) & 38th St (S) | SB | LTR | 0.79 | 27.6 | C | 1.00 | 57.3 | E |
| 35th Ave (E-W) & Steinway St (N-S) | EB | LTR | 1.46 | 255.8 | F | 1.60 | 318.6 | F |
| | WB | LTR | 0.82 | 46.3 | D | 1.71 | 364.8 | F |
| 35th Ave (E-W) & 41st St (N) | NB | LTR | 0.45 | 20.1 | C | 1.21 | 141.2 | F |
| 36th Ave (E-W) & 38th St (S) | SB | LTR | 0.67 | 22.4 | C | 0.98 | 44.4 | D |
| 36th Ave (E-W) & Steinway St (N-S) | EB | LTR | 1.28 | 189.3 | F | 1.83 | 427.7 | F |
| Northern Blvd (E-W) & Queensboro Bridge (S) | WB | R | 1.07 | 61.4 | E | 1.09 | 69.5 | E |
| | SB | L | 1.02 | 69.7 | E | 1.04 | 75.1 | E |
| Northern Blvd (E-W) & 40th Rd / Driveway (N-S) | EB | TR | 0.89 | 20.0 | C | 0.91 | 21.2 | C |
| | SB | LTR | 0.93 | 86.0 | F | 0.93 | 86.0 | F |
| Northern Blvd (E-W) & 40th Ave (N) / 31st St (N-S) | EB | T | 0.94 | 16.2 | B | 0.96 | 18.2 | B |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | EB | LTR | 1.03 | 26.6 | C | 1.06 | 34.2 | C |
| | NB | TR | 1.15 | 138.4 | F | 1.15 | 138.4 | F |
| Northern Blvd (E-W) & 34th St (S) | EB | T | 0.90 | 34.8 | C | 0.92 | 35.9 | D |
| Northern Blvd (E-W) & 35th St / 38th Ave (S) | SB | LTR | 1.27 | 195.4 | F | 1.27 | 195.4 | F |
| Northern Blvd (E-W) & 36th St (S) | EB | T | 0.94 | 17.4 | B | 0.96 | 18.9 | B |
| Northern Blvd (E-W) & 37th St (S)/Standard Ln (N) | EB | TR | 0.91 | 4.8 | A | 0.93 | 5.4 | A |
| | SB | LTR | 1.02 | 103.2 | F | 1.05 | 113.4 | F |
| Northern Blvd (E-W) & 38th St (S) | EB | T | 1.05 | 43.6 | D | 1.07 | 50.9 | D |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | TR | 1.16 | 83.8 | F | 1.20 | 100.2 | F |
| | WB | L | 1.38 | 259.5 | F | 1.43 | 280.5 | F |
| | WB | TR | 1.03 | 56.3 | E | 1.04 | 56.7 | E |
| | NB | TR | 1.34 | 214.2 | F | 1.72 | 377.6 | F |
| | SB | LTR | 1.29 | 204.7 | F | 1.63 | 338.5 | F |
| Northern Blvd (E-W) & 41st St (S) | EB | T | 0.91 | 9.3 | A | 0.92 | 10.3 | A |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | EB | TR | 1.03 | 32.7 | C | 1.04 | 34.5 | C |
| | SB | LTR | 0.87 | 68.8 | E | 1.21 | 159.2 | F |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | EB | LTR | 1.16 | 84.0 | F | 1.39 | 187.8 | F |
| | WB | L | 1.14 | 126.8 | F | 1.14 | 118.5 | F |
| | WB | TR | 1.10 | 76.1 | E | 1.17 | 104.7 | F |
| | NB | LTR | 1.04 | 103.0 | F | 1.10 | 121.2 | F |
| Northern Blvd (E-W) & 44th St (S)/35th Ave (N) | EB | TR | 1.01 | 14.6 | B | 1.03 | 19.6 | B |
| | SB | LTR | 1.25 | 193.1 | F | 1.44 | 271.0 | F |
| Northern Blvd (E-W) & 46th St (S) | EB | T | 0.94 | 10.6 | B | 0.96 | 11.7 | B |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | EB | TR | 1.22 | 107.2 | F | 1.25 | 122.3 | F |
| | WB | L | 1.13 | 137.4 | F | 1.13 | 134.8 | F |
| | WB | TR | 1.18 | 97.1 | F | 1.25 | 126.2 | F |
| | NB | L | 1.50 | 299.7 | F | 1.56 | 325.5 | F |
| | NB | TR | 1.09 | 128.6 | F | 1.09 | 128.6 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | L | 1.12 | 103.9 | F | 1.14 | 115.0 | F |
| | EB | TR | 1.14 | 71.8 | E | 1.15 | 76.0 | E |
| | NB | LTR | 1.19 | 150.5 | F | 1.19 | 150.5 | F |
| | SB | R | 0.70 | 44.6 | D | 0.83 | 55.3 | E |
| Skillman Ave (W) & 39th St (N-S) | NB | LT | 1.03 | 62.2 | E | 1.29 | 159.8 | F |
| | SB | T | 0.84 | 14.8 | B | 0.91 | 15.1 | B |
| 43rd Ave (W) & 39th St (N-S) | SB | LT | 1.57 | 289.6 | F | 1.82 | 397.7 | F |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW-SE) | SE | LTR | 0.87 | 54.4 | D | 0.96 | 72.2 | E |
| | NW | LTR | 0.98 | 58.4 | E | 1.05 | 77.9 | E |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 0.98 | 55.5 | E | 0.98 | 55.5 | E |
| | NE | R | 1.10 | 123.3 | F | 1.10 | 123.3 | F |
| | SW | L | 1.04 | 82.3 | F | 1.10 | 100.9 | F |

*Shading denotes significant adverse impact.*

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-27
## Congested Lane Groups at Analyzed Intersections Under With Action Conditions—Saturday Peak Hour

| Intersection | Approach | Lane Group | No Action Saturday V/C Ratio | No Action Saturday Delay (sec/veh) | No Action Saturday LOS | With Action Saturday V/C Ratio | With Action Saturday Delay (sec/veh) | With Action Saturday LOS |
|---|---|---|---|---|---|---|---|---|
| Broadway (E-W) & 43rd St (N) | NB | LTR | 1.32 | 191.1 | F | 1.58 | 301.7 | F |
| 34th Ave (E-W) & 43rd St (N) | NB | LTR | 0.85 | 44.7 | D | 1.03 | 71.4 | E |
| 35th Ave (E-W) & Steinway St (N-S) | EB | LTR | 1.42 | 239.6 | F | 1.54 | 291.1 | F |
| | WB | LTR | 0.86 | 52.1 | D | 1.88 | 439.7 | F |
| 35th Ave (E-W) & 41st St (N) | NB | LTR | 0.39 | 19.0 | B | 1.27 | 166.2 | F |
| 36th Ave (E-W) & Steinway St (N-S) | EB | LTR | 1.23 | 167.4 | F | 1.67 | 357.3 | F |
| | WB | LTR | 0.76 | 53.3 | D | 0.79 | 56.2 | E |
| Northern Blvd (E-W) & Queensboro | WB | R | 1.12 | 104.3 | F | 1.15 | 114.7 | F |
| | SB | L | 0.89 | 45.9 | D | 0.92 | 49.0 | D |
| Northern Blvd (E-W) & 40th Rd / Driveway (N-S) | SB | LTR | 0.67 | 55.9 | E | 0.67 | 55.9 | E |
| Northern Blvd (E-W) & 39th Ave / Honeywell St (N-S) | NB | L | 1.07 | 115.0 | F | 1.07 | 115.0 | F |
| | NB | TR | 1.05 | 107.1 | F | 1.05 | 107.1 | F |
| Northern Blvd (E-W) & 35th St / 38th Ave (S) | SB | LTR | 0.75 | 61.3 | E | 0.75 | 61.3 | E |
| Northern Blvd (E-W) & 38th St (S) | SB | LR | 0.72 | 63.9 | E | 0.80 | 67.5 | E |
| Northern Blvd (E-W) & 39th St / Steinway St (N-S) | EB | L | 1.05 | 105.0 | F | 1.12 | 127.2 | F |
| | EB | TR | 0.90 | 20.9 | C | 0.96 | 27.4 | C |
| | WB | L | 1.43 | 241.5 | F | 1.78 | 390.7 | F |
| | NB | TR | 1.17 | 136.1 | F | 1.40 | 229.8 | F |
| | SB | LTR | 1.33 | 214.3 | F | 1.69 | 362.3 | F |
| Northern Blvd (E-W) & 42nd St (S) / Driveway (N) | NB | LTR | 0.78 | 73.6 | E | 0.76 | 70.2 | E |
| | SB | LTR | 1.16 | 147.1 | F | 1.70 | 369.8 | F |
| Northern Blvd (E-W) & 43rd St (N) / 42nd Pl (N-S) | EB | LTR | 0.88 | 31.3 | C | 1.28 | 158.7 | F |
| | WB | L | 1.27 | 162.7 | F | 1.50 | 253.4 | F |
| | WB | TR | 0.92 | 20.6 | C | 0.98 | 25.6 | C |
| | NB | LTR | 1.15 | 139.5 | F | 1.19 | 154.7 | F |
| Northern Blvd (E-W) & 44th St (S)/35th Ave (N) | SB | LTR | 1.44 | 271.1 | F | 1.67 | 372.7 | F |
| Northern Blvd (E-W) & 46th St (S) | SB | LR | 0.63 | 50.1 | D | 0.72 | 55.8 | E |
| Northern Blvd (E-W) & 48th St (N-S) / 34th Ave (N) | EB | TR | 1.20 | 112.8 | F | 1.23 | 127.9 | F |
| | WB | L | 1.10 | 97.0 | F | 1.10 | 97.1 | F |
| | WB | TR | 1.19 | 91.4 | F | 1.24 | 111.3 | F |
| | NB | L | 1.63 | 355.8 | F | 1.68 | 376.8 | F |
| | NB | TR | 1.05 | 113.6 | F | 1.05 | 113.6 | F |
| Northern Blvd (E-W) & 51st St / Woodside Ave (N-S) | EB | TR | 0.90 | 39.2 | D | 0.92 | 40.0 | D |
| | NB | LTR | 1.22 | 167.2 | F | 1.22 | 167.2 | F |
| | SB | R | 1.22 | 167.4 | F | 1.37 | 229.3 | F |
| 43rd Ave (W) & 39th St (N-S) | SB | LT | 1.72 | 350.2 | F | 2.03 | 483.1 | F |
| Greenpoint Ave (E-W) & Hunters Point Ave (NW-SE) | SE | LTR | 0.91 | 57.9 | E | 0.97 | 70.9 | E |
| | NW | LTR | 1.13 | 109.0 | F | 1.19 | 133.4 | F |
| Greenpoint Ave (NE-SW) & Borden Ave (E) | EB | LTR | 1.04 | 67.4 | E | 1.04 | 67.4 | E |
| | NE | R | 1.10 | 109.9 | F | 1.10 | 109.9 | F |
| | SW | L | 1.09 | 83.8 | F | 1.17 | 111.3 | F |

*Shading denotes significant adverse impact.*

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

# H. TRANSIT

## EXISTING CONDITIONS

*SUBWAY SERVICE*

*Subway Stations*

As discussed above in Section E, "Level 2 Screening Assessment," project-generated subway trips at the 36th Street (M/R) and Steinway Street (M/R) stations on the Queens Boulevard Line, and the 36th Avenue (N/W) station on the Astoria Line are expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold in the weekday AM and/or PM peak hours. The 36th Avenue station is located on an elevated structure while the remaining two stations are located below-grade.

*36th Street (M/R)*

The 36th Street subway station is located beneath Northern Boulevard and consists of two side platforms each serving one of the local tracks on the Queens Boulevard Line. There is no connection between the two platforms within the station.

Based on the location of the Project Area, incremental demand from the Proposed Actions is expected to be concentrated at entrance stairs and fare arrays at the station's eastern end at 36th Street. As shown in **Figure 13-21**, stair S2/P2 located at the northeast corner of Northern Boulevard and 36th Street provides access to the east end of the southbound (Manhattan-bound) platform via fare array N312A which consists of one high entry/exit turnstile (HEETs) and one high exit turnstile (HXT). Stair S1 located on the south side of Northern Boulevard opposite 36th Street provides access to fare array N313 consisting of one HEET and one HXT located on a mezzanine above the east end of the northbound (Queens-bound) platform. Stair P1 provides access between the mezzanine and platform levels.

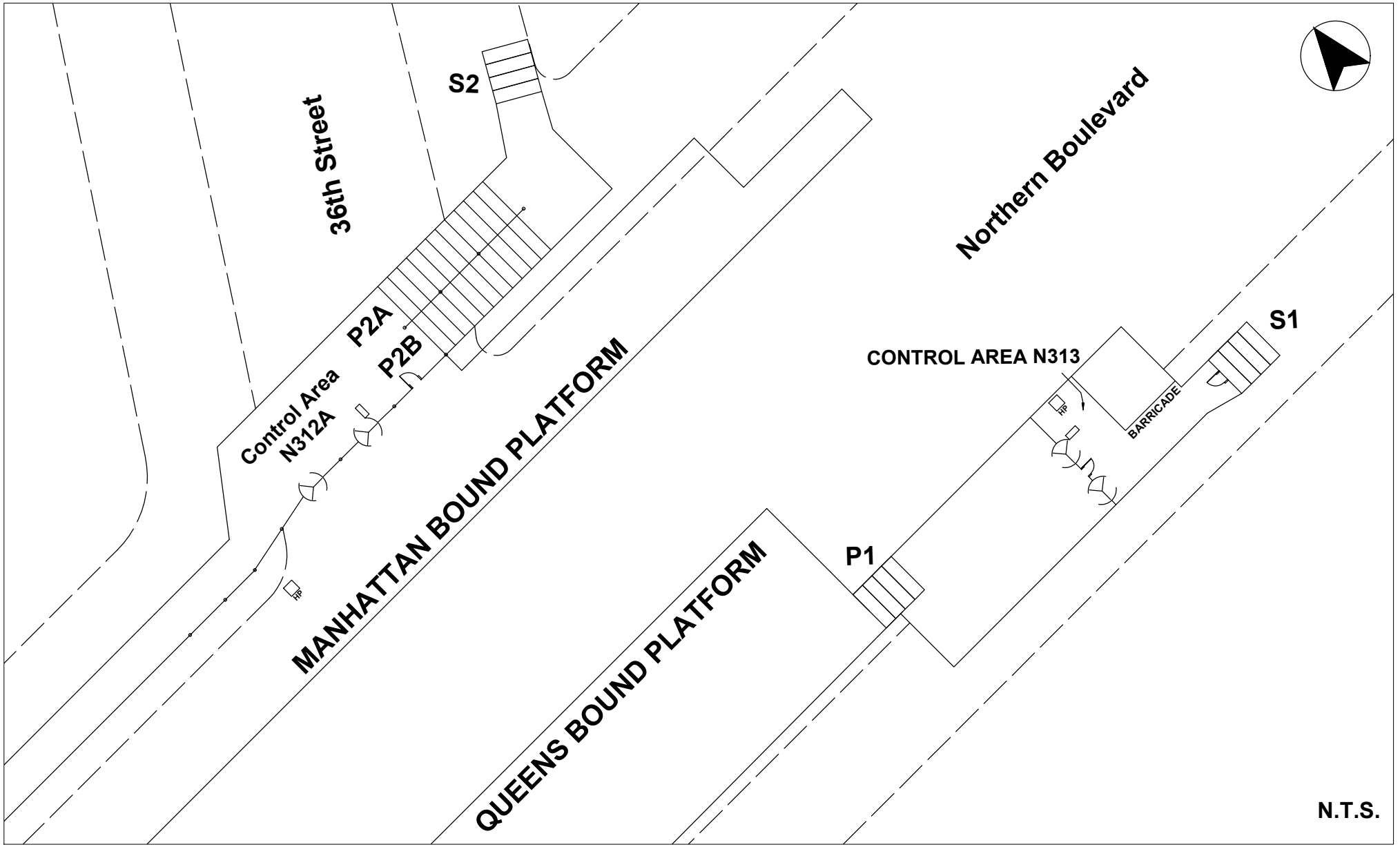
The southbound platform can also be accessed via two stairs located at the northeast and northwest corners of Northern Boulevard at 38th Avenue/35th Street. Access is controlled by fare array N312 consisting of three turnstiles and a 24-hour fare booth located at the platform level. Lastly, a stair on the south side of Northern Boulevard at 34th Street provides access to fare array N311 consisting of three turnstiles, two HEETs and two HXTs located on a mezzanine above the west end of the northbound platform. Two stairs—P6 and P7—provide access between the mezzanine and platform levels. As few, if any, trips generated by the Proposed Actions are expected to enter/exit the station via the entrances at 38th Avenue/35th Street or at 34th Street, significant adverse impacts are not expected to occur, and the stairs and fare arrays at these locations are not included for analysis.

As shown in **Tables 13-28 and 13-29**, all analyzed stairs and fare arrays at the 36th Street subway station currently operate at an uncongested LOS A or B in both the AM and PM peak hours.

*Steinway Street Subway Station (M/R)*

As shown in **Figure 13-22**, the Steinway Street subway station is located beneath Steinway Street, and has two mezzanines, one at the north end of the station and a second at 34th Avenue at the south end of the station. These mezzanines provide access to the station's platform level, which consists of two side platforms each serving one of the local tracks on the Queens Boulevard Line.

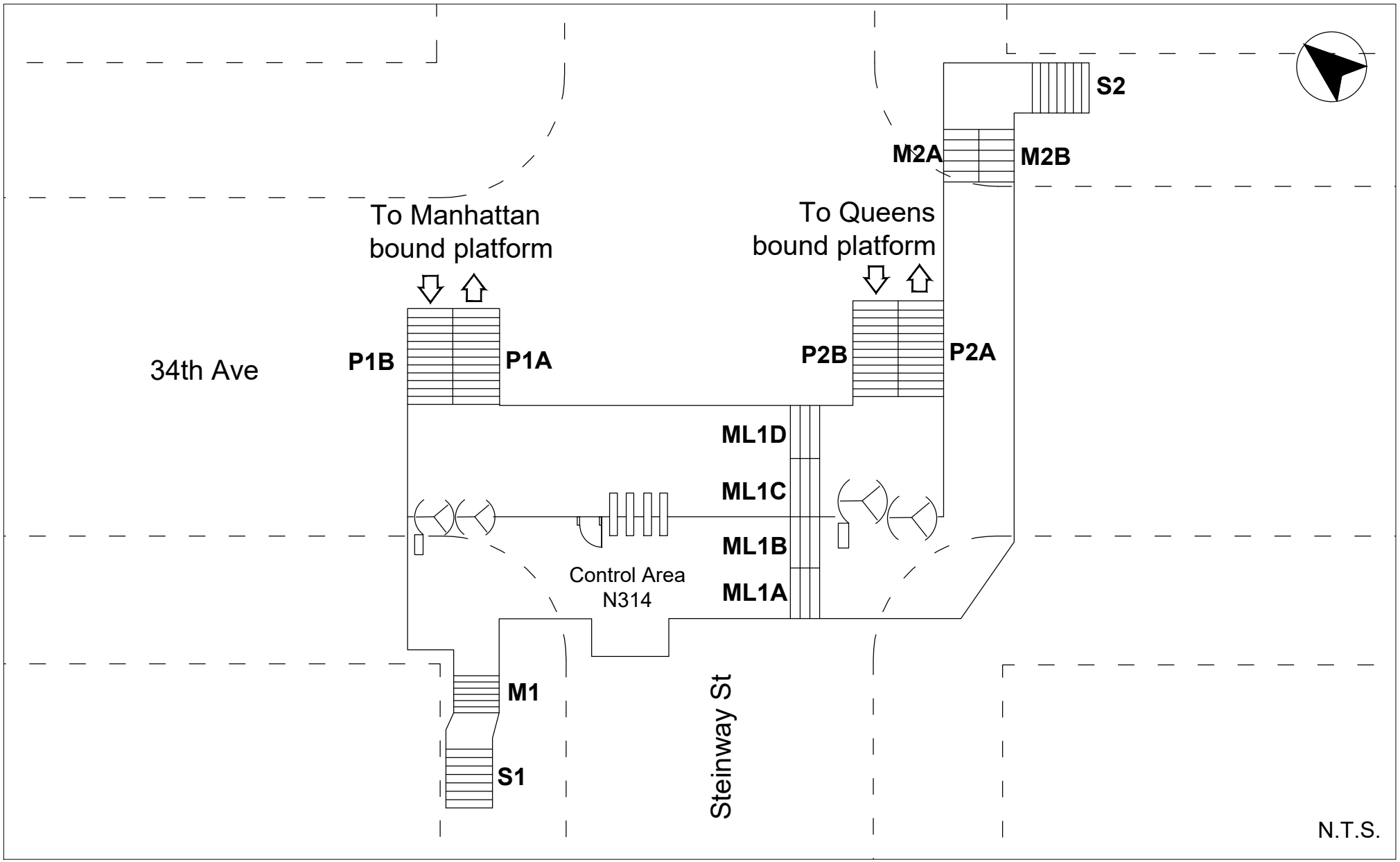
**36th Street (M/R) Subway Station**




**Legend**

- Stairs
- High Entrance/Exit Turnstile (HEET)
- High Exit Turnstile (HXT)
- Emergency Exit

**Steinway Street (M/R) Subway Station**




Legend

Stairs

Fare Array

High Entrance/Exit Turnstile (HEET)

High Exit Turnstile (HXT)

Emergency Exit

Based on the location of the Project Area, incremental demand from the Proposed Actions would enter and exit the station via the south mezzanine at 34th Avenue. These trips would be distributed between the two street stairs at this mezzanine—S1/M1 at the southwest corner of the Steinway Street/34th Avenue intersection, and street stair S2/M2 at the northeast corner of the intersection. Two stairs connect the mezzanine to the platforms—stair P1 to the southbound (Manhattan-bound) platform and stair P2 to the northbound (Queens-bound) platform. In addition, a short stair (ML1) connects the east and west sides of the mezzanine. Access to the platform level is controlled by fare array N314, which, as shown in **Figure 13-22**, consists of one HEET and one HXT located adjacent to stairs S1/M1 and P1, one HEET and one HXT located adjacent to stair P2, and three turnstiles located in the center of the mezzanine.

The mezzanine at the station's north end includes two street stairs on the west and east sides Steinway Street (S3/M3 and S4/M4, respectively), two stairs (P3 and P4) to the southbound platform and one stair (P5) to the northbound platform, and a fare array (N315) consisting of four turnstiles and a 24-hour fare booth. Given its distance from the Project Area, few, if any, trips generated by the Proposed Actions are expected to enter/exit the station via the north mezzanine. Significant adverse impacts are therefore not expected to occur at the stairs and fare arrays at this location, and they are not included for analysis.

