27.0 Mitigation

A. INTRODUCTION

Provided in this chapter is a description of the measures needed to mitigate identified significant adverse environmental impacts of the Proposed Action. As documented in Chapters 3 thru 24, the only significant adverse impacts that may result from the Proposed Action are impacts on traffic, pedestrian flow and transit conditions. The Proposed Action would not result in any other significant adverse impacts on any other impact category.

B. TRAFFIC

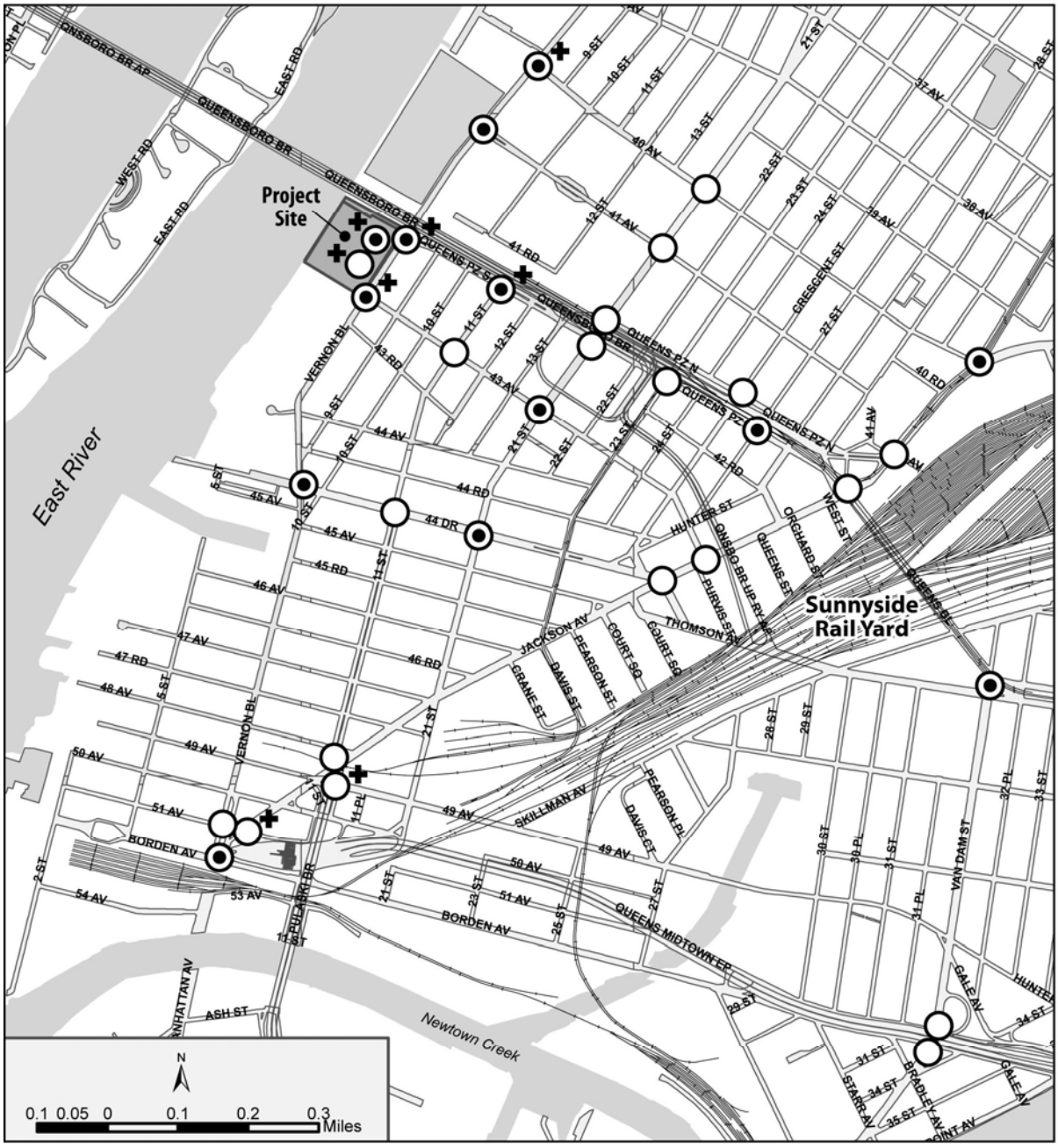
As indicated in Chapter 9, "Traffic and Parking," the Proposed Action would result in significant adverse impacts on traffic conditions at a limited number of intersections in the Traffic and Parking Study Area. Of the 32 signalized and unsignalized intersections analyzed for the weekday peak hours, significant adverse impacts would occur at 13 intersections during the AM peak hour, 11 intersections during the Midday peak hour, and 18 intersections during the PM peak hour (Table 27-1). Of the 21 intersections analyzed during the Saturday Midday peak hour, significant adverse impacts would occur at 6 intersections.