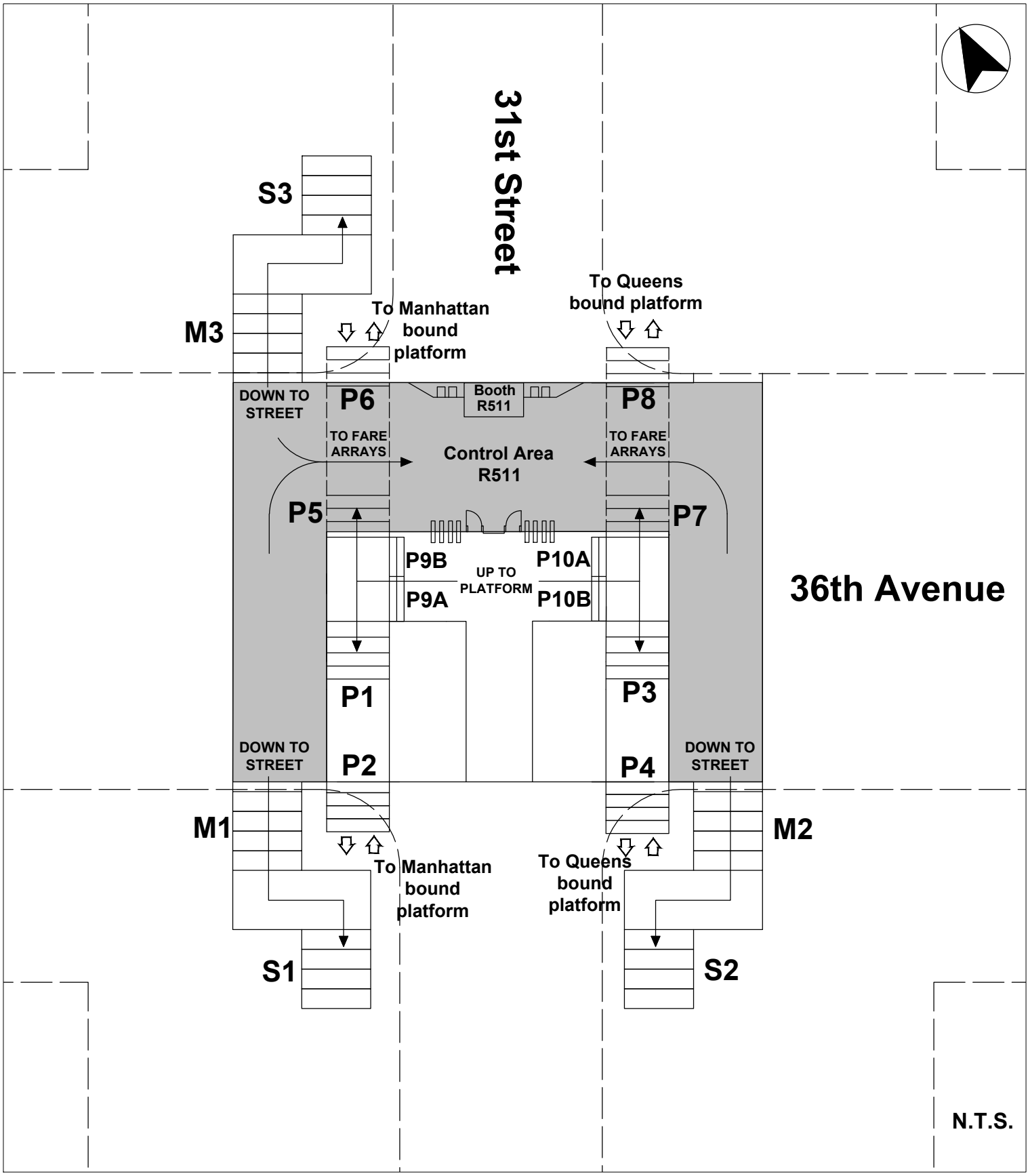
As shown in **Tables 13-28 and 13-29**, all analyzed stairs and fare arrays at the Steinway Street subway station currently operate at an uncongested LOS A or B in both the AM and PM peak hours.

*36th Avenue Subway Station (N/W)*

The 36th Avenue subway station is located on an elevated structure above 31st Street. It consists of a mezzanine located at the 36th Avenue/31st Street intersection, and a platform level, which consists of two side platforms serving the local tracks on the Astoria Line. (A single express track also runs through the station.) As shown in **Figure 13-23**, Access from the street is via three stairs, S1, S2, and S3, located on the southwest, southeast, and northwest corners of the intersection, respectively. Two sets of stairs connect the mezzanine to the platforms—stairs P1/P2, P5/P6, and P9 to the southbound (Manhattan-bound) platform and stairs P3/P4, P7/P8, and P10 to the northbound (Astoria-bound) platform. Access to the platforms is controlled by fare array R511, which consists of a 24-hour fare booth and two banks of turnstiles, each with three turnstiles.

As shown in **Tables 13-28 and 13-29**, all analyzed stairs and fare arrays at the 36th Avenue subway station currently operate at an uncongested LOS A or B in both the AM and PM peak hours.

**36th Avenue (N/W) Subway Station**




**Legend**

Stairs | Fare Array | Emergency Exit | Passageway to Fare Arrays

**Table 13-28**
**Existing Conditions Subway Station Stair Analysis**

| Peak Hour | Station | Stair | Total Width (ft.) | Effective Width (ft.) | Peak Hour Volumes | | Surging Factor | | Friction Factor | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Up | Down | Up | Down | | | |
| AM | 36th Avenue (N/W) | S1/M1 | 4.92 | 3.92 | 242 | 153 | 1.00 | 0.80 | 0.90 | 0.26 | A |
| | | S2/M2 | 4.92 | 3.92 | 454 | 344 | 1.00 | 0.80 | 0.90 | 0.52 | B |
| | | S3/M3 | 5.00 | 4.00 | 688 | 109 | 1.00 | 0.80 | 0.90 | 0.48 | B |
| | | P1/P2 | 4.67 | 3.67 | 744 | 37 | 1.00 | 0.75 | 1.00 | 0.45 | A |
| | | P5/P6 | 4.67 | 3.67 | 609 | 51 | 1.00 | 0.75 | 0.90 | 0.43 | A |
| | | P3/P4 | 4.67 | 3.67 | 19 | 166 | 1.00 | 0.75 | 0.90 | 0.15 | A |
| | | P7/P8 | 4.67 | 3.67 | 12 | 352 | 1.00 | 0.75 | 1.00 | 0.27 | A |
| | Steinway Street (M/R) | S1/M1 | 5.67 | 4.67 | 492 | 483 | 0.80 | 1.00 | 0.90 | 0.55 | B |
| | | S2/M2 | 5.67 | 4.67 | 232 | 413 | 0.80 | 1.00 | 0.90 | 0.35 | A |
| | | P1 | 11.83 | 10.58 | 516 | 673 | 0.75 | 1.00 | 0.90 | 0.30 | A |
| | | P2 | 11.83 | 10.58 | 208 | 223 | 0.75 | 1.00 | 0.90 | 0.11 | A |
| | 36th Street (M/R) | S1 | 4.75 | 3.75 | 177 | 65 | 0.80 | 1.00 | 0.90 | 0.18 | A |
| | | P1 | 7.92 | 6.92 | 177 | 65 | 0.75 | 1.00 | 0.90 | 0.10 | A |
| | | S2/P2 | 5.83 | 4.83 | 472 | 260 | 0.75 | 1.00 | 0.90 | 0.43 | A |
| PM | 36th Avenue (N/W) | S1/M1 | 4.92 | 3.92 | 97 | 250 | 1.00 | 0.80 | 0.90 | 0.24 | A |
| | | S2/M2 | 4.92 | 3.92 | 160 | 533 | 1.00 | 0.80 | 0.90 | 0.49 | B |
| | | S3/M3 | 5.00 | 4.00 | 315 | 193 | 1.00 | 0.80 | 0.90 | 0.32 | A |
| | | P1/P2 | 4.67 | 3.67 | 284 | 19 | 1.00 | 0.75 | 0.90 | 0.20 | A |
| | | P5/P6 | 4.67 | 3.67 | 233 | 26 | 1.00 | 0.75 | 0.90 | 0.17 | A |
| | | P3/P4 | 4.67 | 3.67 | 33 | 298 | 1.00 | 0.75 | 0.90 | 0.27 | A |
| | | P7/P8 | 4.67 | 3.67 | 22 | 633 | 1.00 | 0.75 | 1.00 | 0.49 | B |
| | Steinway Street (M/R) | S1/M1 | 5.67 | 4.67 | 434 | 279 | 0.80 | 1.00 | 0.90 | 0.41 | A |
| | | S2/M2 | 5.67 | 4.67 | 395 | 224 | 0.80 | 1.00 | 0.90 | 0.36 | A |
| | | P1 | 11.83 | 10.58 | 267 | 286 | 0.75 | 1.00 | 0.90 | 0.14 | A |
| | | P2 | 11.83 | 10.58 | 562 | 217 | 0.75 | 1.00 | 0.90 | 0.21 | A |
| | 36th Street (M/R) | S1 | 4.75 | 3.75 | 165 | 402 | 0.80 | 1.00 | 0.90 | 0.38 | A |
| | | P1 | 7.92 | 6.92 | 165 | 402 | 0.75 | 1.00 | 0.90 | 0.21 | A |
| | | S2/P2 | 5.83 | 4.83 | 135 | 358 | 0.75 | 1.00 | 0.90 | 0.26 | A |

**Table 13-29**
**Existing Conditions Subway Station Fare Array Analysis**

| Peak Hour | Station | Control Area | Control Elements | | | Peak Hour Volumes | | Surging Factor | | Friction Factor | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Turnstile | HEET | HXT | System Entries | System Exits | System Entries | System Exits | | | |
| AM | 36th Avenue (N/W) | R511 | 6 | 0 | 0 | 1,384 | 606 | 1.00 | 0.75 | 0.90 | 0.26 | A |
| | Steinway Street (M/R) | N314 | 3 | 2 | 2 | 896 | 724 | 1.00 | 0.75 | 0.90 | 0.26 | A |
| | 36th Street (M/R) | N312A | 0 | 1 | 1 | 260 | 472 | 1.00 | 0.75 | 0.90 | 0.55 | B |
| | | N313 | 0 | 1 | 1 | 65 | 177 | 1.00 | 0.75 | 0.90 | 0.16 | A |
| PM | 36th Avenue (N/W) | R511 | 6 | 0 | 0 | 572 | 976 | 1.00 | 0.75 | 0.90 | 0.20 | A |
| | Steinway Street (M/R) | N314 | 3 | 2 | 2 | 503 | 829 | 1.00 | 0.75 | 0.90 | 0.19 | A |
| | 36th Street (M/R) | N312A | 0 | 1 | 1 | 358 | 135 | 1.00 | 0.75 | 0.90 | 0.54 | B |
| | | N313 | 0 | 1 | 1 | 402 | 165 | 1.00 | 0.75 | 0.90 | 0.62 | B |

*Subway Line Haul*

Line haul is the volume of transit riders passing a defined point on a given transit route. For subway routes in New York City to and from Queens, line haul is typically measured either at East River bridge and tunnel crossings, or at the actual maximum load point on each subway route (the point where the trains carry the greatest number of passengers during the peak hour).

As discussed previously, four NYCT subway routes operate in proximity to the Project Area, including the M, N, R and W. The analysis of existing subway line haul conditions on these routes is based on maximum load point capacity and ridership data collected in 2018 (prior to the Covid-19 pandemic) and provided by NYCT.[5] The ridership data were grown by 0.5 percent to account for any increases in demand during the 2018 to 2021 period, consistent with *CEQR Technical Manual* guidance.

**Table 13-30** shows existing line haul conditions in the peak direction at the maximum load points for each subway route during the AM and PM peak hours. As shown in **Table 13-30**, southbound N/W trains are currently operating at capacity in the AM peak hour with a v/c ratio of 1.0. N/W trains currently operate with available capacity in the peak direction in the PM peak hour, as do M/R trains in both the AM and PM.

*BUS SERVICE*

As shown in **Figure 13-2** and listed in **Table 13-11**, four MTA Bus local bus routes operate in proximity to the Project Area—the Q66, Q101, Q102 and Q104. As shown in **Table 13-12**, only the Q66 route is expected to experience 50 or more new trips in one direction in one or both peak hours and is therefore analyzed in this EIS. Service on this local route is provided by 40-foot standard buses. **Table 13-31** shows the existing number of buses and ridership at the maximum load point by direction on the Q66 in the weekday AM and PM peak hours based on MTA Bus 2019 data collected prior to the Covid-19 pandemic. As shown in **Table 13-31**, based on MTA loading guidelines, Q66 buses currently operate with available capacity in both directions at their maximum load points in the weekday AM and PM peak hours.

**Table 13-30**
**Existing Conditions Subway Line Haul Analysis**

| Peak Period | Route | Direction | Maximum Load Point (leaving station) | Average Trains Per Hour (1) | Average Cars Per Hour | Average Passengers Per Hour (2) | Average Passengers Per Car | Guideline Passengers Per Car (3) | V/C Ratio (4) |
|---|---|---|---|---|---|---|---|---|---|
| AM | M/R | SB | Elmhurst Av | 18.4 | 148 | 13,936 | 94 | 164 | 0.57 |
| | N/W | SB | Queensboro Plaza* | 15.1 | 150 | 21,788 | 145 | 145 | 1.00 |
| PM | M/R | NB | Jackson Hts - Roosevelt Av | 16.3 | 131 | 11,289 | 86 | 161 | 0.54 |
| | N/W | NB | Lexington Av - 59 St* | 14.3 | 144 | 15,535 | 108 | 145 | 0.74 |

**Notes:**

(1) Based on 2017-2018 train throughput data from NYCT except where noted.

(2) Based on 2017-2018 ridership data from NYCT. Passenger volumes grown by 0.5 percent/year to account for growth in demand during the 2018 to 2021 period except where noted.

(3) Guideline capacities are based on NYCT rush hour loading guidelines, which vary by car type, line, and location based on frequency and type of service.

(4) Volume to guideline capacity ratio.

*Based on 2016-2017 data due to construction work during 2018.

[5] NYCT 2017 data were used for the N/W routes due to construction work affecting these routes in 2018.

**Table 13-31**
**Existing Conditions Local Bus Analysis**

| Peak Hour | Route | Direction | Maximum Load Point | Peak Hour Buses[1] | Peak Hour Passengers[1] | Average Passengers per Bus | Available Capacity[2] |
|---|---|---|---|---|---|---|---|
| AM | Q66 | EB | Northern Blvd/127th Pl | 14 | 524 | 37 | 232 |
| | | WB | Northern Blvd/56th St | 17 | 656 | 39 | 262 |
| PM | Q66 | EB | Northern Blvd/69th St | 10 | 333 | 33 | 207 |
| | | WB | Northern Blvd/111th St | 9 | 263 | 29 | 223 |

**Notes:**
[1] Based on MTA Bus 2019 ridership data.
[2] Available capacity based on MTA loading guidelines of 54 passengers per standard bus.

## THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO ACTION CONDITION)

Between 2021 and 2032, it is expected that subway and bus demands in the vicinity of the Project Area will increase due to long-term background growth as well as development that could occur pursuant to existing zoning. In order to forecast future transit conditions without the Proposed Actions (the No Action condition), projected development in the Project Area under the No Action RWCDS was considered, as were proposed developments within 1/2-mile of the Project Area, including those listed in Table 2-1 in Chapter 2, "Land Use, Zoning, and Public Policy." The Future No Action subway station and bus volumes reflect annual background growth rates of 0.5 percent per year for the 2021 through 2026 period and 0.25 percent for the 2026 through 2032 period. These background growth rates, recommended in the *CEQR Technical Manual* for projects in Queens outside of Long Island City, are applied to account for smaller projects and as-of-right developments, and general increases in travel demand not attributable to specific development projects.

### *SUBWAY SERVICE*

#### *Subway Stations*

Under No Action conditions, demand at all analyzed subway stations is expected to increase due to new development and/or background growth. The results of the analysis of No Action AM and PM peak hour conditions at the 36th Street (M/R) and Steinway Street (M/R) subway stations on the Queens Boulevard Line and the 36th Avenue (N/W) subway station on the Astoria Line are shown in **Tables 13-32 and 13-33** and discussed below.

**Table 13-32**
**No Action Subway Station Stair Analysis**

| Peak Hour | Station | Stair | Total Width (ft.) | Effective Width (ft.) | Peak Hour Volumes | | Surging Factor | | Friction Factor | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Up | Down | Up | Down | | | |
| AM | 36th Avenue (N/W) | S1/M1 | 4.92 | 3.92 | 283 | 169 | 1.00 | 0.80 | 0.90 | 0.29 | A |
| | | S2/M2 | 4.92 | 3.92 | 511 | 374 | 1.00 | 0.80 | 0.90 | 0.58 | B |
| | | S3/M3 | 5.00 | 4.00 | 721 | 115 | 1.00 | 0.80 | 0.90 | 0.50 | B |
| | | P1/P2 | 4.67 | 3.67 | 811 | 41 | 1.00 | 0.75 | 1.00 | 0.49 | B |
| | | P5/P6 | 4.67 | 3.67 | 665 | 55 | 1.00 | 0.75 | 0.90 | 0.47 | B |
| | | P3/P4 | 4.67 | 3.67 | 24 | 181 | 1.00 | 0.75 | 0.90 | 0.17 | A |
| | | P7/P8 | 4.67 | 3.67 | 15 | 382 | 1.00 | 0.75 | 1.00 | 0.30 | A |
| | Steinway Street (M/R) | S1/M1 | 5.67 | 4.67 | 544 | 559 | 0.80 | 1.00 | 0.90 | 0.62 | B |
| | | S2/M2 | 5.67 | 4.67 | 217 | 441 | 0.80 | 1.00 | 0.90 | 0.35 | A |
| | | P1 | 11.83 | 10.58 | 528 | 752 | 0.75 | 1.00 | 0.90 | 0.32 | A |
| | | P2 | 11.83 | 10.58 | 233 | 247 | 0.75 | 1.00 | 0.90 | 0.12 | A |
| | 36th Street (M/R) | S1 | 4.75 | 3.75 | 187 | 68 | 0.80 | 1.00 | 0.90 | 0.18 | A |
| | | P1 | 7.92 | 6.92 | 187 | 68 | 0.75 | 1.00 | 0.90 | 0.11 | A |
| | | S2/P2 | 5.83 | 4.83 | 489 | 275 | 0.75 | 1.00 | 0.90 | 0.44 | A |
| PM | 36th Avenue (N/W) | S1/M1 | 4.92 | 3.92 | 117 | 285 | 1.00 | 0.80 | 0.90 | 0.28 | A |
| | | S2/M2 | 4.92 | 3.92 | 205 | 622 | 1.00 | 0.80 | 0.90 | 0.58 | B |
| | | S3/M3 | 5.00 | 4.00 | 341 | 213 | 1.00 | 0.80 | 0.90 | 0.35 | A |
| | | P1/P2 | 4.67 | 3.67 | 325 | 28 | 1.00 | 0.75 | 0.90 | 0.23 | A |
| | | P5/P6 | 4.67 | 3.67 | 267 | 36 | 1.00 | 0.75 | 0.90 | 0.20 | A |
| | | P3/P4 | 4.67 | 3.67 | 41 | 337 | 1.00 | 0.75 | 0.90 | 0.31 | A |
| | | P7/P8 | 4.67 | 3.67 | 29 | 719 | 1.00 | 0.75 | 1.00 | 0.56 | B |
| | Steinway Street (M/R) | S1/M1 | 5.67 | 4.67 | 567 | 377 | 0.80 | 1.00 | 0.90 | 0.54 | B |
| | | S2/M2 | 5.67 | 4.67 | 427 | 214 | 0.80 | 1.00 | 0.90 | 0.37 | A |
| | | P1 | 11.83 | 10.58 | 310 | 361 | 0.75 | 1.00 | 0.90 | 0.17 | A |
| | | P2 | 11.83 | 10.58 | 684 | 231 | 0.75 | 1.00 | 0.90 | 0.25 | A |
| | 36th Street (M/R) | S1 | 4.75 | 3.75 | 188 | 418 | 0.80 | 1.00 | 0.90 | 0.40 | A |
| | | P1 | 7.92 | 6.92 | 188 | 418 | 0.75 | 1.00 | 0.90 | 0.22 | A |
| | | S2/P2 | 5.83 | 4.83 | 145 | 384 | 0.75 | 1.00 | 0.90 | 0.28 | A |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

**Table 13-33**
**No Action Subway Station Fare Array Analysis**

| Peak Hour | Station | Fare Array | Control Elements | | | Peak Hour Volumes | | Surging Factor | | Friction Factor | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Turnstile | HEET | HXT | System Entries | System Exits | System Entries | System Exits | | | |
| AM | 36th Avenue (N/W) | R511 | 6 | 0 | 0 | 1,515 | 659 | 1.00 | 0.75 | 0.90 | 0.29 | A |
| | Steinway Street (M/R) | N314 | 3 | 2 | 2 | 999 | 761 | 1.00 | 0.75 | 0.90 | 0.28 | A |
| | 36th Street (M/R) | N312A | 0 | 1 | 1 | 275 | 489 | 1.00 | 0.75 | 0.90 | 0.58 | B |
| | | N313 | 0 | 1 | 1 | 68 | 187 | 1.00 | 0.75 | 0.90 | 0.17 | A |
| PM | 36th Avenue (N/W) | R511 | 6 | 0 | 0 | 662 | 1,120 | 1.00 | 0.75 | 0.90 | 0.23 | A |
| | Steinway Street (M/R) | N314 | 3 | 2 | 2 | 591 | 994 | 1.00 | 0.75 | 0.90 | 0.23 | A |
| | 36th Street (M/R) | N312A | 0 | 1 | 1 | 384 | 145 | 1.00 | 0.75 | 0.90 | 0.58 | B |
| | | N313 | 0 | 1 | 1 | 418 | 188 | 1.00 | 0.75 | 0.90 | 0.65 | B |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

*36th Street Subway Station (M/R)*

All analyzed stairs and fare arrays at the 36th Street station are expected to operate at an uncongested LOS A or B in both the AM and PM peak hours in the No Action condition.

*Steinway Street Subway Station (M/R)*

All analyzed stairs and fare arrays at the Steinway Street station are expected to operate at an uncongested LOS A or B in both the AM and PM peak hours in the No Action condition.

*36th Avenue Subway Station (N/W)*

All analyzed stairs and fare arrays at the 36th Avenue station are expected to operate at an uncongested LOS A or B in both the AM and PM peak hours in the No Action condition.

*Subway Line Haul*

**Table 13-34** shows anticipated 2032 No Action line haul conditions at the maximum load points on the four subway routes operating in proximity to the Project Area. The data in **Table 13-34** reflect both background growth for the 2021 through 2032 period and the addition of demand from new development within the Project Area and its proximity.

**Table 13-34**
**No Action Subway Line Haul Analysis**

| Peak Period | Route | Direction | Maximum Load Point (leaving station) | Average Trains Per Hour (1) | Average Cars Per Hour | Average Passengers Per Hour (2) | Average Passengers Per Car | Guideline Passengers Per Car (3) | V/C Ratio (4) |
|---|---|---|---|---|---|---|---|---|---|
| AM | M/R | SB | Elmhurst Av | 18.4 | 148 | 14,669 | 99 | 164 | 0.60 |
| | N/W | SB | Queensboro Plaza* | 15.1 | 150 | 22,825 | 152 | 145 | 1.05 |
| PM | M/R | NB | Jackson Hts - Roosevelt Av | 16.3 | 131 | 12,098 | 92 | 161 | 0.57 |
| | N/W | NB | Lexington Av - 59 St* | 14.3 | 144 | 16,306 | 113 | 145 | 0.78 |

**Notes:**

(1) Based on 2017-2018 train throughput data from NYCT except where noted.

(2) No Action passenger volumes reflect demand from No Action development plus background growth rates of 0.5 percent/year for the 2021-2026 period and 0.25 percent/year for the 2026-2032 period as per *CEQR Technical Manual* guidance.

(3) Guideline capacities are based on NYCT peak hour loading guidelines, which vary by car type, line, and location based on frequency and type of service.

(4) Volume to guideline capacity ratio.

*Based on 2016-2017 data due to construction work during 2018.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

As shown in **Table 13-34**, southbound N/W trains would continue to operate over-capacity in the AM peak hour with a v/c ratio of 1.05 compared to 1.0 under existing conditions. N/W trains are expected to continue to operate with available capacity in the peak direction in the PM peak hour, as are M/R trains in both the AM and PM.

*BUS SERVICE*

Demand on the local bus services operating in the vicinity of the Project Area is expected to increase through 2032 as a result of background growth as well as demand from new development. As shown in **Table 13-35**, both eastbound and westbound Q66 buses are expected to operate with available capacity in the AM and PM peak hours in the 2032 No Action condition.

**Table 13-35**
**No Action Local Bus Analysis**

| Peak Hour[1] | Route | Direction | Maximum Load Point | Peak Hour Passengers[1] | Peak Hour Buses[2] | Average Passengers per Bus | Available Capacity[3] |
|---|---|---|---|---|---|---|---|
| AM | Q66 | EB | Northern Blvd/127th Pl | 554 | 14 | 40 | 202 |
| | | WB | Northern Blvd/56th St | 717 | 17 | 42 | 201 |
| PM | Q66 | EB | Northern Blvd/69th St | 406 | 10 | 41 | 134 |
| | | WB | Northern Blvd/111th St | 307 | 9 | 34 | 179 |

**Notes:**
[1] No Action passenger volumes reflect demand from No Action development plus background growth rates of 0.5 percent/year for the 2019–2024 period and 0.25 percent/year for the 2024–2032 period as per *CEQR Technical Manual* guidance.
[2] Based on 2019 data from MTA Bus.
[3] Available capacity based on MTA loading guidelines of 54 passengers per standard bus.

## THE FUTURE WITH THE PROPOSED ACTIONS (WITH ACTION CONDITION)

*SUBWAY SERVICE*

*Subway Stations*

As shown in **Table 13-10**, the Proposed Actions are expected to generate a net total of approximately 2,~~642~~540 and 2,~~958~~313 new subway trips in the weekday AM and PM peak hours, respectively. These incremental subway trips were assigned to the three stations serving the Project Area based on census origin/destination data and each station's proximity to individual projected development sites. Based on the assignment, the highest number of peak hour subway trips are expected to occur at the Steinway Street (M/R) station, which would experience approximately 1,~~352~~302 incremental trips (in and out combined) in the AM peak hour and 1,~~516~~184 in the PM peak hour. The second highest number of trips would occur at the 36th Avenue (N/W) station which would experience approximately ~~951~~912 incremental trips in the AM peak hour and ~~1,063~~832 in the PM peak hour. Lastly, the 36th Street (M/R) station would experience approximately ~~339~~326 and ~~379~~297 trips during these same periods, respectively.

AM and PM peak hour conditions at the 36th Street, Steinway Street and 36th Avenue subway stations in the With Action condition are shown in **Tables 13-36 and 13-37** and discussed below.

*36th Street Subway Station (M/R)*
In the With Action condition, all analyzed stairs and fare arrays at the 36th Street station are expected to operate at an acceptable LOS C or better in both the AM and PM peak hours. Therefore, no significant adverse impacts are anticipated to occur at this station as a result of the Proposed Actions.

*Steinway Street Subway Station (M/R)*
In the With Action condition, all analyzed stairs and the analyzed fare array at the Steinway Street station are projected to operate at an acceptable LOS C or better in both the AM and PM peak hours~~.~~ with the exception of street stair S1/M1 which would operate at LOS D in the AM peak hour. As the WIT for this stair would be 0.67 inches in the AM, this stair would not be considered significantly adversely impacted based on the impact thresholds shown in **Table 13-15**. Therefore, no significant adverse impacts are anticipated to occur at this station as a result of the Proposed Actions.

## Table 13-36
## With Action Subway Station Stair Analysis

| Peak Hour | Station | Stair | Total Width (ft.) | Effective Width (ft.) | Project Increment | | Peak Hour Volumes | | Surging Factor | | Friction Factor | V/C Ratio | LOS | WIT | Impact Threshold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Up | Down | Up | Down | Up | Down | | | | | |
| AM | 36th Avenue (N/W) | S1/M1 | 4.92 | 3.92 | 0 | 0 | 283 | 169 | 1.00 | 0.80 | 0.90 | 0.29 | A | - - - | - - - |
| | | S2/M2 | 4.92 | 3.92 | 380 | 222 | 891 | 596 | 1.00 | 0.80 | 0.90 | 0.97 | C | - - - | - - - |
| | | S3/M3 | 5.00 | 4.00 | 254 | 56 | 975 | 171 | 1.00 | 0.80 | 0.90 | 0.69 | B | - - - | - - - |
| | | P1/P2 | 4.67 | 3.67 | 329 | 13 | 1,140 | 54 | 1.00 | 0.75 | 1.00 | 0.69 | B | - - - | - - - |
| | | P5/P6 | 4.67 | 3.67 | 270 | 18 | 935 | 73 | 1.00 | 0.75 | 0.90 | 0.65 | B | - - - | - - - |
| | | P3/P4 | 4.67 | 3.67 | 21 | 79 | 45 | 260 | 1.00 | 0.75 | 0.90 | 0.25 | A | - - - | - - - |
| | | P7/P8 | 4.67 | 3.67 | 14 | 168 | 29 | 550 | 1.00 | 0.75 | 1.00 | 0.43 | A | - - - | - - - |
| | Steinway Street (M/R) | S1/M1 | 5.67 | 4.67 | 229 | 512 | 773 | 1,071 | 0.80 | 1.00 | 0.90 | 1.01 | D | 0.67 | 8.00 |
| | | S2/M2 | 5.67 | 4.67 | 201 | 360 | 418 | 801 | 0.80 | 1.00 | 0.90 | 0.66 | B | - - - | - - - |
| | | P1 | 11.83 | 10.58 | 138 | 747 | 666 | 1,499 | 0.75 | 1.00 | 0.90 | 0.52 | B | - - - | - - - |
| | | P2 | 11.83 | 10.58 | 292 | 125 | 525 | 372 | 0.75 | 1.00 | 0.90 | 0.23 | A | - - - | - - - |
| | 36th Street (M/R) | S1 | 4.75 | 3.75 | 73 | 31 | 260 | 99 | 0.80 | 1.00 | 0.90 | 0.26 | A | - - - | - - - |
| | | P1 | 7.92 | 6.92 | 73 | 31 | 260 | 99 | 0.75 | 1.00 | 0.90 | 0.15 | A | - - - | - - - |
| | | S2/P2 | 5.83 | 4.83 | 35 | 187 | 524 | 462 | 0.75 | 1.00 | 0.90 | 0.56 | B | - - - | - - - |
| PM | 36th Avenue (N/W) | S1/M1 | 4.92 | 3.92 | 0 | 0 | 117 | 285 | 1.00 | 0.80 | 0.90 | 0.28 | A | - - - | - - - |
| | | S2/M2 | 4.92 | 3.92 | 214 | 380 | 419 | 1,002 | 1.00 | 0.80 | 0.90 | 0.99 | C | - - - | - - - |
| | | S3/M3 | 5.00 | 4.00 | 143 | 95 | 484 | 308 | 1.00 | 0.80 | 0.90 | 0.50 | B | - - - | - - - |
| | | P1/P2 | 4.67 | 3.67 | 178 | 11 | 503 | 39 | 1.00 | 0.75 | 0.90 | 0.35 | A | - - - | - - - |
| | | P5/P6 | 4.67 | 3.67 | 146 | 16 | 413 | 52 | 1.00 | 0.75 | 0.90 | 0.30 | A | - - - | - - - |
| | | P3/P4 | 4.67 | 3.67 | 20 | 143 | 61 | 480 | 1.00 | 0.75 | 0.90 | 0.44 | A | - - - | - - - |
| | | P7/P8 | 4.67 | 3.67 | 13 | 305 | 42 | 1,024 | 1.00 | 0.75 | 1.00 | 0.80 | C | - - - | - - - |
| | Steinway Street (M/R) | S1/M1 | 5.67 | 4.67 | 330 | 262 | 897 | 639 | 0.80 | 1.00 | 0.90 | 0.87 | C | - - - | - - - |
| | | S2/M2 | 5.67 | 4.67 | 327 | 265 | 754 | 479 | 0.80 | 1.00 | 0.90 | 0.71 | C | - - - | - - - |
| | | P1 | 11.83 | 10.58 | 99 | 394 | 409 | 755 | 0.75 | 1.00 | 0.90 | 0.28 | A | - - - | - - - |
| | | P2 | 11.83 | 10.58 | 558 | 133 | 1,242 | 364 | 0.75 | 1.00 | 0.90 | 0.44 | A | - - - | - - - |
| | 36th Street (M/R) | S1 | 4.75 | 3.75 | 140 | 33 | 328 | 451 | 0.80 | 1.00 | 0.90 | 0.53 | B | - - - | - - - |
| | | P1 | 7.92 | 6.92 | 140 | 33 | 328 | 451 | 0.75 | 1.00 | 0.90 | 0.30 | A | - - - | - - - |
| | | S2/P2 | 5.83 | 4.83 | 25 | 99 | 170 | 483 | 0.75 | 1.00 | 0.90 | 0.34 | A | - - - | - - - |

**Notes:**
WIT - Width Increment Threshold.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-37
## With Action Subway Station Fare Array Analysis

| Peak Hour | Station | Fare Array | Control Elements | | | Project Increment | | Peak Hour Volumes | | Surging Factor | | Friction Factor | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Turnstile | HEET | HXT | System Entries | System Exits | System Entries | System Exits | System Entries | System Exits | | | |
| AM | 36th Avenue (N/W) | R511 | 6 | 0 | 0 | 634 | 278 | 2,149 | 937 | 1.00 | 0.75 | 0.90 | 0.41 | A |
| | Steinway Street (M/R) | N314 | 3 | 2 | 2 | 872 | 430 | 1,871 | 1,191 | 1.00 | 0.75 | 0.90 | 0.50 | B |
| | 36th Street (M/R) | N312A | 0 | 1 | 1 | 187 | 35 | 462 | 524 | 1.00 | 0.75 | 0.90 | 0.85 | C |
| | | N313 | 0 | 1 | 1 | 31 | 73 | 99 | 260 | 1.00 | 0.75 | 0.90 | 0.24 | A |
| PM | 36th Avenue (N/W) | R511 | 6 | 0 | 0 | 357 | 475 | 1,019 | 1,595 | 1.00 | 0.75 | 0.90 | 0.33 | A |
| | Steinway Street (M/R) | N314 | 3 | 2 | 2 | 527 | 657 | 1,118 | 1,651 | 1.00 | 0.75 | 0.90 | 0.40 | A |
| | 36th Street (M/R) | N312A | 0 | 1 | 1 | 99 | 25 | 483 | 170 | 1.00 | 0.75 | 0.90 | 0.73 | C |
| | | N313 | 0 | 1 | 1 | 33 | 140 | 451 | 328 | 1.00 | 0.75 | 0.90 | 0.75 | C |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

*36th Avenue Subway Station (N/W)*

In the With Action condition, all analyzed stairs and the analyzed fare array at the 36th Avenue station are projected to operate at an acceptable LOS C or better in both the AM and PM peak hours. Therefore, no significant adverse impacts are anticipated to occur at this station as a result of the Proposed Actions.

*Subway Line Haul*

**Table 13-38** shows line haul conditions on the subway routes serving the Project Area in the With Action condition. As shown in **Table 13-38**, N/W trains are expected to operate over capacity in the AM peak hour with a v/c ratio of 1.09 in the peak southbound direction, and below capacity in the PM peak hour with a v/c ratio of 0.~~83~~82 in the peak northbound direction. This compares to v/c ratios of 1.05 and 0.78, respectively, in the PM under No Action conditions. As southbound N/W trains would be operating over capacity and would experience an average incremental increase of 5.~~56~~25 persons/car in the AM, just above the five persons/car *CEQR Technical Manual* impact threshold, southbound N/W service would be considered significantly adversely impacted by the Proposed Actions in the AM peak hour. (Potential mitigation for this impact is discussed in Chapter 20, "Mitigation.") M/R trains are projected to operate below capacity in the peak direction in both the AM and PM peak hours and would therefore not be significantly adversely impacted by the Proposed Actions in either period.

*BUS SERVICE*

As shown in **Table 13-12**, projected development sites are expected to generate a net total of approximately ~~141~~142 and ~~197~~181 new trips on the bus services operating in proximity to the Project Area during the weekday AM and PM peak hours, respectively. As shown in **Table 13-39**, demand on the analyzed Q66 route is expected to increase by approximately 10 eastbound trips and ~~24~~26 westbound trips at the maximum load points in the AM peak hour, and by ~~46~~45 eastbound trips and ~~20~~17 westbound trips in the PM. With these incremental increases in demand, this bus route would continue to operate with available capacity at its maximum load points in both directions in both the AM and PM peak hours. Therefore, based on *CEQR Technical Manual* impact criteria, no significant adverse impacts to bus service are expected to occur as a result of the Proposed Actions.

**Table 13-38**
**With Action Subway Line Haul Analysis**

| Peak Period | Route | Direction | Maximum Load Point (leaving station) | Average Trains Per Hour (1) | Average Cars Per Hour | Project Increment | Average Passengers Per Hour | Average Passengers Per Car | Guideline Passengers Per Car (2) | V/C Ratio (3) | Average Additional Passengers per Car |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | M/R | SB | Elmhurst Av | 18.4 | 148 | 235 | 14,904 | 101 | 164 | 0.61 | 1.59 |
| | N/W | SB | Queensboro Plaza* | 15.1 | 150 | 787 | 23,612 | 157 | 145 | 1.09 | 5.25 |
| PM | M/R | NB | Jackson Hts - Roosevelt Av | 16.3 | 131 | 165 | 12,263 | 94 | 161 | 0.58 | 1.26 |
| | N/W | NB | Lexington Av - 59 St* | 14.3 | 144 | 720 | 17,026 | 118 | 145 | 0.82 | 5.00 |

**Notes:**

(1) Based on 2017-2018 train throughput data from NYCT except where noted.

(2) Guideline capacities are based on NYCT peak hour loading guidelines, which vary by car type, line, and location based on frequency and type of service.

(4) Volume to guideline capacity ratio.

*Based on 2016-2017 data due to construction work during 2018.

Shading denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

**Table 13-39**
**With Action Conditions Local Bus Analysis**

| Peak Hour | Route | Direction | Maximum Load Point | Peak Hour Buses[1] | No Action Available Capacity[2] | Project Increment | Available Capacity w/ Proposed Actions[2] |
|---|---|---|---|---|---|---|---|
| AM | Q66 | EB | Northern Blvd/127th Pl | 14 | 202 | 10 | 192 |
| | | WB | Northern Blvd/56th St | 17 | 201 | 26 | 175 |
| PM | Q66 | EB | Northern Blvd/69th St | 10 | 134 | 45 | 89 |
| | | WB | Northern Blvd/111th St | 9 | 179 | 17 | 162 |

**Notes:**
[1] Based on 2019 data from MTA Bus.
[2] Available capacity based on MTA loading guidelines of 54 passengers per standard bus.

# I. PEDESTRIANS

## EXISTING CONDITIONS

Much of the pedestrian study area is characterized by relatively light to moderate pedestrian flows during peak periods, with the heaviest flows found along retail corridors such as Steinway Street and corridors providing access to area subway stations and bus routes. As discussed previously in Section E, "Level 2 Screening Assessment," the analysis of pedestrian conditions focuses on pedestrian elements where new trips generated by the Proposed Actions are expected to total 200 or more in one or more peak hours. These elements—sidewalks, corner areas and crosswalks—are primarily located in proximity to projected development sites and along corridors connecting the sites to area transit services. As shown in **Figure 13-3**, they include a total of 40 sidewalks, 65 corner areas and 33 crosswalks primarily located along 34th, 35th and 36th avenues, and 36th through 42nd streets, Steinway Street and Northern Boulevard.

*SIDEWALKS*

Data from pedestrian counts conducted in May and June 2021 indicate that the highest pedestrian flows at analyzed sidewalks within the study area are generally found along commercial corridors and corridors providing access to subway station entrances, including Steinway Street and 35th and 36th Avenues. Analyzed sidewalks typically range from 15 to 20 feet in width. Features typically present along study area sidewalks that can reduce the effective width available for pedestrian flow include street furniture such as sign posts, traffic signal and lamp posts, fire hydrants and tree pits, as well as larger installations such as subway stairs.

**Table 13-40** shows the existing peak hour pedestrian volumes, average pedestrian space in square feet per pedestrian (sf/ped), and platoon-adjusted levels of service at analyzed sidewalks. As shown in **Table 13-40**, all analyzed sidewalks currently operate at an acceptable LOS C or better in all peak hours.

*CROSSWALKS*

Most study area intersections are signalized and include pedestrian signals. The majority of crosswalks in the area feature high visibility striping and analyzed crosswalks generally range from 12 to 17 feet in width. **Table 13-41** shows the peak hour volumes, average pedestrian space (in sf/ped), and levels of service at analyzed crosswalks. As shown in **Table 13-41**, all analyzed crosswalks currently operate at an uncongested LOS A in all peak hours.

## Table 13-40
## Existing Sidewalk Conditions

| Location | Effective Width (ft.) | Peak Hour Volumes | | | | Average Pedestrian Space ($ft^2$/ped) | | | | Platoon-Adjusted Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT | AM | MD | PM | SAT |
| East SW of 42nd St btw 34th Ave and 35th Ave | 1.8 | 54 | 59 | 79 | 44 | 296.7 | 355.5 | 331.9 | 470.2 | B | B | B | B |
| East SW of 42nd St btw 35th Ave and Northern Blvd | 2.1 | 21 | 35 | 39 | 35 | 1,098.2 | 574.1 | 633.5 | 790.7 | A | A | A | A |
| South SW of 35th Ave btw 42nd St and 43rd St | 2.0 | 8 | 16 | 43 | 48 | 1,227.6 | 1,485.0 | 464.0 | 356.2 | A | A | B | B |
| West SW of 42nd St btw 35th Ave and Northern Blvd | 3.1 | 56 | 30 | 54 | 23 | 461.6 | 1,040.7 | 731.7 | 1,060.5 | B | A | A | A |
| West SW of 42nd St btw 34th Ave and 35th Ave | 3.5 | 40 | 39 | 69 | 36 | 1,288.9 | 824.4 | 626.6 | 1,355.2 | A | A | A | A |
| East SW of 41st St btw 34th Ave and 35th Ave | 2.4 | 45 | 36 | 70 | 40 | 621.8 | 745.3 | 372.2 | 747.4 | A | A | B | A |
| East SW of 41st St btw 35th Ave and 36th Ave | 2.5 | 6 | 11 | 14 | 14 | 6,600.0 | 2,412.0 | 1,301.1 | 1,555.7 | A | A | A | A |
| South SW of 35th Ave btw 41st St and 42nd St | 5.9 | 41 | 53 | 60 | 67 | 960.5 | 1,291.5 | 1,078.3 | 643.7 | A | A | A | A |
| West SW of 41st St btw 35th Ave and 36th Ave | 2.3 | 14 | 6 | 12 | 20 | 1,186.3 | 3,075.6 | 1,937.6 | 922.6 | A | A | A | A |
| East SW of Steinway St btw 34th Ave and 35th Ave | 7.4 | 68 | 101 | 104 | 106 | 1,365.4 | 616.7 | 904.0 | 842.6 | A | A | A | A |
| North SW of 35th Ave btw Steinway St and 41st St | 9.0 | 137 | 98 | 112 | 102 | 822.0 | 1,149.2 | 992.8 | 1,062.2 | A | A | A | A |
| East SW of Steinway St btw 35th Ave and 36th Ave | 4.0 | 59 | 67 | 107 | 76 | 848.3 | 822.7 | 556.5 | 558.5 | A | A | A | A |
| South SW of 35th Ave btw Steinway St and 41st St | 6.2 | 50 | 105 | 191 | 117 | 1,114.1 | 604.9 | 404.1 | 501.1 | A | A | B | B |
| West SW of Steinway St btw 35th Ave and 36th Ave | 7.2 | 82 | 106 | 156 | 102 | 1,024.9 | 846.4 | 582.3 | 913.0 | A | A | A | A |
| South SW of 35th Ave btw 38th St and Steinway St | 11.7 | 81 | 99 | 171 | 139 | 1,597.5 | 1,082.9 | 897.2 | 744.7 | A | A | A | A |
| West SW of Steinway St btw 34th Ave and 35th Ave | 6.3 | 312 | 298 | 380 | 305 | 282.6 | 279.1 | 245.2 | 252.9 | B | B | B | B |
| North SW of 35th Ave btw 38th St and Steinway St | 3.6 | 324 | 250 | 287 | 262 | 134.4 | 174.3 | 179.5 | 170.7 | B | B | B | B |
| North SW of 35th Ave btw 37th St and 38th St | 3.1 | 283 | 275 | 244 | 245 | 108.1 | 139.8 | 177.6 | 163.0 | B | B | B | B |
| South SW of 35th Ave btw 37th St and 38th St | 6.9 | 196 | 196 | 231 | 134 | 335.4 | 436.1 | 450.7 | 646.1 | B | B | B | A |
| North SW of Northern Blvd btw 36th Ave and 42nd St | 13.5 | 86 | 61 | 117 | 60 | 1,939.5 | 2,559.0 | 1,425.6 | 2,102.7 | A | A | A | A |
| North SW of 36th Ave btw 41st St and Northern Blvd | 3.4 | 58 | 33 | 66 | 67 | 633.2 | 1,178.4 | 654.6 | 499.7 | A | A | A | B |
| North SW of 36th Ave btw Steinway St and 41st St | 7.2 | 41 | 29 | 49 | 52 | 1,689.7 | 3,211.4 | 1,831.0 | 1,987.5 | A | A | A | A |
| East SW of 38th St btw 35th Ave and 36th Ave | 2.8 | 25 | 56 | 38 | 42 | 1,393.9 | 567.7 | 756.5 | 570.3 | A | A | A | A |
| North SW of 36th Ave btw 38th St and Steinway St | 2.5 | 62 | 68 | 114 | 100 | 427.8 | 331.8 | 253.4 | 233.4 | B | B | B | B |
| North SW of 36th Ave btw 37th St and 38th St | 3.9 | 57 | 71 | 85 | 95 | 773.4 | 603.3 | 547.8 | 522.8 | A | A | A | B |
| East SW of 37th St btw 35th Ave and 36th Ave | 5.9 | 14 | 32 | 42 | 31 | 3,750.9 | 2,021.9 | 1,317.2 | 1,663.7 | A | A | A | A |
| North SW of 36th Ave btw 36th St and 37th St | 8.5 | 53 | 63 | 92 | 83 | 2,159.3 | 1,752.4 | 1,243.9 | 1,054.4 | A | A | A | A |
| North SW of 36th Ave btw 35th St and 36th St | 11.2 | 62 | 54 | 47 | 35 | 2,195.4 | 2,291.5 | 2,407.1 | 2,626.3 | A | A | A | A |
| North SW of 36th Ave btw 34th St and 35th St | 9.5 | 139 | 124 | 138 | 107 | 866.0 | 1,007.2 | 828.7 | 942.2 | A | A | A | A |
| North SW of 36th Ave btw 33rd St and 34th St | 8.7 | 161 | 160 | 187 | 222 | 698.6 | 805.8 | 630.8 | 518.9 | A | A | A | B |
| North SW of 36th Ave btw 32nd St and 33rd St | 3.3 | 171 | 200 | 186 | 141 | 195.4 | 221.1 | 237.8 | 262.7 | B | B | B | B |
| North SW of 36th Ave btw 31st St and 32nd St | 4.2 | 129 | 51 | 75 | 81 | 368.5 | 841.8 | 642.8 | 538.1 | B | A | A | A |
| East SW of 31st St btw 36th Ave and 37th Ave | 6.3 | 177 | 107 | 143 | 152 | 486.5 | 684.6 | 477.6 | 429.7 | B | A | B | B |
| West SW of 31st St btw 35th Ave and 36th Ave | 8.3 | 208 | 49 | 178 | 303 | 533.4 | 1,698.5 | 460.0 | 392.3 | A | A | B | B |
| East SW of 36th St btw 37th Ave and Northern Blvd | 3.8 | 68 | 33 | 58 | 39 | 758.3 | 1,323.6 | 533.4 | 902.2 | A | A | A | A |
| South SW of Northern Blvd btw 36th St and 37th St | 5.4 | 97 | 69 | 104 | 43 | 600.7 | 1,117.7 | 593.2 | 1,494.6 | A | A | A | A |
| South SW of 36th Ave btw 32nd St and 33rd St | 2.4 | 636 | 383 | 199 | 171 | 40.9 | 80.4 | 169.2 | 158.8 | C | C | B | B |
| South SW of 36th Ave btw 31st St and 32nd St | 3.8 | 277 | 196 | 242 | 228 | 137.9 | 133.0 | 236.0 | 250.6 | B | B | B | B |
| North SW of 34th Ave btw 41st St and 42nd St | 12.1 | 268 | 221 | 282 | 327 | 608.8 | 755.7 | 599.0 | 463.7 | A | A | A | B |
| North SW of 34th Ave btw Steinway St and 41st St | 5.7 | 392 | 286 | 406 | 395 | 173.5 | 294.5 | 205.1 | 201.7 | B | B | B | B |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