TABLE 27-1: SIGNIFICANT TRAFFIC IMPACT MITIGATION SUMMARY

Intersections	AM	Midday	PM	Saturday Midday
Number of Intersections Not Significantly Impacted	19	21	14	15
Number of Significantly Impacted Intersections	13	11	18	6

Detailed evaluation of mitigation measures indicates that all significant adverse traffic impacts would be fully mitigated by standard traffic engineering improvements such as installation of traffic signals, signal timing and phasing modifications, parking prohibitions, and lane restriping. These measures represent the standard range of traffic capacity improvements that have been proposed and implemented to mitigate anticipated traffic impacts for numerous projects in New York City.

Figures 27-1 thru 27-4 provide an overview of traffic mitigation needs at affected intersections during the weekday AM, Midday and PM, and Saturday Midday peak hours, respectively. A detailed evaluation of measures that would be applied to mitigate impacts for each intersection at which impacts are projected is provided below. Additional analytical details are provided in the Traffic Appendix.



No Significant Impact

Mitigated Impact

Unsignalized Intersection

FIGURE 27-1:
2009 TRAFFIC MITIGATION OVERVIEW (WEEKDAY AM PEAK)

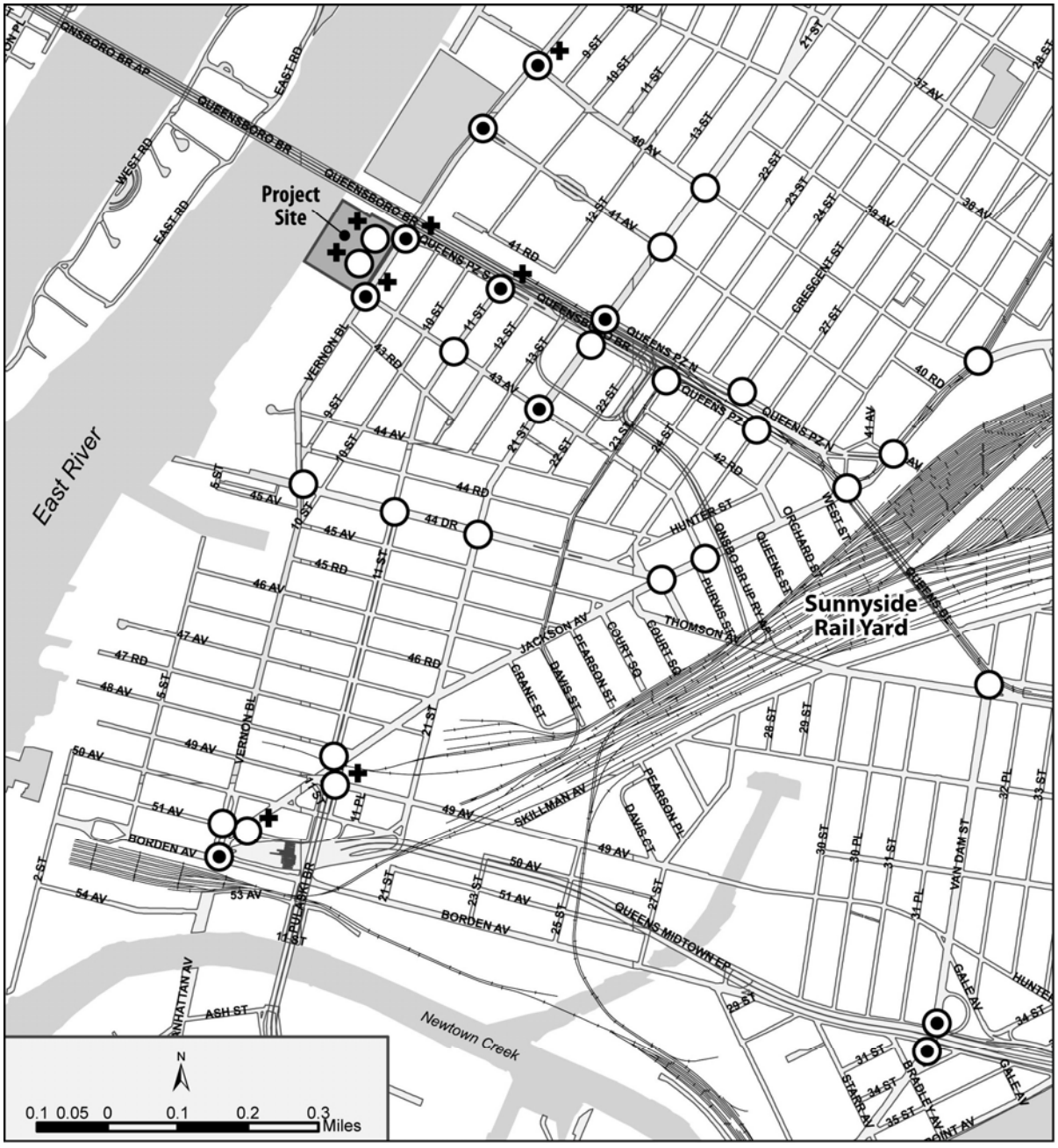


FIGURE 27-2:
2009 TRAFFIC MITIGATION OVERVIEW (WEEKDAY MIDDAY PEAK)