**Table 13-41**
**Existing Crosswalk Conditions**

| Intersection | Crosswalk | Peak Hour Volumes | | | | Average Pedestrian Space ($ft^2$/ped) | | | | Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT | AM | MD | PM | SAT |
| 34th Av & Steinway St | East | 84 | 298 | 244 | 248 | 395.9 | 215.6 | 271.1 | 268.4 | A | A | A | A |
| 34th Av & 41st St | East | 69 | 63 | 93 | 58 | 224.5 | 268.9 | 191.6 | 265.4 | A | A | A | A |
| 34th Av & 42nd St | East | 69 | 28 | 32 | 44 | 218.9 | 534.0 | 374.9 | 384.1 | A | A | A | A |
| 35th Av & 43rd St | West | 26 | 34 | 44 | 35 | 678.2 | 791.8 | 419.2 | 635.9 | A | A | A | A |
| 35th Av & 42nd St | North | 62 | 70 | 85 | 58 | 465.3 | 463.9 | 383.9 | 602.4 | A | A | A | A |
| 35th Av & 42nd St | East | 20 | 34 | 32 | 36 | 1,013.1 | 582.4 | 845.4 | 540.2 | A | A | A | A |
| 35th Av & 42nd St | South | 28 | 29 | 40 | 43 | 1,358.8 | 1,419.3 | 1,003.5 | 1,101.4 | A | A | A | A |
| 35th Av & 42nd St | West | 29 | 16 | 38 | 21 | 733.6 | 1,056.1 | 591.6 | 1,157.8 | A | A | A | A |
| 35th Av & 41st St | North | 92 | 88 | 110 | 78 | 417.3 | 368.3 | 297.3 | 413.8 | A | A | A | A |
| 35th Av & 41st St | East | 13 | 20 | 29 | 14 | 1,052.6 | 539.4 | 468.9 | 812.9 | A | A | A | A |
| 35th Av & 41st St | South | 36 | 48 | 64 | 49 | 852.9 | 788.7 | 781.4 | 794.6 | A | A | A | A |
| 35th Av & 41st St | West | 26 | 22 | 42 | 39 | 555.7 | 570.0 | 336.9 | 308.1 | A | A | A | A |
| 35th Av & Steinway St | East | 61 | 87 | 124 | 91 | 530.3 | 634.2 | 530.5 | 578.9 | A | A | A | A |
| 35th Av & Steinway St | South | 59 | 88 | 121 | 105 | 723.2 | 244.1 | 202.7 | 202.3 | A | A | A | A |
| 35th Av & Steinway St | West | 97 | 147 | 209 | 151 | 382.0 | 330.0 | 272.0 | 319.3 | A | A | A | A |
| 35th Av & 38th St | North | 271 | 257 | 241 | 232 | 132.6 | 150.6 | 161.6 | 177.5 | A | A | A | A |
| 35th Av & 38th St | East | 62 | 83 | 92 | 74 | 479.5 | 349.5 | 312.5 | 374.1 | A | A | A | A |
| 35th Av & 38th St | South | 123 | 131 | 178 | 114 | 327.8 | 257.9 | 277.1 | 367.2 | A | A | A | A |
| 35th Av & 37th St | East | 80 | 79 | 101 | 50 | 314.2 | 246.6 | 209.7 | 527.5 | A | A | A | A |
| 35th Av & 37th St | South | 175 | 187 | 214 | 105 | 216.4 | 242.9 | 253.4 | 423.8 | A | A | A | A |
| 36th Av & Steinway St | North | 54 | 56 | 55 | 49 | 414.3 | 433.3 | 525.7 | 512.4 | A | A | A | A |
| 36th Av & 38th St | North | 55 | 74 | 72 | 72 | 521.8 | 438.4 | 432.5 | 509.5 | A | A | A | A |
| 36th Av & 37th St | North | 49 | 59 | 78 | 57 | 924.3 | 826.8 | 611.0 | 881.8 | A | A | A | A |
| 36th Av & 37th St | East | 20 | 25 | 35 | 25 | 705.0 | 711.1 | 416.8 | 501.4 | A | A | A | A |
| 36th Av & 36th St | North | 61 | 64 | 81 | 45 | 966.9 | 700.3 | 573.5 | 905.2 | A | A | A | A |
| 36th Av & 35th St | North | 71 | 72 | 71 | 48 | 716.4 | 647.7 | 643.7 | 885.3 | A | A | A | A |
| 36th Av & 34th St | North | 139 | 124 | 164 | 113 | 299.9 | 383.6 | 306.4 | 339.9 | A | A | A | A |
| 36th Av & 33rd St | North | 166 | 175 | 212 | 155 | 233.4 | 188.9 | 185.5 | 228.7 | A | A | A | A |
| 36th Av & 31st St | North | 108 | 102 | 163 | 146 | 289.4 | 306.1 | 186.9 | 213.2 | A | A | A | A |
| 36th Av & 31st St | East | 165 | 150 | 136 | 185 | 375.7 | 461.3 | 411.6 | 354.6 | A | A | A | A |
| 37th Av & 36th St | East | 40 | 23 | 33 | 42 | 589.7 | 813.6 | 548.7 | 612.4 | A | A | A | A |
| Northern Bl & 37th St | South | 90 | 99 | 91 | 44 | 353.5 | 292.7 | 336.0 | 566.8 | A | A | A | A |
| Northern Bl & 42nd St | North | 31 | 43 | 58 | 37 | 1,707.0 | 1,221.1 | 870.4 | 1,378.6 | A | A | A | A |

*CORNER AREAS*

**Table 13-42** shows the peak hour volumes, average pedestrian space (in sf/ped) and levels of service at analyzed corner areas. As shown in **Table 13-42**, all of the analyzed corner areas currently operate at an uncongested LOS A in the weekday AM, midday, PM, and Saturday peak hours.

## Table 13-42
## Existing Corner Conditions

| Intersection | Corner | Average Pedestrian Space ($ft^2$/ped) | | | | Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT |
| 34th Av & Steinway St | NE | 534.3 | 286.0 | 284.4 | 433.2 | A | A | A | A |
| 34th Av & Steinway St | SE | 1,111.9 | 404.5 | 490.0 | 527.6 | A | A | A | A |
| 34th Av & Steinway St | SW | 418.6 | 292.7 | 263.2 | 380.6 | A | A | A | A |
| 34th Av & 41st St | NE | 438.7 | 607.1 | 431.4 | 542.5 | A | A | A | A |
| 34th Av & 41st St | SE | 604.5 | 671.6 | 506.1 | 596.4 | A | A | A | A |
| 34th Av & 41st St | SW | 451.4 | 557.8 | 395.8 | 478.6 | A | A | A | A |
| 34th Av & 41st St | NW | 366.6 | 537.8 | 424.1 | 534.6 | A | A | A | A |
| 34th Av & 42nd St | NE | 517.9 | 910.7 | 693.6 | 535.7 | A | A | A | A |
| 34th Av & 42nd St | SE | 814.1 | 1,060.4 | 786.3 | 711.6 | A | A | A | A |
| 34th Av & 42nd St | SW | 820.9 | 638.5 | 719.0 | 602.9 | A | A | A | A |
| 34th Av & 42nd St | NW | 473.3 | 656.0 | 624.0 | 427.2 | A | A | A | A |
| 34th Av & 43rd St | SE | 1,321.6 | 891.7 | 821.4 | 586.5 | A | A | A | A |
| 34th Av & 43rd St | SW | 1,041.6 | 830.4 | 706.1 | 544.0 | A | A | A | A |
| 34th Av & 43rd St | NW | 913.0 | 1,150.5 | 814.7 | 567.1 | A | A | A | A |
| 35th Av & 43rd St | NE | 2,596.2 | 2,192.1 | 1,399.7 | 2,088.3 | A | A | A | A |
| 35th Av & 43rd St | SW | 2,075.8 | 1,956.5 | 1,573.5 | 1,687.4 | A | A | A | A |
| 35th Av & 43rd St | NW | 1,304.7 | 1,546.6 | 1,125.9 | 1,401.9 | A | A | A | A |
| 35th Av & 42nd St | NE | 1,189.2 | 1,114.4 | 1,160.1 | 1,254.0 | A | A | A | A |
| 35th Av & 42nd St | SE | 2,632.8 | 2,088.9 | 1,751.2 | 1,809.8 | A | A | A | A |
| 35th Av & 42nd St | SW | 1,441.4 | 1,984.4 | 1,597.1 | 2,034.6 | A | A | A | A |
| 35th Av & 42nd St | NW | 1,258.0 | 1,368.4 | 1,014.1 | 1,815.9 | A | A | A | A |
| 35th Av & 41st St | NE | 1,298.7 | 1,104.9 | 924.4 | 1,292.4 | A | A | A | A |
| 35th Av & 41st St | SE | 2,302.5 | 1,846.0 | 1,634.2 | 1,923.6 | A | A | A | A |
| 35th Av & 41st St | SW | 1,759.0 | 1,806.7 | 1,407.4 | 1,372.4 | A | A | A | A |
| 35th Av & 41st St | NW | 1,168.0 | 1,122.6 | 884.3 | 978.4 | A | A | A | A |
| 35th Av & Steinway St | NE | 942.9 | 976.1 | 883.5 | 1,065.0 | A | A | A | A |
| 35th Av & Steinway St | SE | 1,301.2 | 981.7 | 776.8 | 859.5 | A | A | A | A |
| 35th Av & Steinway St | SW | 1,228.5 | 839.2 | 677.1 | 808.4 | A | A | A | A |
| 35th Av & Steinway St | NW | 504.4 | 521.5 | 479.3 | 490.5 | A | A | A | A |
| 35th Av & 38th St | NE | 510.5 | 513.8 | 487.7 | 549.1 | A | A | A | A |
| 35th Av & 38th St | SE | 690.8 | 529.0 | 535.9 | 670.7 | A | A | A | A |
| 35th Av & 38th St | SW | 807.7 | 603.1 | 632.4 | 637.8 | A | A | A | A |
| 35th Av & 38th St | NW | 564.9 | 371.4 | 514.6 | 430.6 | A | A | A | A |
| 35th Av & 37th St | NE | 340.8 | 342.5 | 363.9 | 422.4 | A | A | A | A |
| 35th Av & 37th St | SE | 612.2 | 541.1 | 549.9 | 1,032.4 | A | A | A | A |
| 35th Av & 37th St | SW | 337.5 | 580.0 | 574.8 | 916.9 | A | A | A | A |
| 35th Av & 37th St | NW | 304.8 | 372.9 | 583.6 | 553.2 | A | A | A | A |
| Northern Bl & 42nd St | NW | 1,251.5 | 1,362.6 | 1,058.1 | 1,520.3 | A | A | A | A |
| 36th Av & Steinway St | NE | 1,349.1 | 1,685.3 | 1,662.5 | 1,760.5 | A | A | A | A |
| 36th Av & Steinway St | SE | 1,443.2 | 1,651.5 | 1,495.8 | 1,735.5 | A | A | A | A |
| 36th Av & Steinway St | NW | 1,597.2 | 1,096.1 | 1,306.8 | 1,484.9 | A | A | A | A |
| 36th Av & 38th St | NE | 1,887.2 | 1,349.4 | 1,240.0 | 1,244.2 | A | A | A | A |
| 36th Av & 38th St | NW | 1,357.9 | 980.3 | 1,020.2 | 944.8 | A | A | A | A |
| 36th Av & 37th St | NE | 1,378.3 | 1,299.9 | 854.7 | 1,101.3 | A | A | A | A |
| 36th Av & 37th St | SE | 2,595.1 | 1,638.9 | 1,275.7 | 1,313.7 | A | A | A | A |
| 36th Av & 37th St | NW | 1,597.6 | 1,545.5 | 1,406.4 | 1,235.2 | A | A | A | A |
| 36th Av & 36th St | NE | 1,801.1 | 1,267.7 | 1,244.6 | 1,986.5 | A | A | A | A |
| 36th Av & 36th St | SE | 1,928.2 | 1,257.0 | 1,237.8 | 1,942.1 | A | A | A | A |
| 36th Av & 36th St | NW | 1,624.9 | 1,139.6 | 1,205.5 | 1,860.9 | A | A | A | A |
| 36th Av & 35th St | NE | 809.3 | 996.0 | 1,003.8 | 1,468.7 | A | A | A | A |
| 36th Av & 35th St | NW | 951.4 | 913.1 | 978.5 | 1,300.4 | A | A | A | A |
| 36th Av & 34th St | NE | 785.2 | 733.8 | 806.4 | 880.5 | A | A | A | A |
| 36th Av & 34th St | NW | 625.0 | 831.5 | 597.1 | 721.2 | A | A | A | A |
| 36th Av & 33rd St | NE | 693.3 | 606.0 | 621.6 | 719.6 | A | A | A | A |
| 36th Av & 33rd St | NW | 761.4 | 580.0 | 615.2 | 798.9 | A | A | A | A |
| 36th Av & 31st St | NE | 890.4 | 1,064.1 | 813.8 | 782.5 | A | A | A | A |
| 36th Av & 31st St | SE | 802.8 | 1,002.6 | 802.8 | 936.5 | A | A | A | A |
| 36th Av & 31st St | NW | 1,210.5 | 2,102.8 | 978.9 | 854.4 | A | A | A | A |
| 37th Av & 36th St | NE | 2,094.3 | 1,905.5 | 2,131.8 | 2,345.1 | A | A | A | A |
| 37th Av & 36th St | SE | 2,300.9 | 2,582.3 | 2,170.7 | 2,170.7 | A | A | A | A |
| Northern Bl & 37th St | SE | 1,526.8 | 1,281.4 | 1,161.9 | 2,174.3 | A | A | A | A |
| Northern Bl & 37th St | SW | 1,185.5 | 1,020.4 | 860.6 | 1,849.0 | A | A | A | A |
| 36th Av & 33rd St | SE | 179.0 | 379.0 | 576.6 | 969.7 | A | A | A | A |
| 36th Av & 33rd St | SW | 172.1 | 282.0 | 532.6 | 757.7 | A | A | A | A |
| Northern Bl & 42nd St | NE | 2525.0 | 1790.0 | 1538.7 | 1614.6 | A | A | A | A |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO ACTION CONDITION)

Pedestrian volumes along analyzed sidewalks, crosswalks, and corner areas are expected to increase during the 2021 through 2032 period due to background growth as well as demand from new development. In determining future No Action pedestrian volumes, development on projected development sites pursuant to the No Action RWCDS was considered, as was demand from other No Action development projects (see Table 2-1 in Chapter 2, "Land Use, Zoning, and Public Policy"). Conditions on analyzed sidewalks, crosswalks, and corner areas in the No Action condition are discussed below.

*SIDEWALKS*

**Table 13-43** shows the No Action peak hour pedestrian volumes, average pedestrian space, and platoon-adjusted levels of service at analyzed sidewalks. As shown in **Table 13-43**, all analyzed sidewalks are projected to operate at an acceptable LOS C or better in all peak hours with the exception of the south sidewalk on 36th Avenue between 32nd and 33rd streets which would operate at LOS D in the AM peak hour.

*CROSSWALKS*

**Table 13-44** shows the peak hour volumes, average pedestrian space, and levels of service at analyzed crosswalks in the No Action condition. As shown in **Table 13-44**, all analyzed crosswalks are expected to operate at an ~~uncongested~~acceptable LOS ~~A~~C or ~~B~~better in all peak hours in the No Action condition.

*CORNER AREAS*

**Table 13-45** shows the peak hour volumes, average pedestrian space, and levels of service at analyzed corner areas in the No Action condition. As shown in **Table 13-45**, all analyzed corner areas are expected to continue to operate at an uncongested LOS A in all peak hours.

## THE FUTURE WITH THE PROPOSED ACTIONS (WITH ACTION CONDITION)

Incremental pedestrian demand generated by the Proposed Actions by 2032 would include trips made solely by walking, as well as pedestrian trips en route to and from subway station entrances and bus stops. Pedestrian trips generated by the Proposed Actions are expected to be most concentrated in proximity to projected development sites and along corridors connecting these sites to area transit services. To better accommodate the increased pedestrian demand, sidewalk widths on the south side of 35th Avenue from 37th Street to Steinway Street, and from 41st Street to 43rd Street, would be widened by five feet adjacent to the Applicant-controlled development sites.

As shown in **Table 13-9**, the Proposed Actions are expected to generate a net total of approximately ~~920~~1,593 walk-only trips in the weekday AM peak hour, ~~3,037~~2,615 in the midday peak hour, ~~1,786~~3,089 in the PM peak hour and ~~1,651~~3,372 in the Saturday peak hour. Persons en route to and from subway station entrances and bus stops would add approximately 2,~~784~~682, 1,~~438, 3,155~~474, 2,494 and 2,~~552~~538 additional pedestrian trips to Project Area sidewalks and crosswalks during these same periods, respectively. These pedestrian volumes were added to the projected No Action volumes to generate the With Action pedestrian volumes for analysis.