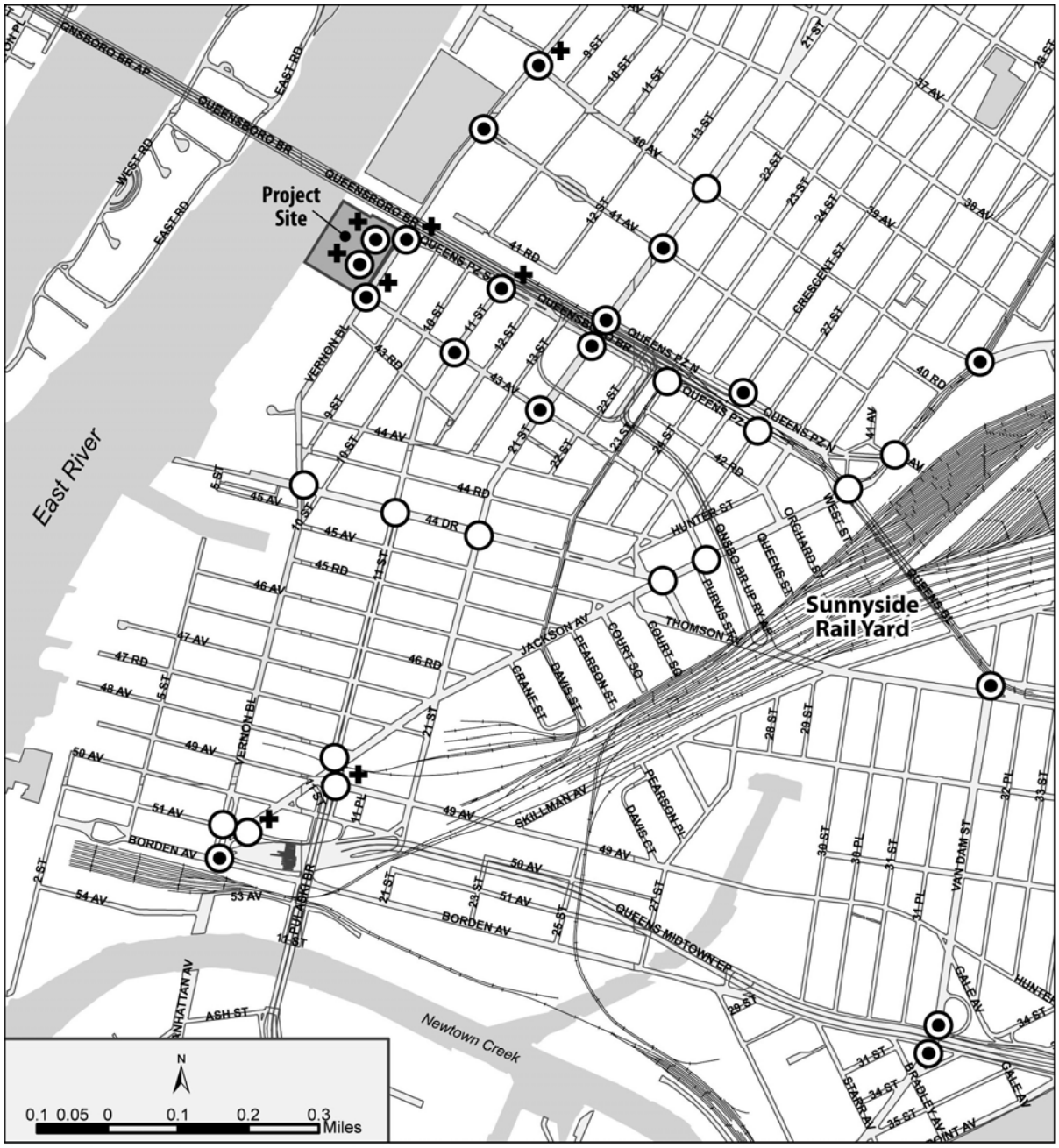


FIGURE 27-3:
2009 TRAFFIC MITIGATION OVERVIEW (WEEKDAY PM PEAK)

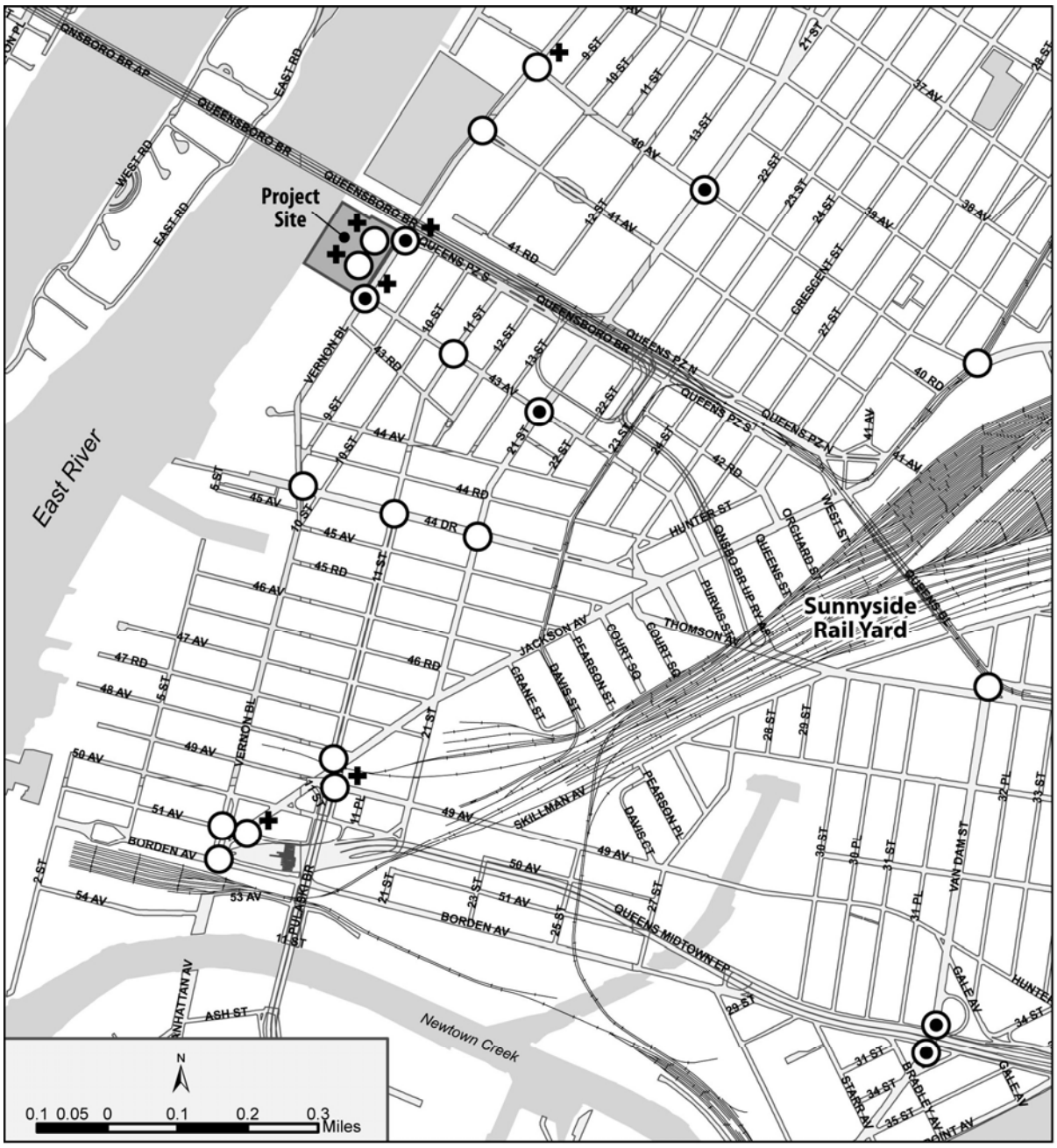


FIGURE 27-4:
2009 TRAFFIC MITIGATION OVERVIEW (SATURDAY MIDDAY PEAK)

1. Vernon Boulevard

Along the Vernon Boulevard corridor, three of the four signalized intersections analyzed, and all five unsignalized intersections analyzed, would be significantly impacted during at least one peak hour. All significantly impacted locations could be mitigated using standard traffic engineering measures, including signalization of the intersections of 43rd Avenue and Queens Plaza South with Vernon Boulevard. Along northbound Vernon Boulevard, between 41st Avenue and 43rd Avenue, mitigation measures would include prohibiting curb parking on weekdays between 4–7 PM to accommodate two travel lanes. The two northbound lanes would be transitioned back to the existing one lane between Queens Plaza South and 41st Avenue. Curb parking would also need to be prohibited along northbound Vernon Boulevard at the intersections of Vernon Boulevard with the North and South Garage Entrances on weekdays between 7-10 AM.

In the southbound direction, between 41st Avenue and 43rd Avenue, parking would need to be prohibited on weekdays between 7 AM and 7 PM to accommodate two travel lanes. These two lanes would be transitioned back to one lane between 43rd Avenue and 43rd Road. Also, in the southbound direction, between 41st Avenue and Queens Plaza South, parking would need to be prohibited during the Saturday Midday peak period. Approximately 90 spaces would be lost on Vernon Boulevard during the weekday AM peak hour, approximately 50 spaces would be lost during the weekday Midday peak hour, approximately 100 spaces would be lost during the weekday PM peak hour, and approximately 25 spaces would be lost during the Saturday Midday peak hour in the southbound direction. These changes along Vernon Boulevard are illustrated in Figure 27-5. Significant traffic impacts and corresponding mitigation measures along Vernon Boulevard are as follows:

- **Vernon Boulevard and 44th Drive:** prohibit parking in the southbound direction (along the west curb of Vernon Boulevard) during the weekday AM peak period.
- **Vernon Boulevard and 41st Avenue:** significant traffic impacts during the weekday peak hours would be mitigated by signal timing modifications that would allow additional time for north/south traffic movements.
- **Vernon Boulevard and Borden Avenue:** significant traffic impacts during the weekday peak hours would be mitigated by signal timing modifications.
- **Vernon Boulevard and 43rd Avenue:** install a traffic signal and prohibit parking along northbound Vernon Boulevard during the weekday PM peak period to provide an additional travel lane. Lower volumes would permit parking during the weekday AM, Midday and Saturday Midday peak periods in the northbound direction (along the east curb of Vernon Boulevard); however, parking restrictions would still apply in the southbound direction during the weekday peak periods to provide two travel lanes.
- **Vernon Boulevard and Queens Plaza South:** install a traffic signal and prohibit parking along northbound Vernon Boulevard during the PM peak period to provide an additional travel lane. Parking prohibitions would be needed in the southbound direction during all peak periods analyzed to provide two travel lanes.
- **Vernon Boulevard and 40th Street:** prohibit parking in the southbound direction during the AM and Midday peak periods. During the weekday PM peak period, mitigation measures would involve parking prohibitions on both sides of Vernon Boulevard.
- **North Garage Entrance and Vernon Boulevard intersection:** prohibit parking in the northbound direction during the weekday AM and PM peak periods. Parking would also be prohibited from 7 AM – 7 PM on weekdays in the southbound direction. Southbound Vernon Boulevard would need to be restriped to provide one through lane and one right-turn only lane.
- **South Garage Entrance and Vernon Boulevard intersection:** prohibit parking in the northbound direction during the weekday AM and PM peak periods. Parking would also be prohibited from 7 AM – 7 PM on weekdays in the southbound direction.