# Table 13-43
# No Action Sidewalk Conditions

| Location | Effective Width (ft.) | Peak Hour Volumes | | | | Average Pedestrian Space ($ft^2$/ped) | | | | Platoon-Adjusted Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT | AM | MD | PM | SAT |
| East SW of 42nd St btw 34th Ave and 35th Ave | 1.8 | 95 | 129 | 176 | 158 | 168.4 | 162.3 | 148.7 | 130.6 | B | B | B | B |
| East SW of 42nd St btw 35th Ave and Northern Blvd | 2.1 | 22 | 37 | 41 | 37 | 1,048.3 | 543.1 | 602.6 | 747.9 | A | A | A | A |
| South SW of 35th Ave btw 42nd St and 43rd St | 2.0 | 55 | 213 | 182 | 218 | 178.3 | 111.1 | 109.2 | 77.8 | B | B | B | C |
| West SW of 42nd St btw 35th Ave and Northern Blvd | 3.1 | 41 | 15 | 36 | 22 | 630.6 | 2,081.6 | 1,097.7 | 1,108.8 | A | A | A | A |
| West SW of 42nd St btw 34th Ave and 35th Ave | 3.5 | 97 | 137 | 206 | 206 | 531.4 | 234.5 | 209.7 | 236.6 | A | B | B | B |
| East SW of 41st St btw 34th Ave and 35th Ave | 2.4 | 113 | 153 | 235 | 248 | 247.4 | 175.1 | 110.4 | 120.1 | B | B | B | B |
| East SW of 41st St btw 35th Ave and 36th Ave | 2.5 | 65 | 120 | 165 | 208 | 609.1 | 220.9 | 109.9 | 104.2 | A | B | B | B |
| South SW of 35th Ave btw 41st St and 42nd St | 5.9 | 185 | 429 | 446 | 548 | 212.6 | 159.2 | 144.7 | 78.0 | B | B | B | C |
| West SW of 41st St btw 35th Ave and 36th Ave | 2.3 | 12 | 4 | 10 | 20 | 1,384.0 | 4,613.4 | 2,325.1 | 922.6 | A | A | A | A |
| East SW of Steinway St btw 34th Ave and 35th Ave | 7.4 | 95 | 178 | 216 | 301 | 977.3 | 349.8 | 435.2 | 296.6 | A | B | B | B |
| North SW of 35th Ave btw Steinway St and 41st St | 9.0 | 191 | 321 | 271 | 306 | 589.6 | 350.7 | 410.2 | 353.9 | A | B | B | B |
| East SW of Steinway St btw 35th Ave and 36th Ave | 4.0 | 290 | 468 | 689 | 808 | 172.3 | 117.3 | 85.8 | 51.5 | B | B | C | C |
| South SW of 35th Ave btw Steinway St and 41st St | 6.2 | 221 | 525 | 664 | 715 | 251.9 | 120.6 | 115.8 | 81.4 | B | B | B | C |
| West SW of Steinway St btw 35th Ave and 36th Ave | 7.2 | 88 | 112 | 164 | 110 | 955.0 | 801.0 | 553.9 | 846.6 | A | A | A | A |
| South SW of 35th Ave btw 38th St and Steinway St | 11.7 | 146 | 333 | 423 | 444 | 886.2 | 321.8 | 362.6 | 232.9 | A | B | B | B |
| West SW of Steinway St btw 34th Ave and 35th Ave | 6.3 | 371 | 408 | 578 | 524 | 237.6 | 203.7 | 161.0 | 147.0 | B | B | B | B |
| North SW of 35th Ave btw 38th St and Steinway St | 3.6 | 421 | 507 | 512 | 532 | 103.2 | 85.5 | 100.2 | 83.6 | B | C | B | C |
| North SW of 35th Ave btw 37th St and 38th St | 3.1 | 316 | 322 | 305 | 320 | 96.7 | 119.2 | 142.0 | 124.6 | B | B | B | B |
| South SW of 35th Ave btw 37th St and 38th St | 6.9 | 231 | 260 | 346 | 271 | 284.5 | 328.7 | 300.8 | 319.4 | B | B | B | B |
| North SW of Northern Blvd btw 36th Ave and 42nd St | 13.5 | 105 | 223 | 210 | 198 | 1,588.5 | 699.9 | 794.2 | 637.1 | A | A | A | A |
| North SW of 36th Ave btw 41st St and Northern Blvd | 3.4 | 121 | 275 | 263 | 331 | 303.4 | 141.0 | 164.0 | 100.6 | B | B | B | B |
| North SW of 36th Ave btw Steinway St and 41st St | 7.2 | 73 | 215 | 176 | 243 | 949.0 | 433.0 | 509.7 | 425.2 | A | B | B | B |
| East SW of 38th St btw 35th Ave and 36th Ave | 2.8 | 26 | 59 | 40 | 44 | 1,340.3 | 538.9 | 718.7 | 544.4 | A | A | A | A |
| North SW of 36th Ave btw 38th St and Steinway St | 2.5 | 101 | 151 | 240 | 274 | 262.5 | 149.1 | 120.0 | 84.6 | B | B | B | C |
| North SW of 36th Ave btw 37th St and 38th St | 3.9 | 108 | 194 | 307 | 386 | 408.1 | 220.6 | 151.3 | 128.3 | B | B | B | B |
| East SW of 37th St btw 35th Ave and 36th Ave | 5.9 | 53 | 65 | 84 | 87 | 990.8 | 995.4 | 658.6 | 592.7 | A | A | A | A |
| North SW of 36th Ave btw 36th St and 37th St | 8.5 | 134 | 199 | 320 | 379 | 854.0 | 554.7 | 357.5 | 230.7 | A | A | B | B |
| North SW of 36th Ave btw 35th St and 36th St | 11.2 | 127 | 174 | 240 | 285 | 1,071.7 | 711.1 | 471.3 | 322.4 | A | A | B | B |
| North SW of 36th Ave btw 34th St and 35th St | 9.5 | 212 | 255 | 346 | 371 | 567.8 | 489.7 | 330.4 | 271.6 | A | B | B | B |
| North SW of 36th Ave btw 33rd St and 34th St | 8.7 | 205 | 245 | 334 | 422 | 548.6 | 526.2 | 353.0 | 272.8 | A | B | B | B |
| North SW of 36th Ave btw 32nd St and 33rd St | 3.3 | 216 | 282 | 321 | 325 | 154.6 | 156.6 | 137.5 | 113.6 | B | B | B | B |
| North SW of 36th Ave btw 31st St and 32nd St | 4.2 | 172 | 127 | 206 | 262 | 276.3 | 337.9 | 233.8 | 166.1 | B | B | B | B |
| East SW of 31st St btw 36th Ave and 37th Ave | 6.3 | 306 | 304 | 437 | 493 | 281.3 | 240.8 | 156.0 | 132.1 | B | B | B | B |
| West SW of 31st St btw 35th Ave and 36th Ave | 8.3 | 278 | 148 | 322 | 485 | 399.0 | 562.2 | 254.2 | 244.9 | B | A | B | B |
| East SW of 36th St btw 37th Ave and Northern Blvd | 3.8 | 73 | 41 | 76 | 64 | 706.3 | 1,065.3 | 407.0 | 549.7 | A | A | B | A |
| South SW of Northern Blvd btw 36th St and 37th St | 5.4 | 105 | 81 | 127 | 73 | 554.9 | 952.1 | 485.7 | 880.4 | A | A | B | A |
| South SW of 36th Ave btw 32nd St and 33rd St | 2.4 | 722 | 500 | 355 | 353 | 35.7 | 61.2 | 94.5 | 76.4 | D | C | B | C |
| South SW of 36th Ave btw 31st St and 32nd St | 3.8 | 343 | 299 | 392 | 404 | 111.2 | 86.9 | 145.5 | 141.1 | B | C | B | B |
| North SW of 34th Ave btw 41st St and 42nd St | 12.1 | 333 | 429 | 440 | 522 | 489.9 | 389.2 | 383.8 | 290.4 | B | B | B | B |
| North SW of 34th Ave btw Steinway St and 41st St | 5.7 | 474 | 503 | 578 | 602 | 143.4 | 167.2 | 143.9 | 132.1 | B | B | B | B |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-44
## No Action Crosswalk

| Intersection | Crosswalk | Peak Hour Volumes | | | | Average Pedestrian Space ($ft^2$/ped) | | | | Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT | AM | MD | PM | SAT |
| 34th Av & Steinway St | East | 103 | 369 | 341 | 422 | 309.5 | 173.2 | 192.6 | 156.1 | A | A | A | A |
| 34th Av & 41st St | East | 138 | 180 | 259 | 266 | 110.3 | 93.1 | 66.8 | 56.3 | A | A | A | B |
| 34th Av & 42nd St | East | 112 | 100 | 129 | 160 | 131.3 | 148.7 | 89.2 | 104.3 | A | A | A | A |
| 35th Av & 43rd St | West | 44 | 66 | 86 | 83 | 398.0 | 407.4 | 211.9 | 260.6 | A | A | A | A |
| 35th Av & 42nd St | North | 120 | 293 | 246 | 259 | 192.7 | 87.0 | 104.3 | 106.5 | A | A | A | A |
| 35th Av & 42nd St | East | 67 | 122 | 153 | 184 | 300.1 | 160.8 | 173.0 | 103.2 | A | A | A | A |
| 35th Av & 42nd St | South | 125 | 314 | 299 | 359 | 235.2 | 98.9 | 101.9 | 100.8 | A | A | A | A |
| 35th Av & 42nd St | West | 86 | 112 | 174 | 190 | 244.6 | 151.2 | 124.4 | 121.0 | A | A | A | A |
| 35th Av & 41st St | North | 134 | 294 | 245 | 252 | 241.2 | 91.4 | 110.5 | 108.4 | A | A | A | A |
| 35th Av & 41st St | East | 86 | 158 | 229 | 269 | 160.6 | 69.3 | 56.1 | 38.8 | A | A | B | C |
| 35th Av & 41st St | South | 169 | 429 | 463 | 615 | 153.0 | 72.5 | 89.8 | 51.8 | A | A | A | B |
| 35th Av & 41st St | West | 102 | 154 | 229 | 274 | 139.7 | 81.6 | 60.9 | 40.8 | A | A | A | B |
| 35th Av & Steinway St | East | 112 | 214 | 298 | 369 | 304.8 | 255.6 | 217.7 | 138.7 | A | A | A | A |
| 35th Av & Steinway St | South | 150 | 362 | 391 | 425 | 276.3 | 55.9 | 56.5 | 43.3 | A | B | B | B |
| 35th Av & Steinway St | West | 151 | 260 | 409 | 380 | 242.3 | 178.2 | 132.6 | 119.3 | A | A | A | A |
| 35th Av & 38th St | North | 326 | 331 | 346 | 365 | 88.1 | 92.5 | 88.9 | 90.4 | A | A | A | A |
| 35th Av & 38th St | East | 68 | 96 | 120 | 108 | 409.0 | 282.7 | 221.4 | 234.8 | A | A | A | A |
| 35th Av & 38th St | South | 166 | 219 | 360 | 336 | 184.9 | 117.0 | 92.1 | 79.1 | A | A | A | A |
| 35th Av & 37th St | East | 139 | 138 | 192 | 164 | 166.9 | 127.9 | 93.2 | 135.7 | A | A | A | A |
| 35th Av & 37th St | South | 217 | 248 | 303 | 215 | 145.8 | 153.9 | 149.2 | 173.7 | A | A | A | A |
| 36th Av & Steinway St | North | 101 | 155 | 201 | 255 | 217.3 | 151.6 | 136.1 | 92.0 | A | A | A | A |
| 36th Av & 38th St | North | 94 | 158 | 196 | 245 | 304.9 | 203.5 | 155.8 | 147.7 | A | A | A | A |
| 36th Av & 37th St | North | 109 | 161 | 259 | 301 | 409.0 | 296.7 | 177.7 | 159.3 | A | A | A | A |
| 36th Av & 37th St | East | 49 | 76 | 118 | 125 | 282.7 | 234.6 | 120.8 | 100.4 | A | A | A | A |
| 36th Av & 36th St | North | 121 | 179 | 269 | 288 | 484.9 | 242.3 | 170.4 | 138.6 | A | A | A | A |
| 36th Av & 35th St | North | 136 | 193 | 265 | 298 | 368.5 | 238.0 | 170.3 | 139.8 | A | A | A | A |
| 36th Av & 34th St | North | 182 | 207 | 310 | 308 | 228.3 | 228.5 | 160.4 | 122.5 | A | A | A | A |
| 36th Av & 33rd St | North | 210 | 260 | 356 | 348 | 183.3 | 126.1 | 109.0 | 100.3 | A | A | A | A |
| 36th Av & 31st St | North | 143 | 162 | 255 | 267 | 217.4 | 191.1 | 118.1 | 114.5 | A | A | A | A |
| 36th Av & 31st St | East | 264 | 296 | 349 | 439 | 231.0 | 230.0 | 157.0 | 144.0 | A | A | A | A |
| 37th Av & 36th St | East | 54 | 40 | 65 | 84 | 432.8 | 464.4 | 276.4 | 306.3 | A | A | A | A |
| Northern Bl & 37th St | South | 96 | 110 | 111 | 71 | 330.9 | 263.5 | 280.7 | 351.0 | A | A | A | A |
| Northern Bl & 42nd St | North | 65 | 220 | 167 | 176 | 808.5 | 241.6 | 294.5 | 281.1 | A | A | A | A |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

# Table 13-45
# No Action Corner Conditions

| Intersection | Corner | Average Pedestrian Space ($ft^2$/ped) | | | | Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT |
| 34th Av & Steinway St | NE | 432.4 | 207.7 | 211.8 | 248.7 | A | A | A | A |
| 34th Av & Steinway St | SE | 694.0 | 260.5 | 306.6 | 260.3 | A | A | A | A |
| 34th Av & Steinway St | SW | 335.8 | 204.5 | 193.5 | 237.0 | A | A | A | A |
| 34th Av & 41st St | NE | 318.1 | 291.3 | 245.6 | 233.6 | A | A | A | A |
| 34th Av & 41st St | SE | 355.0 | 291.9 | 244.6 | 215.2 | A | A | A | A |
| 34th Av & 41st St | SW | 290.2 | 265.3 | 207.0 | 198.5 | A | A | A | A |
| 34th Av & 41st St | NW | 289.3 | 297.9 | 257.4 | 266.3 | A | A | A | A |
| 34th Av & 42nd St | NE | 346.9 | 264.3 | 271.0 | 220.6 | A | A | A | A |
| 34th Av & 42nd St | SE | 453.1 | 348.8 | 305.1 | 272.9 | A | A | A | A |
| 34th Av & 42nd St | SW | 452.3 | 270.2 | 311.1 | 244.2 | A | A | A | A |
| 34th Av & 42nd St | NW | 338.1 | 267.5 | 285.7 | 202.5 | A | A | A | A |
| 34th Av & 43rd St | SE | 626.9 | 382.8 | 387.2 | 260.0 | A | A | A | A |
| 34th Av & 43rd St | SW | 521.9 | 339.6 | 322.2 | 231.2 | A | A | A | A |
| 34th Av & 43rd St | NW | 558.6 | 276.0 | 301.3 | 232.8 | A | A | A | A |
| 35th Av & 43rd St | NE | 785.3 | 253.3 | 320.9 | 296.4 | A | A | A | A |
| 35th Av & 43rd St | SW | 1,099.6 | 509.3 | 581.4 | 496.8 | A | A | A | A |
| 35th Av & 43rd St | NW | 689.7 | 392.5 | 398.4 | 403.7 | A | A | A | A |
| 35th Av & 42nd St | NE | 621.7 | 335.4 | 389.9 | 318.5 | A | A | A | A |
| 35th Av & 42nd St | SE | 696.0 | 328.3 | 335.9 | 286.5 | A | A | A | A |
| 35th Av & 42nd St | SW | 618.5 | 332.4 | 333.2 | 309.5 | A | A | A | A |
| 35th Av & 42nd St | NW | 626.9 | 338.6 | 348.0 | 365.4 | A | A | A | A |
| 35th Av & 41st St | NE | 654.3 | 285.2 | 291.3 | 234.6 | A | A | A | A |
| 35th Av & 41st St | SE | 470.2 | 218.5 | 234.2 | 143.6 | A | A | A | A |
| 35th Av & 41st St | SW | 431.7 | 220.0 | 230.5 | 139.5 | A | A | A | A |
| 35th Av & 41st St | NW | 629.5 | 310.1 | 307.1 | 241.7 | A | A | A | A |
| 35th Av & Steinway St | NE | 586.3 | 375.8 | 363.9 | 295.2 | A | A | A | A |
| 35th Av & Steinway St | SE | 384.3 | 229.4 | 189.6 | 138.9 | A | A | A | A |
| 35th Av & Steinway St | SW | 674.4 | 317.8 | 280.8 | 249.9 | A | A | A | A |
| 35th Av & Steinway St | NW | 380.5 | 282.9 | 261.7 | 238.6 | A | A | A | A |
| 35th Av & 38th St | NE | 431.6 | 410.5 | 358.2 | 373.0 | A | A | A | A |
| 35th Av & 38th St | SE | 550.1 | 363.8 | 308.4 | 290.6 | A | A | A | A |
| 35th Av & 38th St | SW | 613.1 | 405.4 | 340.6 | 296.1 | A | A | A | A |
| 35th Av & 38th St | NW | 458.1 | 304.6 | 360.1 | 295.9 | A | A | A | A |
| 35th Av & 37th St | NE | 252.3 | 244.8 | 227.1 | 232.0 | A | A | A | A |
| 35th Av & 37th St | SE | 443.9 | 378.2 | 339.3 | 432.7 | A | A | A | A |
| 35th Av & 37th St | SW | 298.3 | 469.4 | 443.4 | 556.1 | A | A | A | A |
| 35th Av & 37th St | NW | 262.6 | 311.3 | 416.4 | 366.9 | A | A | A | A |
| Northern Bl & 42nd St | NW | 1,131.7 | 553.9 | 628.7 | 593.4 | A | A | A | A |
| 36th Av & Steinway St | NE | 872.2 | 752.3 | 654.4 | 502.8 | A | A | A | A |
| 36th Av & Steinway St | SE | 1,063.5 | 955.9 | 784.7 | 761.8 | A | A | A | A |
| 36th Av & Steinway St | NW | 1,096.9 | 682.5 | 688.1 | 565.5 | A | A | A | A |
| 36th Av & 38th St | NE | 1,276.0 | 808.1 | 639.9 | 589.8 | A | A | A | A |
| 36th Av & 38th St | NW | 806.2 | 506.3 | 349.3 | 304.9 | A | A | A | A |
| 36th Av & 37th St | NE | 630.3 | 481.9 | 271.6 | 235.2 | A | A | A | A |
| 36th Av & 37th St | SE | 1,300.9 | 844.5 | 565.8 | 468.6 | A | A | A | A |
| 36th Av & 37th St | NW | 1,015.7 | 829.5 | 584.9 | 478.2 | A | A | A | A |
| 36th Av & 36th St | NE | 1,014.7 | 602.9 | 469.6 | 395.6 | A | A | A | A |
| 36th Av & 36th St | SE | 1,109.5 | 716.3 | 624.2 | 640.9 | A | A | A | A |
| 36th Av & 36th St | NW | 1,088.3 | 601.8 | 497.8 | 443.2 | A | A | A | A |
| 36th Av & 35th St | NE | 554.7 | 470.9 | 357.7 | 309.4 | A | A | A | A |
| 36th Av & 35th St | NW | 695.8 | 533.2 | 442.0 | 399.7 | A | A | A | A |
| 36th Av & 34th St | NE | 565.3 | 465.7 | 425.3 | 341.9 | A | A | A | A |
| 36th Av & 34th St | NW | 529.7 | 603.4 | 411.6 | 373.7 | A | A | A | A |
| 36th Av & 33rd St | NE | 584.6 | 446.7 | 408.1 | 378.5 | A | A | A | A |
| 36th Av & 33rd St | NW | 565.3 | 377.5 | 365.9 | 367.0 | A | A | A | A |
| 36th Av & 31st St | NE | 605.2 | 597.8 | 403.2 | 369.2 | A | A | A | A |
| 36th Av & 31st St | SE | 617.5 | 669.2 | 488.0 | 501.4 | A | A | A | A |
| 36th Av & 31st St | NW | 891.0 | 1,160.4 | 627.7 | 544.3 | A | A | A | A |
| 37th Av & 36th St | NE | 1,145.6 | 840.1 | 770.4 | 726.7 | A | A | A | A |
| 37th Av & 36th St | SE | 1,208.2 | 1,046.5 | 744.6 | 749.6 | A | A | A | A |
| Northern Bl & 37th St | SE | 1,381.3 | 1,094.3 | 908.6 | 1,187.7 | A | A | A | A |
| Northern Bl & 37th St | SW | 1,114.3 | 916.3 | 743.0 | 1,256.5 | A | A | A | A |
| 36th Av & 33rd St | SE | 150.6 | 256.5 | 316.6 | 425.7 | A | A | A | A |
| 36th Av & 33rd St | SW | 139.97 | 186.71 | 265.4 | 316.7 | A | A | A | A |
| Northern Bl & 42nd St | NE | 1731.2 | 635.7 | 781.0 | 667.7 | A | A | A | A |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

Anticipated conditions and significant adverse impacts at analyzed sidewalks, crosswalks, and corner areas in the With Action condition are shown in **Tables 13-46 through 13-48**. As discussed below, only three sidewalks out of the 40 analyzed and only two crosswalks out of the 33 analyzed would be impacted in one or more peak hours, and there would be no impacts to any analyzed corner areas. Potential mitigation for these sidewalk and crosswalk impacts are discussed in Chapter 20, "Mitigation."

*SIDEWALKS*

**Table 13-46** shows the incremental change in peak hour pedestrian volumes attributable to the Proposed Actions and the total With Action pedestrian volumes, average pedestrian space, and platoon-adjusted levels of service at analyzed sidewalks. In addition, **Table 13-46** identifies the sidewalks that are expected to be significantly adversely impacted in one or more peak hours based on the *CEQR Technical Manual* criteria shown in **Table 13-17**. As shown in **Table 13-46**, there would be significant adverse impacts at only three of the 40 analyzed sidewalks in one or more peak hours. These would include:

- The north sidewalk on 36th Avenue between 38th Street and Steinway Street in ~~all analyzed~~the weekday AM, weekday PM, and Saturday peak hours;
- The north sidewalk of 36th Avenue between 32nd Street and 33rd Street in the weekday AM and Saturday peak ~~hour~~hours; and
- The south sidewalk of 36th Avenue between 32nd Street and 33rd Street in the weekday AM peak hour.

*CROSSWALKS*

**Table 13-47** shows the incremental change in peak hour pedestrian volumes attributable to the Proposed Actions and the total With Action pedestrian volumes, average pedestrian space, and levels of service at analyzed crosswalks. As shown in **Table 13-47**, based on the *CEQR Technical Manual* criteria shown in **Table 13-18**, there would be significant adverse impacts at only two of the 33 analyzed crosswalks in one or more peak hours as result of the Proposed Actions. These would include:

- The east crosswalk on 35th Avenue at 41st Street in the ~~weekday midday~~Saturday peak hour; and
- The south crosswalk on 35th Avenue at Steinway Street in the Saturday peak hour.

*CORNER AREAS*

**Table 13-48** shows the total With Action pedestrian volumes, average pedestrian space, and levels of service at analyzed corner areas. As shown in **Table 13-48**, based on the *CEQR Technical Manual* criteria shown in **Table 13-18**, all analyzed corner areas are expected to continue to operate at an uncongested LOS ~~AC~~A in all peak hours. Therefore, there would be no significant adverse impacts to any analyzed corner area in any peak hour as a result of the Proposed Actions.