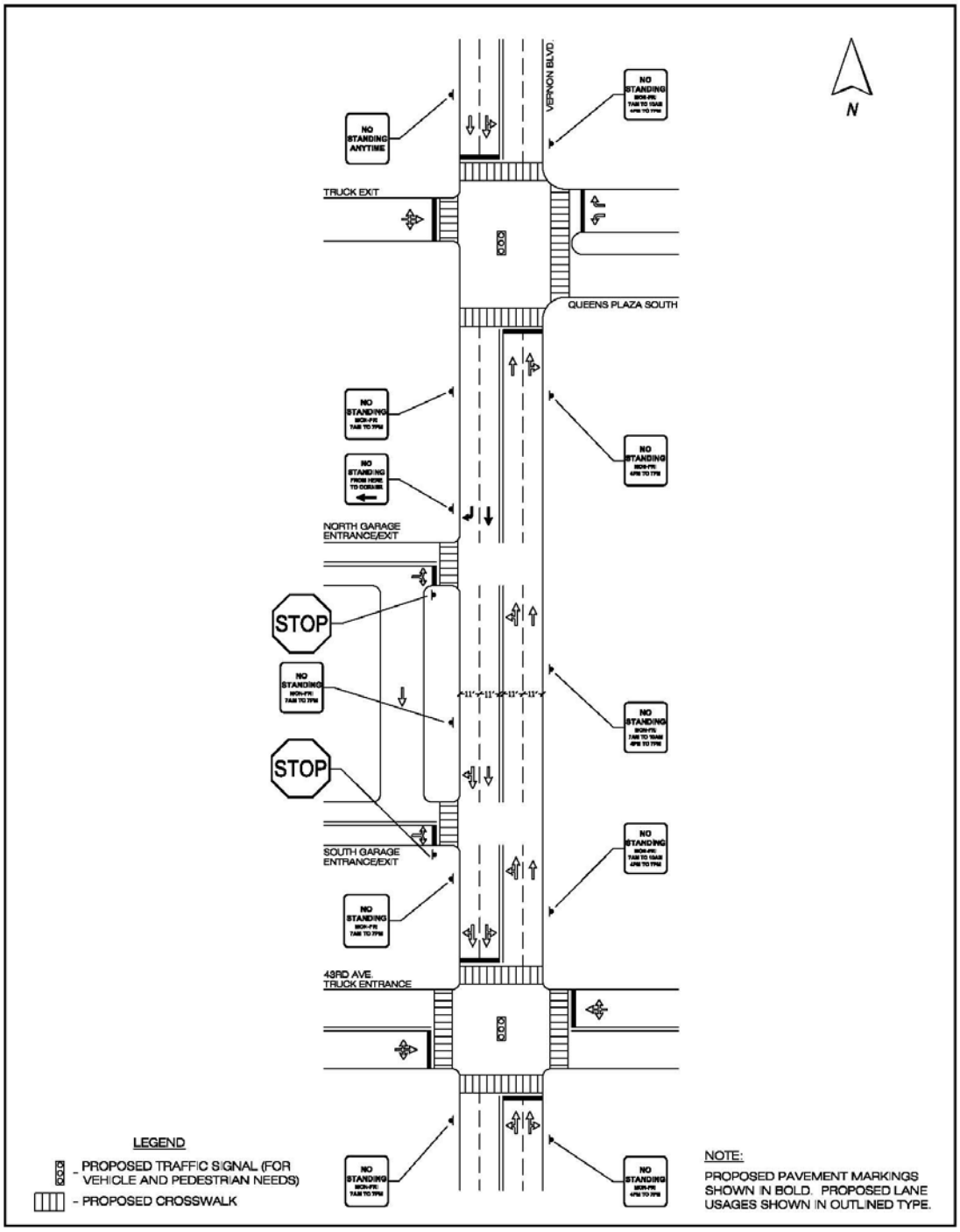


FIGURE 27-5:
PROPOSED MODIFICATIONS ALONG VERNON BOULEVARD NEAR PROJECT SITE ENTRANCES / EXITS

2. 11th Street

Along the 11th Street corridor, two of the five intersections analyzed would be significantly impacted and require mitigation during at least one peak hour, including the following:

- **11th Street and 43rd Avenue:** significant traffic impacts during the weekday PM peak hour would be mitigated by signal timing modifications that would allow additional time for east/west traffic movements.
- **11th Street and Queens Plaza South:** significant traffic impacts during the weekday peak hours would be mitigated by installing a traffic signal.

3. 21st Street

Along the 21st Street corridor, the following six intersections would be significantly impacted during at least one peak period and require mitigation as described below:

- **21st Street and 44th Drive:** significant traffic impacts during the weekday AM peak hour would be mitigated by signal timing modifications that would allow additional time for east/west traffic movements.
- **21st Street and 43rd Avenue:** significant traffic impacts during the weekday and weekend peak hours would be mitigated by signal timing modifications to allow additional time for the north/south traffic movements during the weekday AM peak hour and the east/west traffic movements during all other peak hours.
- **21st Street and 41st Avenue:** significant traffic impacts during the weekday PM peak hour would be mitigated by signal timing modifications that would allow additional time for north/south traffic movements.
- **21st Street and 40th Avenue:** significant traffic impacts during the Saturday Midday peak hour would be mitigated by prohibiting parking in the westbound direction (along the north curb) of 40th Avenue to accommodate one 15-foot-wide shared left-through lane and another 15-foot-wide shared through-right lane.
- **21st Street and Queens Plaza South:** significant traffic impacts during the weekday PM peak hour would be mitigated by signal timing modifications that would allow additional time for north/south traffic movements.
- **21st Street and Queens Plaza North:** significant traffic impacts during the weekday Midday and PM peak hours would be mitigated by signal timing modifications that would allow additional time for north/south traffic movements.

4. Jackson Avenue/Northern Boulevard

Along the Jackson Avenue/Northern Boulevard corridor, the intersection of Northern Boulevard and 31st Street would be significantly impacted during weekday AM and PM peak hours and require mitigation. The impacts would be mitigated by restriping the Northern Boulevard southbound median to provide additional width for the approach. During the weekday PM peak hour, mitigation measures would also include signal timing modifications that would allow additional time for the Northern Boulevard phase.

5. Queens Boulevard/Queens Plaza North And South

Along the Queens Boulevard/Queens Plaza North and South corridor, three of the four signalized intersections analyzed would be significantly impacted and require mitigation during at least one peak hour including the following:

- **At the intersection of Queens Boulevard/Thomson Avenue at Van Dam Street:** significant traffic impacts during the weekday AM and PM peak hours would be mitigated by signal timing modifications.
- **At the intersection of Queens Plaza South and 27th Street:** significant traffic impacts during the weekday AM peak hour would be mitigated by increasing the right turn lane width of eastbound Queens Plaza South from 10 feet to 10.5 feet by using 0.5 feet from the 18.5-foot-wide center median.
- **At the intersection of Queens Plaza North and Crescent Street:** significant traffic impacts during the weekday PM peak hour would be mitigated by signal timing modifications that would allow for additional time for southbound movements.

6. Van Dam Street

The two signalized intersections analyzed would be significantly impacted and require mitigation during at least one peak hour including the following:

- **At the intersection of Queens-Midtown Expressway (the exit from the westbound LIE) and Van Dam Street:** significant traffic impacts during the weekday Midday, PM, and Saturday Midday peak hours would be mitigated by signal timing modifications.
- **Borden Avenue and Van Dam Street:** significant traffic impacts during the weekday Midday, PM and Saturday Midday peak hours would be mitigated by modifications to the signal timing plan. Mitigation measures would also involve restriping to increase the width of the southbound through lane from 11 feet to 14 feet.

7. Variations

Compared to the Preferred Development Program, each of the variations would generate approximately the same or fewer number of vehicle trips during all peak travel periods. However, for Variation 2—at 21st Street and 40th Avenue—there would be one additional significant traffic impact during the weekday AM peak hour. The impact would be fully mitigated by shifting one second of green time from the east-west phase to the north-south phase for the AM peak hour.

This mitigation measure falls within the range of typical measures employed by New York City Department of Transportation (NYCDOT) in improving traffic conditions in all parts of the City. Traffic mitigation measures require approval of the NYCDOT.

C. TRANSIT AND PEDESTRIANS

1. Buses

The Q103 bus route would be significantly impacted in the northbound direction during the AM peak hour, and in the southbound direction during the PM peak hour. The significant impact during the AM peak hour would be mitigated by the addition of two buses in the northbound direction. These two additional buses would lower the average number of passengers per bus at its peak load point from 108 to 60. The significant impact during the PM peak hour would be mitigated by the addition of one bus in the southbound direction. This additional bus would lower the average number of passengers per bus at its peak load point from 71 to 51.

MTA Bus, as standard practice, routinely conducts periodic ridership counts and adjusts bus service frequency to meet its service criteria, within physical and operating constraints.

2. Pedestrians

The pedestrian crossing locations across Vernon Boulevard at Queens Plaza South and 43rd Avenue, which are most proximate to the Proposed Action, would be significantly impacted. This impact would be mitigated with a traffic signal installed at both of these intersections, as previously identified within Chapter 10.

3. Variations

Compared to the Preferred Development Program, each of the variations would generate approximately the same or fewer number of pedestrian and transit trips as during all peak travel periods. Consequently, the same measures determined to be effective at mitigating the effect of the Preferred Development Program would mitigate the potential impacts associated with the variations. With these measures, none of the variations would result in any significant adverse transit or pedestrian impacts.

D. HAZARDOUS MATERIALS

Preliminary investigations indicate that site soils may have contamination as a result of prior use of the site. Potential impacts from exposure to contaminated soils would be mitigated by the Applicant through the completion of site investigations and remediation of on-site contamination, if necessary. The Applicant would file a Restrictive Declaration to ensure this occurs.