# Table 13-46
# With Action Sidewalk Conditions

| Location | Effective Width (ft.) | Project Increment | | | | Peak Hour Volumes | | | | Average Pedestrian Space ($ft^2$/ped) | | | | Platoon-Adjusted Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT | AM | MD | PM | SAT | AM | MD | PM | SAT |
| East SW of 42nd St btw 34th Ave and 35th Ave | 1.8 | 338 | 253 | 397 | 367 | 433 | 382 | 573 | 525 | 35.6 | 53.9 | 44.6 | 38.0 | D | C | C | D |
| East SW of 42nd St btw 35th Ave and Northern Blvd | 8.2 | 323 | 310 | 290 | 238 | 345 | 347 | 331 | 275 | 262.4 | 227.3 | 293.0 | 395.2 | B | B | B | B |
| South SW of 35th Ave btw 42nd St and 43rd St | 9.8 | 142 | 293 | 287 | 337 | 197 | 506 | 469 | 555 | 244.8 | 230.6 | 208.9 | 151.1 | B | B | B | B |
| West SW of 42nd St btw 35th Ave and Northern Blvd | 6.4 | 271 | 389 | 531 | 653 | 312 | 404 | 567 | 675 | 172.4 | 160.8 | 144.9 | 74.6 | B | B | B | C |
| West SW of 42nd St btw 34th Ave and 35th Ave | 3.5 | 78 | 126 | 158 | 169 | 175 | 263 | 364 | 375 | 294.4 | 121.8 | 118.3 | 129.7 | B | B | B | B |
| East SW of 41st St btw 34th Ave and 35th Ave | 2.4 | 82 | 121 | 143 | 137 | 195 | 274 | 378 | 385 | 143.1 | 97.4 | 68.2 | 77.0 | B | B | C | C |
| East SW of 41st St btw 35th Ave and 36th Ave | 8.3 | 306 | 289 | 503 | 562 | 371 | 409 | 668 | 770 | 352.1 | 213.8 | 89.4 | 92.8 | B | B | C | B |
| South SW of 35th Ave btw 41st St and 42nd St | 15.4 | 148 | 231 | 296 | 333 | 333 | 660 | 742 | 881 | 307.9 | 270.0 | 226.9 | 127.1 | B | B | B | B |
| West SW of 41st St btw 35th Ave and 36th Ave | 5.8 | 199 | 205 | 293 | 336 | 211 | 209 | 303 | 356 | 194.0 | 217.6 | 189.1 | 127.5 | B | B | B | B |
| East SW of Steinway St btw 34th Ave and 35th Ave | 7.4 | 344 | 285 | 450 | 509 | 439 | 463 | 666 | 810 | 211.2 | 134.1 | 140.8 | 109.8 | B | B | B | B |
| North SW of 35th Ave btw Steinway St and 41st St | 9.0 | 171 | 191 | 278 | 305 | 362 | 512 | 549 | 611 | 310.9 | 219.7 | 202.3 | 177.0 | B | B | B | B |
| East SW of Steinway St btw 35th Ave and 36th Ave | 6.6 | 347 | 315 | 434 | 508 | 637 | 783 | 1123 | 1316 | 128.8 | 115.3 | 86.6 | 52.0 | B | B | C | C |
| South SW of 35th Ave btw Steinway St and 41st St | 6.2 | 315 | 337 | 513 | 622 | 536 | 862 | 1177 | 1337 | 103.4 | 73.0 | 64.8 | 42.6 | B | C | C | C |
| West SW of Steinway St btw 35th Ave and 36th Ave | 7.2 | 238 | 135 | 205 | 226 | 326 | 247 | 369 | 336 | 257.6 | 363.1 | 246.0 | 277.0 | B | B | B | B |
| South SW of 35th Ave btw 38th St and Steinway St | 16.9 | 223 | 283 | 348 | 386 | 369 | 616 | 771 | 830 | 508.3 | 252.1 | 288.3 | 180.5 | B | B | B | B |
| West SW of Steinway St btw 34th Ave and 35th Ave | 6.3 | 782 | 401 | 668 | 654 | 1153 | 809 | 1246 | 1178 | 75.8 | 102.3 | 74.1 | 64.7 | C | B | C | C |
| North SW of 35th Ave btw 38th St and Steinway St | 3.6 | 332 | 182 | 305 | 234 | 753 | 689 | 817 | 766 | 57.0 | 62.5 | 62.3 | 57.6 | C | C | C | C |
| North SW of 35th Ave btw 37th St and 38th St | 3.1 | 368 | 246 | 429 | 399 | 684 | 568 | 734 | 719 | 43.7 | 67.1 | 58.2 | 54.7 | C | C | C | C |
| South SW of 35th Ave btw 37th St and 38th St | 7.3 | 122 | 234 | 159 | 158 | 353 | 494 | 505 | 429 | 194.9 | 181.0 | 215.8 | 211.2 | B | B | B | B |
| North SW of Northern Blvd btw 36th Ave and 42nd St | 13.5 | 344 | 233 | 338 | 349 | 449 | 456 | 548 | 547 | 371.3 | 342.2 | 304.2 | 230.4 | B | B | B | B |
| North SW of 36th Ave btw 41st St and Northern Blvd | 10.7 | 350 | 267 | 399 | 432 | 471 | 542 | 662 | 763 | 243.6 | 224.1 | 203.8 | 136.8 | B | B | B | B |
| North SW of 36th Ave btw Steinway St and 41st St | 13.8 | 623 | 460 | 736 | 853 | 696 | 675 | 912 | 1096 | 190.6 | 264.4 | 188.4 | 180.5 | B | B | B | B |
| East SW of 38th St btw 35th Ave and 36th Ave | 2.8 | 116 | 148 | 220 | 232 | 142 | 207 | 260 | 276 | 245.2 | 153.3 | 110.1 | 86.2 | B | B | B | C |
| North SW of 36th Ave btw 38th St and Steinway St | 2.5 | 846 | 527 | 827 | 910 | 947 | 678 | 1067 | 1184 | 26.1 | 31.7 | 25.1 | 17.0 | D * | D | D * | E * |
| North SW of 36th Ave btw 37th St and 38th St | 3.9 | 871 | 527 | 790 | 867 | 979 | 721 | 1097 | 1253 | 43.8 | 58.5 | 41.2 | 38.3 | C | C | C | D |
| East SW of 37th St btw 35th Ave and 36th Ave | 5.9 | 439 | 365 | 410 | 292 | 492 | 430 | 494 | 379 | 106.2 | 150.1 | 111.5 | 135.7 | B | B | B | B |
| North SW of 36th Ave btw 36th St and 37th St | 8.5 | 1125 | 652 | 1017 | 1049 | 1259 | 851 | 1337 | 1428 | 90.3 | 129.3 | 85.0 | 60.4 | B | B | C | C |
| North SW of 36th Ave btw 35th St and 36th St | 11.2 | 947 | 546 | 881 | 905 | 1074 | 720 | 1121 | 1190 | 126.3 | 171.5 | 100.4 | 76.5 | B | B | B | C |
| North SW of 36th Ave btw 34th St and 35th St | 9.5 | 947 | 546 | 881 | 905 | 1159 | 801 | 1227 | 1276 | 103.3 | 155.6 | 92.6 | 78.3 | B | B | B | C |
| North SW of 36th Ave btw 33rd St and 34th St | 8.7 | 947 | 546 | 881 | 905 | 1152 | 791 | 1215 | 1327 | 97.1 | 162.7 | 96.5 | 86.2 | B | B | B | C |
| North SW of 36th Ave btw 32nd St and 33rd St | 3.3 | 880 | 489 | 766 | 802 | 1096 | 771 | 1087 | 1127 | 28.8 | 56.5 | 39.4 | 31.2 | D * | C | D | D * |
| North SW of 36th Ave btw 31st St and 32nd St | 4.2 | 880 | 489 | 766 | 802 | 1052 | 616 | 972 | 1064 | 44.0 | 68.9 | 48.5 | 39.6 | C | C | C | D |
| East SW of 31st St btw 36th Ave and 37th Ave | 6.3 | 603 | 339 | 595 | 603 | 909 | 643 | 1032 | 1096 | 94.2 | 113.5 | 65.4 | 58.7 | B | B | C | C |
| West SW of 31st St btw 35th Ave and 36th Ave | 8.3 | 312 | 147 | 238 | 259 | 590 | 295 | 560 | 744 | 187.8 | 281.9 | 145.9 | 159.5 | B | B | B | B |
| East SW of 36th St btw 37th Ave and Northern Blvd | 3.8 | 222 | 84 | 124 | 148 | 295 | 125 | 200 | 212 | 174.5 | 349.3 | 154.3 | 165.6 | B | B | B | B |
| South SW of Northern Blvd btw 36th St and 37th St | 5.4 | 105 | 81 | 171 | 147 | 210 | 162 | 298 | 220 | 277.3 | 476.0 | 206.8 | 292.0 | B | B | B | B |
| South SW of 36th Ave btw 32nd St and 33rd St | 2.4 | 131 | 141 | 227 | 216 | 853 | 641 | 582 | 569 | 29.7 | 47.3 | 57.0 | 46.7 | D * | C | C | C |
| South SW of 36th Ave btw 31st St and 32nd St | 3.8 | 131 | 141 | 227 | 216 | 474 | 440 | 619 | 620 | 80.2 | 58.5 | 91.8 | 91.6 | C | C | B | B |
| North SW of 34th Ave btw 41st St and 42nd St | 12.1 | 185 | 116 | 185 | 163 | 518 | 545 | 625 | 685 | 314.9 | 306.3 | 270.1 | 221.2 | B | B | B | B |
| North SW of 34th Ave btw Steinway St and 41st St | 5.7 | 184 | 119 | 193 | 177 | 658 | 622 | 771 | 779 | 103.0 | 135.1 | 107.6 | 101.9 | B | B | B | B |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-47
## With Action Crosswalk Conditions

| Intersection | Crosswalk | Project Increment | | | | Peak Hour Volumes | | | | Average Pedestrian Space ($ft^2$/ped) | | | | Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT | AM | MD | PM | SAT | AM | MD | PM | SAT |
| 34th Av & Steinway St | East | 475 | 341 | 577 | 621 | 578 | 710 | 918 | 1,043 | 56.9 | 89.0 | 69.2 | 61.1 | B | A | A | A |
| 34th Av & 41st St | East | 80 | 119 | 141 | 134 | 218 | 299 | 400 | 400 | 68.8 | 55.4 | 42.6 | 36.9 | A | B | B | C |
| 34th Av & 42nd St | East | 206 | 194 | 273 | 272 | 318 | 294 | 402 | 432 | 44.1 | 49.4 | 27.4 | 37.5 | B | B | C | C |
| 35th Av & 43rd St | West | 78 | 122 | 117 | 146 | 122 | 188 | 203 | 229 | 135.9 | 141.1 | 86.4 | 89.7 | A | A | A | A |
| 35th Av & 42nd St | North | 42 | 58 | 62 | 56 | 162 | 351 | 308 | 315 | 142.1 | 72.2 | 82.9 | 87.0 | A | A | A | A |
| 35th Av & 42nd St | East | 369 | 307 | 463 | 445 | 436 | 429 | 616 | 629 | 44.2 | 44.2 | 41.5 | 28.8 | B | B | B | C |
| 35th Av & 42nd St | South | 135 | 237 | 278 | 323 | 260 | 551 | 577 | 682 | 106.8 | 52.5 | 47.4 | 47.1 | A | B | B | B |
| 35th Av & 42nd St | West | 128 | 142 | 164 | 200 | 214 | 254 | 338 | 390 | 94.5 | 65.2 | 63.8 | 58.9 | A | A | A | B |
| 35th Av & 41st St | North | 182 | 200 | 287 | 300 | 316 | 494 | 532 | 552 | 99.5 | 53.1 | 49.8 | 49.4 | A | B | B | B |
| 35th Av & 41st St | East | 152 | 222 | 324 | 315 | 238 | 380 | 553 | 584 | 54.3 | 28.9 | 22.6 | 17.3 | B | C | D | D * |
| 35th Av & 41st St | South | 308 | 308 | 468 | 543 | 477 | 737 | 931 | 1158 | 51.9 | 40.7 | 43.2 | 26.3 | B | B | B | C |
| 35th Av & 41st St | West | 82 | 111 | 150 | 134 | 184 | 265 | 379 | 408 | 71.2 | 44.1 | 32.3 | 23.3 | A | B | C | D |
| 35th Av & Steinway St | East | 239 | 198 | 301 | 343 | 351 | 412 | 599 | 712 | 100.2 | 129.4 | 105.0 | 68.7 | A | A | A | A |
| 35th Av & Steinway St | South | 385 | 362 | 486 | 546 | 535 | 724 | 877 | 971 | 69.9 | 25.8 | 21.8 | 15.4 | A | C | D | D * |
| 35th Av & Steinway St | West | 526 | 319 | 468 | 505 | 677 | 579 | 877 | 885 | 46.7 | 78.2 | 59.9 | 50.5 | B | A | B | B |
| 35th Av & 38th St | North | 393 | 275 | 443 | 407 | 719 | 606 | 789 | 772 | 37.4 | 49.0 | 37.9 | 41.1 | C | B | C | B |
| 35th Av & 38th St | East | 146 | 206 | 256 | 268 | 214 | 302 | 376 | 376 | 127.7 | 87.4 | 68.0 | 64.5 | A | A | A | A |
| 35th Av & 38th St | South | 119 | 121 | 82 | 32 | 285 | 340 | 442 | 368 | 102.5 | 73.6 | 77.0 | 80.2 | A | A | A | A |
| 35th Av & 37th St | East | 365 | 210 | 324 | 228 | 504 | 348 | 516 | 392 | 43.8 | 50.2 | 34.5 | 59.8 | B | B | C | B |
| 35th Av & 37th St | South | 97 | 131 | 131 | 108 | 314 | 379 | 434 | 323 | 99.9 | 101.0 | 103.3 | 115.4 | A | A | A | A |
| 36th Av & Steinway St | North | 686 | 435 | 685 | 757 | 787 | 590 | 886 | 1012 | 23.7 | 37.1 | 28.4 | 21.1 | D | C | C | D |
| 36th Av & 38th St | North | 888 | 561 | 893 | 982 | 982 | 719 | 1089 | 1227 | 26.0 | 42.2 | 25.5 | 27.0 | C | B | C | C |
| 36th Av & 37th St | North | 1125 | 652 | 1017 | 1049 | 1234 | 813 | 1276 | 1350 | 33.6 | 55.2 | 32.8 | 33.0 | C | B | C | C |
| 36th Av & 37th St | East | 59 | 49 | 66 | 40 | 108 | 125 | 184 | 165 | 125.5 | 142.1 | 76.7 | 76.0 | A | A | A | A |
| 36th Av & 36th St | North | 947 | 546 | 881 | 905 | 1068 | 725 | 1150 | 1193 | 51.0 | 57.6 | 37.4 | 31.1 | B | B | C | C |
| 36th Av & 35th St | North | 947 | 546 | 881 | 905 | 1083 | 739 | 1146 | 1203 | 41.9 | 59.4 | 37.2 | 32.4 | B | B | C | C |
| 36th Av & 34th St | North | 947 | 546 | 881 | 905 | 1129 | 753 | 1191 | 1213 | 33.8 | 60.6 | 39.4 | 28.8 | C | A | C | C |
| 36th Av & 33rd St | North | 925 | 527 | 842 | 871 | 1135 | 787 | 1198 | 1219 | 32.0 | 39.7 | 30.5 | 26.9 | C | C | C | C |
| 36th Av & 31st St | North | 360 | 219 | 319 | 337 | 503 | 381 | 574 | 604 | 59.1 | 81.0 | 50.8 | 49.2 | B | A | B | B |
| 36th Av & 31st St | East | 520 | 271 | 449 | 466 | 784 | 567 | 798 | 905 | 76.2 | 118.3 | 66.8 | 67.9 | A | A | A | A |
| 37th Av & 36th St | East | 244 | 112 | 158 | 180 | 298 | 152 | 223 | 264 | 73.1 | 118.0 | 80.0 | 97.3 | A | A | A | A |
| Northern Bl & 37th St | South | 105 | 81 | 171 | 147 | 201 | 191 | 282 | 218 | 154.4 | 150.5 | 110.9 | 109.8 | A | A | A | A |
| Northern Bl & 42nd St | North | 260 | 165 | 239 | 228 | 325 | 385 | 406 | 404 | 152.0 | 135.0 | 116.3 | 118.5 | A | A | A | A |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-48
## With Action Corner Conditions

| Intersection | Corner | Average Pedestrian Space ($ft^2$/ped) | | | | Level of Service | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM | MD | PM | SAT | AM | MD | PM | SAT |
| 34th Av & Steinway St | NE | 187.5 | 148.0 | 128.1 | 137.7 | A | A | A | A |
| 34th Av & Steinway St | SE | 222.5 | 176.9 | 164.2 | 143.5 | A | A | A | A |
| 34th Av & Steinway St | SW | 302.7 | 179.9 | 168.7 | 209.4 | A | A | A | A |
| 34th Av & 41st St | NE | 206.9 | 206.8 | 168.8 | 159.9 | A | A | A | A |
| 34th Av & 41st St | SE | 223.6 | 213.2 | 172.1 | 157.0 | A | A | A | A |
| 34th Av & 41st St | SW | 198.5 | 207.9 | 152.0 | 150.8 | A | A | A | A |
| 34th Av & 41st St | NW | 207.5 | 229.7 | 183.0 | 189.3 | A | A | A | A |
| 34th Av & 42nd St | NE | 180.1 | 175.4 | 136.2 | 135.3 | A | A | A | A |
| 34th Av & 42nd St | SE | 217.8 | 206.1 | 151.6 | 161.6 | A | A | A | A |
| 34th Av & 42nd St | SW | 275.3 | 189.3 | 204.2 | 171.7 | A | A | A | A |
| 34th Av & 42nd St | NW | 215.7 | 189.6 | 181.9 | 141.9 | A | A | A | A |
| 34th Av & 43rd St | SE | 480.3 | 296.5 | 312.2 | 210.4 | A | A | A | A |
| 34th Av & 43rd St | SW | 377.6 | 242.4 | 230.4 | 171.4 | A | A | A | A |
| 34th Av & 43rd St | NW | 420.3 | 214.2 | 223.4 | 179.3 | A | A | A | A |
| 35th Av & 43rd St | NE | 524.6 | 203.6 | 247.8 | 230.9 | A | A | A | A |
| 35th Av & 43rd St | SW | 482.3 | 290.1 | 299.5 | 252.3 | A | A | A | A |
| 35th Av & 43rd St | NW | 389.1 | 259.3 | 240.9 | 243.0 | A | A | A | A |
| 35th Av & 42nd St | NE | 211.2 | 174.7 | 178.4 | 141.8 | A | A | A | A |
| 35th Av & 42nd St | SE | 208.8 | 152.6 | 153.7 | 126.8 | A | A | A | A |
| 35th Av & 42nd St | SW | 318.1 | 191.2 | 179.5 | 143.8 | A | A | A | A |
| 35th Av & 42nd St | NW | 349.0 | 218.0 | 226.7 | 228.6 | A | A | A | A |
| 35th Av & 41st St | NE | 267.8 | 146.9 | 129.9 | 110.6 | A | A | A | A |
| 35th Av & 41st St | SE | 205.2 | 144.2 | 134.3 | 92.5 | A | A | A | A |
| 35th Av & 41st St | SW | 201.1 | 140.6 | 134.4 | 91.1 | A | A | A | A |
| 35th Av & 41st St | NW | 318.9 | 184.4 | 162.7 | 137.7 | A | A | A | A |
| 35th Av & Steinway St | NE | 315.6 | 254.9 | 231.5 | 161.2 | A | A | A | A |
| 35th Av & Steinway St | SE | 148.8 | 126.3 | 100.6 | 71.1 | A | A | A | A |
| 35th Av & Steinway St | SW | 219.7 | 199.4 | 166.5 | 138.2 | A | A | A | A |
| 35th Av & Steinway St | NW | 150.4 | 168.0 | 139.0 | 122.5 | A | A | A | A |
| 35th Av & 38th St | NE | 180.7 | 193.7 | 150.1 | 156.1 | A | A | A | A |
| 35th Av & 38th St | SE | 310.8 | 227.7 | 208.2 | 206.5 | A | A | A | A |
| 35th Av & 38th St | SW | 471.0 | 335.1 | 361.0 | 347.4 | A | A | A | A |
| 35th Av & 38th St | NW | 202.8 | 189.0 | 184.9 | 177.4 | A | A | A | A |
| 35th Av & 37th St | NE | 130.4 | 141.3 | 119.0 | 144.8 | A | A | A | A |
| 35th Av & 37th St | SE | 246.8 | 233.1 | 212.8 | 295.9 | A | A | A | A |
| 35th Av & 37th St | SW | 241.6 | 422.5 | 333.9 | 402.9 | A | A | A | A |
| 35th Av & 37th St | NW | 221.5 | 249.6 | 318.6 | 293.1 | A | A | A | A |
| Northern Bl & 42nd St | NW | 364.0 | 310.1 | 282.5 | 248.6 | A | A | A | A |
| 36th Av & Steinway St | NE | 166.1 | 244.9 | 193.7 | 147.5 | A | A | A | A |
| 36th Av & Steinway St | SE | 715.7 | 576.7 | 465.4 | 462.8 | A | A | A | A |
| 36th Av & Steinway St | NW | 207.1 | 263.7 | 217.0 | 173.5 | A | A | A | A |
| 36th Av & 38th St | NE | 143.9 | 205.9 | 128.7 | 128.7 | A | A | A | A |
| 36th Av & 38th St | NW | 121.8 | 174.8 | 112.3 | 116.5 | A | A | A | A |
| 36th Av & 37th St | NE | 81.3 | 122.1 | 72.6 | 70.1 | A | A | A | A |
| 36th Av & 37th St | SE | 607.1 | 508.6 | 350.1 | 317.0 | A | A | A | A |
| 36th Av & 37th St | NW | 144.8 | 216.0 | 137.0 | 131.6 | A | A | A | A |
| 36th Av & 36th St | NE | 150.2 | 175.4 | 121.1 | 99.8 | A | A | A | A |
| 36th Av & 36th St | SE | 452.8 | 404.7 | 349.8 | 320.0 | A | A | A | A |
| 36th Av & 36th St | NW | 177.9 | 188.3 | 130.6 | 112.2 | A | A | A | A |
| 36th Av & 35th St | NE | 94.9 | 135.0 | 88.4 | 76.4 | A | A | A | A |
| 36th Av & 35th St | NW | 143.3 | 186.1 | 124.8 | 111.5 | A | A | A | A |
| 36th Av & 34th St | NE | 126.4 | 193.0 | 142.8 | 106.9 | A | A | A | A |
| 36th Av & 34th St | NW | 131.9 | 220.6 | 145.0 | 114.5 | A | A | A | A |
| 36th Av & 33rd St | NE | 133.2 | 166.6 | 130.7 | 113.2 | A | A | A | A |
| 36th Av & 33rd St | NW | 158.1 | 172.8 | 141.3 | 131.9 | A | A | A | A |
| 36th Av & 31st St | NE | 190.4 | 288.3 | 174.7 | 170.1 | A | A | A | A |
| 36th Av & 31st St | SE | 339.3 | 437.3 | 285.2 | 292.2 | A | A | A | A |
| 36th Av & 31st St | NW | 522.7 | 749.8 | 431.9 | 385.8 | A | A | A | A |
| 37th Av & 36th St | NE | 400.2 | 412.2 | 357.7 | 376.6 | A | A | A | A |
| 37th Av & 36th St | SE | 413.0 | 479.9 | 350.4 | 390.5 | A | A | A | A |
| Northern Bl & 37th St | SE | 603.6 | 649.7 | 428.4 | 487.5 | A | A | A | A |
| Northern Bl & 37th St | SW | 616.9 | 602.0 | 400.3 | 493.2 | A | A | A | A |
| 36th Av & 33rd St | SE | 131.6 | 205.7 | 228.7 | 283.8 | A | A | A | A |
| 36th Av & 33rd St | SW | 120.88 | 153.2 | 190.8 | 231.4 | A | A | A | A |
| Northern Bl & 42nd St | NE | 448.2 | 373.1 | 335.9 | 321.1 | A | A | A | A |

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

# J. STREET USER SAFETY EVALUATION

## RECENT DOT INITIATIVES

*VISION ZERO QUEENS PEDESTRIAN SAFETY ACTION PLAN*

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside a motor vehicle. In an effort to drive these fatalities down, DOT and the New York City Police Department (NYPD) developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. These plans pinpoint the conditions and characteristics of pedestrian fatalities and severe injuries; they also identify priority corridors, intersections, and areas that disproportionately account for pedestrian fatalities and severe injuries, prioritizing them for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement, and education measures that intend to alter the physical and behavioral conditions on City streets that lead to pedestrian fatality and injury.

The *Vision Zero Queens Pedestrian Safety Action Plan* was released in 2015 and a *Boroughs Pedestrian Safety Action Plan Update* was released in 2019. The plans define areas where safety issues have been found to occur systematically at an area-wide level as Priority Areas. Based on the 2019 update, the Project Area is located within a Priority Area, and Northern Boulevard, ~~Queens Boulevard,~~ 34th Avenue, and Broadway are identified as Priority Corridors. (Northern Boulevard is also identified as a truck priority corridor.)

Actions recommended in the 2015 *Vision Zero Queens Pedestrian Safety Action Plan* to enhance pedestrian safety in Queens are summarized below. Many of these actions were subsequently advanced as reported in the 2019 update.

*Engineering and Planning*

- Implement at least 50 Vision Zero safety engineering improvements annually at Priority Corridors, Intersections, and Areas citywide, informed by community input
- Expand exclusive pedestrian crossing time, install expanded speed limit signage, and modify signal timing to reduce off-speak speeding on Priority Corridors and Intersections where feasible
- Expand community outreach and engagement with regard to Priority Corridors, Intersections, and Areas
- Install additional lighting under elevated trains and around other key transit stops
- Coordinate with MTA to ensure bus operations contribute to a safe pedestrian environment
- Expand a bicycle network in Queens that improves safety for all road users
- Proactively design for pedestrian safety in high-growth areas in Queens

*Enforcement*

- Deploy speed camera at Priority Corridors, Intersections, and Areas
- Focus enforcement and deploy dedicated resources to Queens NYPD precincts that overlap substantially with Priority Areas
- Prioritize targeted enforcement at all Priority Corridors, Intersections, and Areas annually

*Education and Awareness Campaigns*

- Target child and senior safety education at Priority Corridors and Priority Areas
- Launch multilingual public information campaigns in Priority Areas
- Target intensive street-level outreach at Priority Corridors, Intersections, and Areas

High crash locations and Priority Corridors within the traffic study area are discussed below.

**STUDY AREA HIGH CRASH LOCATIONS**

Crash data for analyzed intersections in the traffic and pedestrian study areas were obtained from DOT for the three-year period between January 1, 2017, and December 31, 2019 (the most recent three-year period for which data are available). The data quantify the total number of reportable and non-reportable crashes (reportable crashes are those involving a fatality, injury, or more than $1,000 in property damage), as well as the total number of crashes involving injuries to pedestrians or bicyclists. During the three-year reporting period, a total of ~~794~~911 reportable and non-reportable crashes, ~~101~~115 pedestrian/bicyclist-related injury crashes and two fatalities occurred at study area intersections. **Table 13-49** provides a summary of these crashes by year and location, including a breakdown of pedestrian and bicycle crashes.

According to the *CEQR Technical Manual*, a high crash location is one where there were ~~48 or more reportable and non-reportable crashes or~~ five or more pedestrian/bicyclist-related crashes in any consecutive 12 months within the most recent three-year period for which data are available. ~~As shown in **Table 13-49**, no study area intersections experienced 48 or more reportable and non-reportable crashes within a consecutive 12-month period during the 2017 to 2019 period. However~~As shown in **Table 13-49**, the intersection of Northern Boulevard and 43rd Street/42nd Place experienced five pedestrian/bicyclist-related crashes in 2017, and the intersection of Northern Boulevard and 39th Street/Steinway Street experienced five pedestrian/bicyclist-related crashes in 2019. Both are therefore considered high crash locations and discussed below.

*NORTHERN BOULEVARD AND 43RD STREET/42ND PLACE*

A total of four pedestrian injury crashes and one bicycle injury crash occurred at this intersection in 2017. No pedestrian or bicycle-related crashes were reported in 2018, and only two bicycle-related crashes occurred at this intersection in 2019. Geometric and operational characteristics affecting safety at this intersection likely include high traffic volumes, an irregular geometry (43rd Street and 42nd Place are offset), and a relatively long (approximately 95-foot) pedestrian crossing distance on Northern Boulevard. In the high-crash year of 2017, high-visibility crosswalks were in place on the crossings of Northern Boulevard, while standard crosswalks were in place on the crossings of 43rd Street and 42nd Place. Pedestrian signals with countdown clocks were also in place at all four crosswalks at this intersection. Subsequently, in 2018, high visibility crosswalks were installed on 43rd Street and on 42nd Place, and a new restriction on trucks turning from Northern Boulevard onto 42nd Place (except for local deliveries) was implemented. These operational changes likely contributed to the fact that there were no pedestrian or bicycle injury crashes reported in 2018 and only two bicycle injury crashes in 2019. It should also be noted that in 2020, new striped bicycle lanes marked by delineator posts were installed along each curb on Northern Boulevard.

*NORTHERN BOULEVARD AND 39TH STREET/STEINWAY STREET*

A total of four pedestrian injury crashes and one bicycle injury crash occurred at this intersection in 2019. Only two pedestrian crashes occurred at this intersection in 2017, and only one bicycle-

related crash occurred at this intersection in 2018. The increase in crashes in 2019 compared to earlier years may have been due in part to construction activity, including sidewalk and lane closures, associated with a new development at the northwest corner of the intersection. In addition to the construction-related sidewalk and lane closures, geometric and operational characteristics affecting safety at this intersection likely include high traffic volumes, an irregular geometry (39th Street and Steinway Street are slightly offset), and relatively long pedestrian crossing distances on Northern Boulevard (approximately 105 feet on the west crosswalk and 125 feet on the east crosswalk). High-visibility crosswalks and pedestrian signals with countdown clocks have already been installed on all crossings at this intersection, and a striped bicycle lane is in place along the west curb on 39th Street. It should also be noted that in 2020, new striped bicycle lanes marked by delineator posts were installed along each curb on Northern Boulevard.

## PRIORITY CORRIDORS

Three of the Priority Corridors identified in the 2019 *Vision Zero Boroughs Pedestrian Safety Action Plan Update* encompass intersections included in the traffic analysis study area: Northern Boulevard (also identified as a Truck Priority Corridor), 34th Avenue, and Broadway.

### *NORTHERN BOULEVARD*

Nineteen analyzed intersections are located along Northern Boulevard, including two identified as high crash locations (see above). Substantial safety improvements have been implemented at analyzed intersections along the Northern Boulevard corridor under Vision Zero, including:

- Installation of pedestrian safety islands at 34th Street, 39th Avenue and 48th Street;
- Installation of curb extensions at 48th Street and 34th Avenue;
- Installation of 10-second (versus the typical 7-second) leading pedestrian intervals (LPIs) at multiple locations; and
- Installation of high visibility crosswalks and refurbished markings at multiple locations.

In addition, as noted previously, new striped bicycle lanes marked by delineator posts were installed along each curb on Northern Boulevard in 2020. Upgrading to protected bike lanes accompanied by the installation of offset crossings (to slow turning vehicles) and additional pedestrian islands has been proposed.

### *34TH AVENUE*

The traffic study area includes three analyzed intersections along the 34th Avenue corridor at 38th, 41st, and 43rd Streets. All three intersections are signalized, and have pedestrian signals and high visibility crosswalks. Shared bicycle lanes have been installed in both directions along 34th Avenue. As part of the Vision Zero initiatives along 34th Avenue, the signal timing for all intersections along this corridor was adjusted to match the 25 MPH speed limit.

### *BROADWAY*

The traffic study area includes one analyzed intersection along the Broadway corridor—the signalized intersection of Broadway and 43rd Street. High-visibility crosswalks and pedestrian signals have been installed at this location, as has a 7-second LPI for pedestrians crossing Broadway. A striped bicycle lane is present along 43rd Street, and installation of protected bike lanes along Broadway has also been proposed. In addition, the signal timing for all intersections along this corridor was adjusted to match the 25 MPH speed limit.

## Table 13-49
## Summary of Motor Vehicle Crash Data 2017–2019

| Intersection | | Pedestrian Injury Crashes | | | Bicycle Injury Crashes | | | Total Pedestrian/Bicyclist Injury Crashes | | | Total Crashes (Reportable + Non-Reportable) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 |
| Northern Blvd | 41st Ave / Queens Plaza E. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 40th Rd | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 6 | 4 | 7 |
| | 31st St / 40th Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 17 | 11 |
| | 39th Ave / Honeywell St | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 9 | 10 | 11 |
| | 34th St | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 4 | 7 | 4 |
| | 35th St / 38th Ave | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 5 | 7 |
| | 36th St | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 3 |
| | 37th St / 37th Ave | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 6 | 3 |
| | 38th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | 39th St / Steinway St | 2 | 0 | 4 | 0 | 1 | 1 | 2 | 1 | **5** | 23 | 17 | 19 |
| | 41st St | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 6 | 6 |
| | 36th Ave | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 3 | 2 |
| | 42nd St | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 3 | 2 | 4 |
| | 43rd St / 42nd Pl | 4 | 0 | 0 | 1 | 0 | 2 | **5** | 0 | 2 | 15 | 14 | 13 |
| | 44th St / 35th Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 9 |
| | 45th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 3 |
| | 46th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| | 47th St | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 3 |
| | 48th St / 34th Ave | 1 | 0 | 2 | 0 | 1 | 2 | 1 | 1 | 4 | 7 | 16 | 21 |
| | 51st St / Woodside Ave | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 13 | 20 | 16 |
| | Newtown Rd / Woodside Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 |
| 34th Ave | 33rd St | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 4 | 4 | 7 |
| | 34th St | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 4 | 0 |
| | 35th St | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 1 |
| | 36th St | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 1 |
| | 37th St | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 5 |
| | 38th St | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 4 | 5 |
| | Steinway St | 1 | 2 | 0 | 3 | 1 | 2 | 4 | 3 | 2 | 8 | 18 | 12 |
| | 41st St | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 4 | 6 | 1 |
| | 42nd St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| | 43rd St | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 4 | 3 |
| | 44th St | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 2 |
| | 45th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| | 46th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 47th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 |
| 35th Ave | 32nd St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| | 33rd St | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 3 | 1 |
| | 34th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| | 35th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| | 36th St | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 2 |
| | 37th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 |
| | 38th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 |
| | Steinway St | 1 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 3 | 6 | 6 | 12 |
| | 41st St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| | 42nd St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | 43rd St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 |
| 37th Ave | 33rd St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 3 |
| | 34th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| | 35th St | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 2 |

**Table 13-49 (cont'd)**
**Summary of Motor Vehicle Crash Data 2017–2019**

| Intersection | | Pedestrian Injury Crashes | | | Bicycle Injury Crashes | | | Total Pedestrian/Bicyclist Injury Crashes | | | Total Crashes (Reportable + Non-Reportable) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 |
| 36th Ave | 31st St | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 6 | 7 |
| | 32nd St | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 6 | 0 |
| | 33rd St | 2 | 1 | 2 | 0 | 1 | 0 | 2 | 2 | 2 | 4 | 3 | 5 |
| | 34th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 |
| | 35th St | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 4 |
| | 36th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| | 37th St | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| | 38th St | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| | Steinway St | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 4 | 9 |
| | 41st St | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 4 |
| Greenpoint Ave | 38th St | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 1 | 0 |
| | 39th St / 50th Ave | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 |
| | Borden Ave | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 0 | 3 | 21 | 29 | 32 |
| | Hunters Point Ave | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 14 | 18 | 11 |
| 39th St | 43rd Ave | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 | 8 | 5 | 5 |
| | 51st Ave / Hunters Point Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 |
| | Skillman Ave | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 | 9 | 4 |
| 36th St | 37th Ave | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 4 | 2 |
| 38th St | Hunters Point Ave | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 6 |
| 43rd St | Broadway | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 5 | 2 | 3 |

**5** Denotes a high crash location based on CEQR Technical Manual criteria.

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

# K. PARKING

Parking demand forecasts were prepared to determine if the on-site accessory parking provided under the Proposed Actions' RWCDS would be sufficient to accommodate all of the projected demand for both a typical weekday and a typical Saturday. **Tables 13-50 and 13-51** show forecasts of the total parking demand for the Proposed Development (Projected Development Sites A through E) on a weekday and Saturday, respectively, while **Tables 13-52 and 13-53** show similar forecasts for the Additional Affected Area (Sites F through K). **Tables 13-54 and 13-55** show the total weekday and Saturday parking demand generated at the Projected Development Site (Sites A through K) under the Proposed Actions' RWCDS. The hourly parking patterns used to estimate parking demand from the office, daycare, and community center uses were based on data from the 2016 *East New York Rezoning FEIS*. The hourly parking patterns used to generate the parking demand for the medical office use were based on data from the New York City Department of City Planning (NYCDCP). The parking patterns used to estimate the parking demand for the performing arts center use were based on data from the 2019 *Industry City DEIS*, and the parking patterns used to for PCE use were based on data from the 2018 *Spofford FEIS*. Parking patterns from the 2014 *Astoria Cove FEIS* were used to estimate the parking demand from the Proposed Development's residential, local retail, and supermarket uses. As the Proposed Development's residential component is expected to be comprised of rental units, 2015–2019 ACS auto ownership data for rental households in Queens census tracts 51, 55, 57, 59, 155, 157

and 159 were used to estimate residential overnight parking demand. Accordingly, an auto ownership rate of 0.38 autos per household was utilized for the residential component.

Lastly, the parking patterns used to estimate the parking demand for the cinema use were based on data from the April 2019 Astoria Kaufman Cinema parking study. With regard to the cinema use, it is important to note that the travel and parking demand forecasts assume full occupancy of all seats. However, multiplex cinemas typically operate at substantially lower occupancy levels. Even when blockbuster movies are released (typically five to seven times per year), total occupancy will generally not exceed 60 percent, even on opening weekend, as the hit movie will not be showing on all of the screens at the cinema. The parking demand forecast should therefore be considered very conservative with respect to cinema demand.

As shown in **Tables 13-50 and 13-51**, parking demand from office, retail and community facility uses typically peaks in the midday period and declines during the late afternoon and evening. By contrast, parking demand from residential uses peaks overnight. Therefore, some of the spaces used by residents would be available to accommodate commercial and community facility demand during daytime hours. Overall, as shown in **Table 13-50**, weekday parking demand from the Proposed Development would peak at approximately 1,~~431~~411 spaces from 8:00 p.m. to 9:00 p.m. (conservatively assuming the cinema would be operating at 100 percent capacity), primarily due to the overlapping of residential and cinema demand. As the Kaufman Astoria Studios have a prior agreement with the Astoria Kaufman cinema to reserve 150 parking spaces of the cinema parking for its employees from 5:30 a.m. to 6:30 p.m. on weekdays, the agreement is expected to be continue with the Proposed Development. The Kaufman Astoria Studios' employees parking pattern is assumed to be similar to an office parking pattern, which peaks in the midday. Conservatively assuming that all 150 spaces would be occupied by the Kaufman Astoria Studios' employees during the weekday midday period, the weekday midday parking demand would peak at approximately 1,~~216~~193 occupied spaces from 2:00 p.m. to 3:00 p.m. and would not exceed the Proposed Developments' peak weekday parking demand of 1,~~431~~411 spaces.

## Table 13-50
## Total Weekday Hourly Parking Accumulation for the Proposed Development (Sites A-E)

| | Residential 2,843 DUs 2,762 Total Auto Trips/D trips/day | | | Local Retail 74,930 gsf 974 Total Auto Trips/D trips/day | | | Office 250,070 gsf 386 Total Auto Trips/D trips/day | | | Cinema 3,500 seats 2,536 Total Auto Trips/D trips/day | | | Community Center 70,820 gsf 112 Total Auto Trips/D trips/day | | | Supermarket 30,000 gsf 640 Total Auto Trips/D trips/day | | | Medical Office 5,000 gsf 70 Total Auto Trips/D trips/day | | | Daycare (Staff) 10,000 gsf 24 Total Auto Trips/D trips/day | | | PCE (Physical Cultural Establishment) 30,000 gsf 46 Total Auto Trips/D trips/day | | | Arts and Cultural Center 21,900 gsf 300 Total Auto Trips. trips/day | | | Total Accum. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | | |
| 12-1 AM | 5 | 5 | 1082 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1-2 | 5 | 5 | 1082 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 2-3 | 5 | 5 | 1082 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 3-4 | 5 | 5 | 1082 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 4-5 | 5 | 5 | 1082 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 5-6 | 9 | 28 | 1063 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 10 | 5 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 6-7 | 16 | 47 | 1032 | 1 | 0 | 1 | 0 | 0 | 0 | 9 | 0 | 14 | 0 | 0 | 0 | 10 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7-8 | 28 | 114 | 946 | 13 | 9 | 5 | 8 | 0 | 8 | 15 | 10 | 19 | 2 | 1 | 1 | 13 | 8 | 12 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 997 |
| 8-9 | 56 | 200 | 802 | 26 | 21 | 10 | 62 | 8 | 62 | 24 | 1 | 42 | 6 | 3 | 4 | 13 | 12 | 13 | 3 | 3 | 0 | 5 | 0 | 7 | 2 | 2 | 2 | 5 | 4 | 3 | 945 |
| 9-10 | 55 | 103 | 754 | 24 | 20 | 14 | 58 | 7 | 113 | 16 | 13 | 45 | 6 | 6 | 4 | 24 | 13 | 24 | 4 | 2 | 2 | 2 | 0 | 9 | 1 | 3 | 0 | 29 | 3 | 29 | 994 |
| 10-11 | 55 | 94 | 715 | 35 | 24 | 25 | 8 | 10 | 111 | 37 | 13 | 69 | 4 | 4 | 4 | 26 | 19 | 31 | 4 | 2 | 4 | 0 | 0 | 9 | 1 | 1 | 0 | 21 | 4 | 46 | 1014 |
| 11-12 | 59 | 73 | 701 | 35 | 34 | 26 | 4 | 15 | 100 | 45 | 13 | 101 | 4 | 5 | 3 | 26 | 26 | 31 | 3 | 5 | 2 | 1 | 0 | 10 | 1 | 1 | 0 | 8 | 23 | 31 | 1005 |
| 12-1 PM | 78 | 78 | 701 | 38 | 38 | 26 | 4 | 6 | 98 | 48 | 29 | 120 | 5 | 5 | 3 | 23 | 22 | 32 | 3 | 3 | 2 | 1 | 1 | 10 | 2 | 2 | 0 | 5 | 26 | 10 | 1002 |
| 1-2 | 70 | 71 | 700 | 46 | 40 | 32 | 6 | 2 | 102 | 45 | 42 | 123 | 5 | 5 | 3 | 29 | 35 | 26 | 4 | 3 | 3 | 0 | 1 | 9 | 3 | 2 | 1 | 27 | 5 | 32 | 1031 |
| 2-3 | 74 | 70 | 704 | 46 | 38 | 40 | 12 | 14 | 100 | 36 | 48 | 111 | 4 | 2 | 5 | 32 | 38 | 20 | 4 | 3 | 4 | 0 | 0 | 9 | 2 | 1 | 2 | 22 | 6 | 48 | 1043 |
| 3-4 | 84 | 67 | 721 | 44 | 41 | 43 | 6 | 14 | 92 | 60 | 92 | 79 | 3 | 2 | 6 | 31 | 34 | 17 | 4 | 3 | 5 | 0 | 1 | 8 | 2 | 2 | 2 | 16 | 10 | 54 | 1027 |
| 4-5 | 151 | 89 | 783 | 41 | 41 | 43 | 10 | 42 | 60 | 92 | 59 | 112 | 3 | 7 | 2 | 32 | 30 | 19 | 4 | 5 | 4 | 1 | 3 | 6 | 2 | 3 | 1 | 10 | 15 | 49 | 1079 |
| 5-6 | 147 | 86 | 844 | 53 | 53 | 43 | 10 | 49 | 21 | 110 | 93 | 129 | 6 | 6 | 2 | 33 | 34 | 18 | 2 | 3 | 3 | 0 | 5 | 1 | 2 | 2 | 1 | 2 | 29 | 22 | 1084 |
| 6-7 | 147 | 69 | 922 | 36 | 45 | 34 | 4 | 20 | 5 | 142 | 118 | 153 | 5 | 6 | 1 | 16 | 16 | 18 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 25 | 0 | 1133 |
| 7-8 | 125 | 59 | 988 | 24 | 42 | 16 | 1 | 6 | 0 | 175 | 88 | 240 | 2 | 2 | 1 | 6 | 10 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1259 |
| 8-9 | 104 | 42 | 1050 | 18 | 28 | 6 | 0 | 0 | 0 | 150 | 46 | 344 | 1 | 2 | 0 | 3 | 6 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | **1411** |
| 9-10 | 39 | 29 | 1060 | 7 | 12 | 1 | 0 | 0 | 0 | 97 | 224 | 217 | 0 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1283 |
| 10-11 | 31 | 22 | 1069 | 0 | 1 | 0 | 0 | 0 | 0 | 110 | 193 | 134 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1203 |
| 11-12 | 28 | 15 | 1082 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 144 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1112 |

**Note:**

25% linked-trip credit applied to supermarket

50% linked-trip credit applied to local retail

Assumes 0.38 autos/DU based on 2015-2019 ACS auto ownership data for rental households in Queens census tracts 51, 55,57,59,155,157,159.

**80** denotes the total peak parking accumulation

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-51
## Total Saturday Hourly Parking Accumulation for the Proposed Development (Sites A-E)

| | Residential 2,843 DUs | | | Local Retail 74,930 gsf | | | Office 250,070 gsf | | | Cinema 3,500 seats | | | Community Center 70,820 gsf | | | Supermarket 30,000 gsf | | | Medical Office 5,000 gsf | | | Daycare (Staff) 10,000 gsf | | | PCE (Physical Cultural Establishment) 30,000 gsf | | | Arts and Cultural Center 21,900 gsf | | | Total Accum. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | |
| 12-1 AM | 15 | 14 | 1083 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 213 | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1200 |
| 1-2 | 15 | 14 | 1084 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1117 |
| 2-3 | 7 | 7 | 1084 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1096 |
| 3-4 | 2 | 2 | 1084 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1091 |
| 4-5 | 2 | 2 | 1084 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1091 |
| 5-6 | 3 | 5 | 1082 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1089 |
| 6-7 | 4 | 10 | 1076 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1085 |
| 7-8 | 16 | 47 | 1045 | 6 | 1 | 5 | 10 | 0 | 12 | 5 | 10 | 2 | 1 | 0 | 1 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1068 |
| 8-9 | 47 | 106 | 986 | 14 | 14 | 5 | 12 | 0 | 24 | 16 | 5 | 13 | 2 | 1 | 2 | 6 | 5 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1036 |
| 9-10 | 85 | 113 | 958 | 15 | 9 | 11 | 12 | 4 | 32 | 21 | 0 | 34 | 1 | 1 | 2 | 7 | 3 | 7 | 2 | 1 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 1050 |
| 10-11 | 85 | 128 | 915 | 28 | 18 | 21 | 2 | 0 | 34 | 84 | 0 | 118 | 1 | 3 | 0 | 8 | 4 | 11 | 1 | 1 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 5 | 0 | 7 | 1110 |
| 11-12 | 106 | 106 | 915 | 30 | 29 | 22 | 1 | 2 | 33 | 95 | 0 | 213 | 3 | 2 | 1 | 9 | 7 | 13 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 7 | 1 | 13 | 1213 |
| 12-1 PM | 121 | 122 | 914 | 39 | 40 | 21 | 2 | 2 | 33 | 126 | 46 | 293 | 3 | 1 | 3 | 11 | 10 | 14 | 2 | 1 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 12 | 2 | 23 | 1305 |
| 1-2 | 130 | 125 | 919 | 44 | 44 | 21 | 8 | 8 | 33 | 136 | 107 | 322 | 2 | 1 | 4 | 11 | 11 | 14 | 2 | 3 | 1 | 0 | 0 | 0 | 2 | 3 | 1 | 4 | 12 | 15 | 1330 |
| 2-3 | 110 | 110 | 919 | 39 | 30 | 30 | 2 | 0 | 35 | 131 | 72 | 381 | 1 | 2 | 3 | 10 | 12 | 12 | 2 | 1 | 2 | 0 | 0 | 0 | 3 | 2 | 2 | 5 | 11 | 9 | 1393 |
| 3-4 | 119 | 87 | 951 | 30 | 29 | 31 | 0 | 2 | 33 | 200 | 175 | 406 | 1 | 1 | 3 | 10 | 13 | 9 | 1 | 1 | 2 | 0 | 0 | 0 | 3 | 2 | 3 | 9 | 8 | 10 | 1448 |
| 4-5 | 145 | 68 | 1028 | 33 | 35 | 29 | 5 | 16 | 22 | 252 | 129 | 529 | 0 | 1 | 2 | 9 | 14 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 2 | 2 | 3 | 12 | 6 | 16 | 1635 |
| 5-6 | 136 | 83 | 1081 | 39 | 38 | 30 | 2 | 12 | 12 | 209 | 154 | 584 | 1 | 1 | 2 | 11 | 11 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 5 | 10 | 11 | 1727 |
| 6-7 | 105 | 101 | 1085 | 24 | 32 | 22 | 2 | 10 | 4 | 189 | 258 | 515 | 2 | 1 | 3 | 9 | 9 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 11 | 3 | 1637 |
| 7-8 | 90 | 90 | 1085 | 21 | 34 | 9 | 2 | 6 | 0 | 341 | 263 | 593 | 1 | 3 | 1 | 7 | 6 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 6 | 0 | 1693 |
| 8-9 | 59 | 60 | 1084 | 16 | 22 | 3 | 0 | 0 | 0 | 242 | 138 | 697 | 0 | 1 | 0 | 2 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | **1788** |
| 9-10 | 47 | 47 | 1084 | 8 | 8 | 3 | 0 | 0 | 0 | 192 | 251 | 638 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1728 |
| 10-11 | 47 | 48 | 1083 | 0 | 3 | 0 | 0 | 0 | 0 | 168 | 340 | 466 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1550 |
| 11-12 | 37 | 38 | 1082 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 160 | 330 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1412 |

**Note:**

25% linked-trip credit applied to supermarket

50% linked-trip credit applied to local retail

Assumes 0.38 autos/DU based on 2015-2019 ACS auto ownership data for rental households in Queens census tracts 51, 55,57,59,155,157,159.

**80** denotes the total peak parking accumulation

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-52
## Total Weekday Hourly Parking Accumulation for the Additional Affected Area (Sites F-K)

| | Residential | | | Local Retail | | | Total Accum. |
|---|---|---|---|---|---|---|---|
| | 809 DUs | | | 84,985 gsf | | | |
| | In | Out | Accum. | In | Out | Accum. | |
| | | | 308 | | | | |
| 12-1 AM | 0 | 0 | 308 | 0 | 0 | 0 | **308** |
| 1-2 | 0 | 0 | 308 | 0 | 0 | 0 | **308** |
| 2-3 | 0 | 0 | 308 | 0 | 0 | 0 | **308** |
| 3-4 | 0 | 0 | 308 | 0 | 0 | 0 | **308** |
| 4-5 | 0 | 0 | 308 | 0 | 0 | 0 | **308** |
| 5-6 | 1 | 8 | 301 | 0 | 0 | 0 | 301 |
| 6-7 | 5 | 11 | 295 | 0 | 0 | 0 | 295 |
| 7-8 | 8 | 35 | 268 | 13 | 13 | 0 | 268 |
| 8-9 | 18 | 58 | 228 | 28 | 26 | 2 | 230 |
| 9-10 | 15 | 30 | 213 | 29 | 22 | 9 | 222 |
| 10-11 | 15 | 28 | 200 | 40 | 29 | 20 | 220 |
| 11-12 | 18 | 22 | 196 | 41 | 38 | 23 | 219 |
| 12-1 PM | 23 | 23 | 196 | 43 | 43 | 23 | 219 |
| 1-2 | 22 | 21 | 197 | 53 | 46 | 30 | 227 |
| 2-3 | 23 | 20 | 200 | 52 | 45 | 37 | 237 |
| 3-4 | 24 | 19 | 205 | 45 | 45 | 37 | 242 |
| 4-5 | 43 | 27 | 221 | 47 | 47 | 37 | 258 |
| 5-6 | 41 | 25 | 237 | 61 | 61 | 37 | 274 |
| 6-7 | 46 | 21 | 262 | 42 | 52 | 27 | 289 |
| 7-8 | 35 | 17 | 280 | 26 | 43 | 10 | 290 |
| 8-9 | 30 | 12 | 298 | 20 | 29 | 1 | 299 |
| 9-10 | 11 | 8 | 301 | 12 | 12 | 1 | 302 |
| 10-11 | 9 | 6 | 304 | 0 | 1 | 0 | 304 |
| 11-12 | 8 | 4 | 308 | 0 | 0 | 0 | **308** |

**Note:**

50% linked-trip credit applied to local retail

Assumes 0.38 autos/DU based on 2015-2019 ACS auto ownership data for rental households in Queens census tracts 51, 55,57,59,155,157,159.

**80** denotes the total peak parking accumulation

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

**Table 13-53**
**Total Saturday Hourly Parking Accumulation for the Additional Affected Area (Sites F-K)**

| | Residential 809 DUs | | | Local Retail 84,985 gsf | | | Total Accum. |
|---|---|---|---|---|---|---|---|
| | In | Out | Accum. | In | Out | Accum. | |
| 12-1 AM | 5 | 5 | 308 | 0 | 0 | 0 | 308 |
| 1-2 | 5 | 5 | 308 | 0 | 0 | 0 | 308 |
| 2-3 | 1 | 1 | 308 | 0 | 0 | 0 | 308 |
| 3-4 | 0 | 0 | 308 | 0 | 0 | 0 | 308 |
| 4-5 | 0 | 0 | 308 | 0 | 0 | 0 | 308 |
| 5-6 | 0 | 0 | 308 | 0 | 0 | 0 | 308 |
| 6-7 | 0 | 2 | 306 | 0 | 0 | 0 | 306 |
| 7-8 | 6 | 13 | 299 | 7 | 1 | 6 | 305 |
| 8-9 | 13 | 32 | 280 | 15 | 15 | 6 | 286 |
| 9-10 | 24 | 32 | 272 | 15 | 9 | 12 | 284 |
| 10-11 | 22 | 38 | 256 | 30 | 20 | 22 | 278 |
| 11-12 | 31 | 30 | 257 | 32 | 33 | 21 | 278 |
| 12-1 PM | 34 | 36 | 255 | 43 | 45 | 19 | 274 |
| 1-2 | 37 | 36 | 256 | 50 | 50 | 19 | 275 |
| 2-3 | 32 | 32 | 256 | 46 | 31 | 34 | 290 |
| 3-4 | 35 | 24 | 267 | 34 | 33 | 35 | 302 |
| 4-5 | 42 | 20 | 289 | 37 | 40 | 32 | 321 |
| 5-6 | 40 | 24 | 305 | 45 | 46 | 31 | **336** |
| 6-7 | 31 | 29 | 307 | 26 | 37 | 20 | 327 |
| 7-8 | 26 | 26 | 307 | 26 | 38 | 8 | 315 |
| 8-9 | 19 | 18 | 308 | 20 | 25 | 3 | 311 |
| 9-10 | 13 | 13 | 308 | 12 | 11 | 4 | 312 |
| 10-11 | 13 | 13 | 308 | 0 | 4 | 0 | 308 |
| 11-12 | 10 | 10 | 308 | 0 | 0 | 0 | 308 |

**Note:**

50% linked-trip credit applied to local retail

Assumes 0.38 autos/DU based on 2015-2019 ACS auto ownership data for rental households in Queens census tracts 51, 55,57,59,155,157,159.

**80** denotes the total peak parking accumulation

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-54
## Total Weekday Hourly Parking Accumulation for the Projected Development Site (Sites A-K)

| | Residential 3,652 DUs | | | Local Retail 159,915 gsf | | | Office 250,070 gsf | | | Cinema 3,500 seats | | | Community Center 70,820 gsf | | | Supermarket 30,000 gsf | | | Medical Office 5,000 gsf | | | Daycare (Staff) 10,000 gsf | | | PCE (Physical Cultural Establishment) 30,000 gsf | | | Arts and Cultural Center 21,900 gsf | | | Total Accum. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | |
| 12-1 AM | 5 | 5 | 1390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1391 |
| 1-2 | 5 | 5 | 1390 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1399 |
| 2-3 | 5 | 5 | 1390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1399 |
| 3-4 | 5 | 5 | 1390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1399 |
| 4-5 | 5 | 5 | 1390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1399 |
| 5-6 | 10 | 36 | 1364 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 10 | 5 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1369 |
| 6-7 | 21 | 58 | 1327 | 1 | 0 | 1 | 0 | 0 | 0 | 9 | 0 | 14 | 0 | 0 | 0 | 10 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1349 |
| 7-8 | 36 | 149 | 1214 | 26 | 22 | 5 | 8 | 0 | 8 | 15 | 10 | 19 | 2 | 1 | 1 | 13 | 8 | 12 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 1265 |
| 8-9 | 74 | 258 | 1030 | 54 | 47 | 12 | 62 | 8 | 62 | 24 | 1 | 42 | 6 | 3 | 4 | 13 | 12 | 13 | 3 | 3 | 0 | 5 | 0 | 7 | 2 | 2 | 2 | 5 | 4 | 3 | 1175 |
| 9-10 | 70 | 133 | 967 | 53 | 42 | 23 | 58 | 7 | 113 | 16 | 13 | 45 | 6 | 6 | 4 | 24 | 13 | 24 | 4 | 2 | 2 | 2 | 0 | 9 | 1 | 3 | 0 | 29 | 3 | 29 | 1216 |
| 10-11 | 70 | 122 | 915 | 75 | 53 | 45 | 8 | 10 | 111 | 37 | 13 | 69 | 4 | 4 | 4 | 26 | 19 | 31 | 4 | 2 | 4 | 0 | 0 | 9 | 1 | 1 | 0 | 21 | 4 | 46 | 1234 |
| 11-12 | 77 | 95 | 897 | 76 | 72 | 49 | 4 | 15 | 100 | 45 | 13 | 101 | 4 | 5 | 3 | 26 | 26 | 31 | 3 | 5 | 2 | 1 | 0 | 10 | 1 | 1 | 0 | 8 | 23 | 31 | 1224 |
| 12-1 PM | 101 | 101 | 897 | 81 | 81 | 49 | 4 | 6 | 98 | 48 | 29 | 120 | 5 | 5 | 3 | 23 | 22 | 32 | 3 | 3 | 2 | 1 | 1 | 10 | 2 | 2 | 0 | 5 | 26 | 10 | 1221 |
| 1-2 | 92 | 92 | 897 | 99 | 86 | 62 | 6 | 2 | 102 | 45 | 42 | 123 | 5 | 5 | 3 | 29 | 35 | 26 | 4 | 3 | 3 | 0 | 1 | 9 | 3 | 2 | 1 | 27 | 5 | 32 | 1258 |
| 2-3 | 97 | 90 | 904 | 98 | 83 | 77 | 12 | 14 | 100 | 36 | 48 | 111 | 4 | 2 | 5 | 32 | 38 | 20 | 4 | 3 | 4 | 0 | 0 | 9 | 2 | 1 | 2 | 22 | 6 | 48 | 1280 |
| 3-4 | 108 | 86 | 926 | 89 | 86 | 80 | 6 | 14 | 92 | 60 | 92 | 79 | 3 | 2 | 6 | 31 | 34 | 17 | 4 | 3 | 5 | 0 | 1 | 8 | 2 | 2 | 2 | 16 | 10 | 54 | 1269 |
| 4-5 | 194 | 116 | 1004 | 88 | 88 | 80 | 10 | 42 | 60 | 92 | 59 | 112 | 3 | 7 | 2 | 32 | 30 | 19 | 4 | 5 | 4 | 1 | 3 | 6 | 2 | 3 | 1 | 10 | 15 | 49 | 1337 |
| 5-6 | 188 | 111 | 1081 | 114 | 114 | 80 | 10 | 49 | 21 | 110 | 93 | 129 | 6 | 6 | 2 | 33 | 34 | 18 | 2 | 3 | 3 | 0 | 5 | 1 | 2 | 2 | 1 | 2 | 29 | 22 | 1358 |
| 6-7 | 193 | 90 | 1184 | 78 | 97 | 61 | 4 | 20 | 5 | 142 | 118 | 153 | 5 | 6 | 1 | 16 | 16 | 18 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 25 | 0 | 1422 |
| 7-8 | 160 | 76 | 1268 | 50 | 85 | 26 | 1 | 6 | 0 | 175 | 88 | 240 | 2 | 2 | 1 | 6 | 10 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1549 |
| 8-9 | 134 | 54 | 1348 | 38 | 57 | 7 | 0 | 0 | 0 | 150 | 46 | 344 | 1 | 2 | 0 | 3 | 6 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | **1710** |
| 9-10 | 50 | 37 | 1361 | 19 | 24 | 2 | 0 | 0 | 0 | 97 | 224 | 217 | 0 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1585 |
| 10-11 | 40 | 28 | 1373 | 0 | 2 | 0 | 0 | 0 | 0 | 110 | 193 | 134 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1507 |
| 11-12 | 36 | 19 | 1390 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 144 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1420 |

**Note:**

25% linked-trip credit applied to supermarket

50% linked-trip credit applied to local retail

Assumes 0.38 autos/DU based on 2015-2019 ACS auto ownership data for rental households in Queens census tracts 51, 55,57,59,155,157,159.

**80** denotes the total peak parking accumulation

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

## Table 13-55
## Total Saturday Hourly Parking Accumulation for the Projected Development Site (Sites A-K)

| | Residential 3,652 DUs | | | Local Retail 159,915 gsf | | | Office 250,070 gsf | | | Cinema 3,500 seats | | | Community Center 70,820 gsf | | | Supermarket 30,000 gsf | | | Medical Office 5,000 gsf | | | Daycare (Staff) 10,000 gsf | | | PCE (Physical Cultural Establishment) 30,000 gsf | | | Arts and Cultural Center 21,900 gsf | | | Total Accum. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | In | Out | Accum. | |
| 12-1 AM | 20 | 19 | 1391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 213 | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1508 |
| 1-2 | 20 | 19 | 1392 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1425 |
| 2-3 | 8 | 8 | 1392 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1404 |
| 3-4 | 2 | 2 | 1392 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1399 |
| 4-5 | 2 | 2 | 1392 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1399 |
| 5-6 | 3 | 5 | 1390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1397 |
| 6-7 | 4 | 12 | 1382 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1391 |
| 7-8 | 22 | 60 | 1344 | 13 | 2 | 11 | 10 | 0 | 12 | 5 | 10 | 2 | 1 | 0 | 1 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1373 |
| 8-9 | 60 | 138 | 1266 | 29 | 29 | 11 | 12 | 0 | 24 | 16 | 5 | 13 | 2 | 1 | 2 | 6 | 5 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1322 |
| 9-10 | 109 | 145 | 1230 | 30 | 18 | 23 | 12 | 4 | 32 | 21 | 0 | 34 | 1 | 1 | 2 | 7 | 3 | 7 | 2 | 1 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 1334 |
| 10-11 | 107 | 166 | 1171 | 58 | 38 | 43 | 2 | 0 | 34 | 84 | 0 | 118 | 1 | 3 | 0 | 8 | 4 | 11 | 1 | 1 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 5 | 0 | 7 | 1388 |
| 11-12 | 137 | 136 | 1172 | 62 | 62 | 43 | 1 | 2 | 33 | 95 | 0 | 213 | 3 | 2 | 1 | 9 | 7 | 13 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 7 | 1 | 13 | 1491 |
| 12-1 PM | 155 | 158 | 1169 | 82 | 85 | 40 | 2 | 2 | 33 | 126 | 46 | 293 | 3 | 1 | 3 | 11 | 10 | 14 | 2 | 1 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 12 | 2 | 23 | 1579 |
| 1-2 | 167 | 161 | 1175 | 94 | 94 | 40 | 8 | 8 | 33 | 136 | 107 | 322 | 2 | 1 | 4 | 11 | 11 | 14 | 2 | 3 | 1 | 0 | 0 | 0 | 2 | 3 | 1 | 4 | 12 | 15 | 1605 |
| 2-3 | 142 | 142 | 1175 | 85 | 61 | 64 | 2 | 0 | 35 | 131 | 72 | 381 | 1 | 2 | 3 | 10 | 12 | 12 | 2 | 1 | 2 | 0 | 0 | 0 | 3 | 2 | 2 | 5 | 11 | 9 | 1683 |
| 3-4 | 154 | 111 | 1218 | 64 | 62 | 66 | 0 | 2 | 33 | 200 | 175 | 406 | 1 | 1 | 3 | 10 | 13 | 9 | 1 | 1 | 2 | 0 | 0 | 0 | 3 | 2 | 3 | 9 | 8 | 10 | 1750 |
| 4-5 | 187 | 88 | 1317 | 70 | 75 | 61 | 5 | 16 | 22 | 252 | 129 | 529 | 0 | 1 | 2 | 9 | 14 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 2 | 2 | 3 | 12 | 6 | 16 | 1956 |
| 5-6 | 176 | 107 | 1386 | 84 | 84 | 61 | 2 | 12 | 12 | 209 | 154 | 584 | 1 | 1 | 2 | 11 | 11 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 5 | 10 | 11 | 2063 |
| 6-7 | 136 | 130 | 1392 | 50 | 69 | 42 | 2 | 10 | 4 | 189 | 258 | 515 | 2 | 1 | 3 | 9 | 9 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 11 | 3 | 1964 |
| 7-8 | 116 | 116 | 1392 | 47 | 72 | 17 | 2 | 6 | 0 | 341 | 263 | 593 | 1 | 3 | 1 | 7 | 6 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 6 | 0 | 2008 |
| 8-9 | 78 | 78 | 1392 | 36 | 47 | 6 | 0 | 0 | 0 | 242 | 138 | 697 | 0 | 1 | 0 | 2 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | **2099** |
| 9-10 | 60 | 60 | 1392 | 20 | 19 | 7 | 0 | 0 | 0 | 192 | 251 | 638 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2040 |
| 10-11 | 60 | 61 | 1391 | 0 | 7 | 0 | 0 | 0 | 0 | 168 | 340 | 466 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1858 |
| 11-12 | 47 | 48 | 1390 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 160 | 330 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1720 |

**Note:**

25% linked-trip credit applied to supermarket

50% linked-trip credit applied to local retail

Assumes 0.38 autos/DU based on 2015-2019 ACS auto ownership data for rental households in Queens census tracts 51, 55,57,59,155,157,159.

**80** denotes the total peak parking accumulation

Note: this table has been updated for the FEIS; changes from the DEIS are not shown in strikethrough/underline.

As shown in **Table 13-51**, on a Saturday, parking demand from the Proposed Development would peak at approximately 1,~~770~~788 spaces between 8:00 p.m. to 9:00 p.m. (conservatively assuming 100 percent cinema occupancy). There would be no reserved parking spaces for the Kaufman Astoria Studios' employees on the weekend.

In addition to parking demand from the Proposed Development (Sites A through E), new demand would also be generated by the Additional Affected Area (Sites F through K) under the Proposed Actions' RWCDS. As shown in **Tables 13-52 and 13-53**, parking demand generated by the Additional Affected Area is expected to peak at approximately 308 spaces during the overnight period on weekdays, and at ~~342~~336 spaces during the 5:00 p.m. to 6:00 p.m. period on Saturdays.

Overall, as shown in **Tables 13-54 and 13-55**, parking demand generated by the Projected Development Site (Sites A through K) under the Proposed Actions' RWCDS would peak at approximately 1,~~737~~710 spaces during the 8:00 p.m. to 9:00 p.m. period on weekdays, and at 2,~~080~~099 spaces during the same period on Saturdays, primarily due to the overlapping of residential and cinema demand (conservatively assuming 100 percent cinema occupancy).

As shown in **Table 13-56**, the Proposed Actions' RWCDS includes a total of approximately 1,633 on-site accessory parking spaces compared with 700 spaces under the No Action RWCDS. These would include 1,390 spaces located in five below-grade parking garages and one surface parking lot on the Development Site. There would be approximately 489 spaces on Site A, 237 spaces on Site B, 288 spaces on Site C, 241 spaces on Site D and 135 spaces on Site E. It is also anticipated that there would also be a total of approximately 243 parking spaces in the Additional Affected Area. No existing off-street public parking would be displaced from the Project Area under the Proposed Actions; however, approximately 39 spaces of existing on-street parking would be displaced to accommodate truck access to the Proposed Development's loading berths. (As discussed in Chapter 20, "Mitigation," approximately ~~36~~24 existing spaces of on-street parking would also be displaced under the Proposed Actions' traffic mitigation plan.)

**Table 13-56**
**Proposed Accessory Parking Spaces**
**on the Projected Development Site**

| Site | Parking Spaces |
|---|---|
| A | 489 |
| B | 237 |
| C | 288 |
| D | 241 |
| E | 135 |
| Proposed Development Total | 1,390 |
| F | 29 |
| G | 36 |
| H | 79 |
| I | 34 |
| J | 43 |
| K | 22 |
| Additional Affected Area Total | 243 |
| **Projected Development Site Total** | **1,633** |

As discussed above, the Proposed Development (Sites A through E) would generate a peak parking demand of approximately 1,~~431~~411 spaces during the 8:00 p.m. to 9:00 p.m. period on weekdays,

and 1,~~770~~788 spaces during the same period on Saturdays. Therefore, there would be a shortfall of approximately ~~41~~21 spaces on weekday evenings and ~~380~~398 spaces on Saturday evenings during periods of peak activity at the cinema (conservatively assuming 100 percent cinema occupancy).

Peak parking demand generated by the Additional Affected Area (Sites F through K), would total approximately 308 spaces during the overnight period on weekdays, and ~~342~~336 spaces during the 5:00 p.m. to 6:00 p.m. period on Saturdays. Therefore, there would be shortfalls of approximately 65 spaces during the overnight period on weekdays and ~~99~~93 spaces during the 5:00 p.m. to 6:00 p.m. period on Saturdays.

Total parking demand at the Projected Development Site (Sites A through K) would peak at approximately 1,~~737~~710 spaces during the 8:00 p.m. to 9:00 p.m. period on weekdays, and at 2,~~080~~099 spaces during the same period on Saturdays. In addition, approximately 39 existing on-street parking spaces would be displaced from the Project Area under the Proposed Actions in order to accommodate truck access to the Proposed Development's loading berths. Therefore, the total increase in parking demand under the Proposed Actions' RWCDS would result in parking shortfalls of approximately ~~143~~116 spaces during the 8:00 p.m. to 9:00 p.m. period on weekdays, and approximately ~~486~~505 spaces during the same period on Saturdays. This excess demand, much of which would be associated with peak activity at the cinema, would need to be accommodated in nearby off-street public parking facilities, or by on-street parking. Consequently, the Proposed Actions may potentially contribute to, or result in, off-street and on-street parking shortfalls in the 2032 With Action condition.

As discussed in Section F, "Transportation Analysis Methodologies," in this area of Queens, the inability of a proposed project or the surrounding area to accommodate future parking demands would be considered a parking shortfall, but would generally not be considered significant under *CEQR Technical Manual* guidance due to the magnitude of available alternative modes of transportation. Therefore, under the Proposed Actions, any shortfalls in off-street and on-street parking spaces Project Area and its vicinity would not be considered significant. ✷