

A. INTRODUCTION

The Bronx Terminal Market parcel is located along River Avenue and Exterior Street, in close proximity to Yankee Stadium and alongside (as well as beneath) the Major Deegan Expressway. The site borders the Harlem River north of the 145th Street Bridge and is within the Bronx's grid street network of north-south avenues and east-west cross-streets. Although the Major Deegan Expressway is frequently congested in the northbound direction during peak traffic hours due to delays further north at the Cross Bronx Expressway exit, many sections of the local street network that serve the site have substantial amounts of unused capacity, particularly Exterior Street, which bisects the site. Some sections of the local street network—most notably the approach and departure routes to/from the 145th Street and Macombs Dam Bridges, the Major Deegan Expressway, and River Avenue before and after Yankee games—carry substantial traffic volumes, which at times are congested.

This chapter addresses the potential traffic and parking impacts of the Proposed Project. The approach routes to the site traverse intersections along 138th, 149th, and 161st Streets, Exterior Street, River Avenue, the Grand Concourse, the 145th Street and Macombs Dam Bridges, and the Major Deegan Expressway exits immediately north and south of the Bronx Terminal Market. Therefore, the traffic and parking analyses cover a large study area encompassing 15 existing intersections plus new intersections created for access to and from the project's parking garages. Key segments of the Major Deegan Expressway have also been studied (see Figures 16-1 and 16-2).

The analyses begin with an assessment of existing traffic and parking conditions in the study area, and proceed to an analysis of conditions in the future without the Proposed Project—i.e., the future No Build condition. The Existing and No Build conditions are analyzed under normal weekday and Saturday peak hour roadway conditions and under roadway conditions typically experienced before and after Yankee games on a weekday and Saturday. Three non-game day peak hours are analyzed, including the 1-2 PM weekday midday, 5-6 PM weekday PM, and 1-2 PM Saturday midday peak hours. Also, three Yankee game day peak hours are analyzed, including the 5:15-6:15 PM pre-game weekday PM, 12-1 PM pre-game Saturday midday, and 4-5 PM post-game Saturday PM peak hours. These analyses are presented for two separate future Build years—2009 and 2014.

The next step in the analyses considers the amount of vehicular traffic expected to be generated by the Proposed Project in each of the Build years, and an assessment of future traffic and parking conditions with the Proposed Project in place in 2009 (interim Build condition) and 2014 (final Build condition). Like the No Build conditions, the Build conditions analyze roadway conditions with and without Yankee games, on weekdays and Saturday. These Build year analyses identify the location and extent of significant impacts potentially generated by the Proposed Project, and identify and evaluate traffic improvements that may be needed to mitigate those impacts. The parking analysis addresses the ability of the Proposed Project to

accommodate the parking demands in each Build year. In addition to the analyses presented in this chapter of the EIS, data on traffic volumes and detailed traffic impact analyses are presented in Appendix A.

B. EXISTING CONDITIONS

ROADWAY NETWORK AND TRAFFIC STUDY AREA

The overall study area generally consists of a grid network of local streets and avenues that are interspersed between the Harlem River and the Grand Concourse with the ramp network that serves traffic heading to and from the Major Deegan Expressway. The presence of the Major Deegan Expressway and its ramp network has a major influence on traffic conditions in the area, since the Expressway attracts a substantial volume of traffic, especially before and after Yankee games. The Major Deegan Expressway is elevated above Exterior Street between 149th Street and Jerome Avenue and consists of three lanes per direction in the vicinity of the site with single-lane entrance and exit ramps. It serves as the sole limited-access highway carrying major traffic loads to, from, and through the area. There are several ramps to and from the Major Deegan Expressway that serve the area. Together with the Triborough Bridge south of the project site and the Cross Bronx Expressway north of the project site, the Major Deegan Expressway provides excellent traffic access to the site.

The Major Deegan Expressway provides access to the project site at Exits 4 through 6.

- Northbound Exit 4 is a single-lane off-ramp touching down at the 149th Street/Exterior Street/River Avenue/145th Street Bridge access intersection. This is the most direct route to the site for northbound Major Deegan Expressway motorists. There is no southbound Exit 4 or direct access to the southbound Major Deegan from this area. Motorists from the site can continue south on Exterior Street/Major Deegan Boulevard under the Expressway and access the Major Deegan near 138th Street.
- Northbound Exit 5 consists of a single-lane off-ramp terminating at the intersection of 157th Street and the access ramp from northbound Exterior Street below. Although this exit is located adjacent to the north end of the project site, it does not connect directly to Exterior Street or River Avenue.
- Southbound Exit 5 is a single-lane off-ramp to Jerome Avenue and the Macombs Dam Bridge approach. This exit provides access to Exterior Street via a ramp south of the Macombs Dam Bridge.
- Southbound Exit 6 consists of a single-lane off-ramp that passes under the Macombs Dam Bridge and splits to provide access to Exterior Street or River Avenue. The ramp provides direct access to southbound Exterior Street past the Yankee Stadium parking lots west of the Expressway. The ramp also provides access to River Avenue via the 153rd Street flyover ramp, which terminates at 153rd Street one block west of River Avenue.

The local study area street network conforms to a general grid, with the avenues extending in a north-south direction and the cross-streets extending east-west. The north-south avenues consist of Jerome, Cromwell, River, Gerard, and Walton Avenues, the Grand Concourse, and Exterior Street.

- Exterior Street is a 50 to 70-foot wide two-lane, two-way cobblestone street that currently serves low traffic volumes destined to the Bronx Terminal Market and an increased volume

of traffic after Yankee games because of its access to the northbound and southbound Major Deegan Expressway. It bisects the project site and is expected to receive the most project-generated traffic.

- The two-lane, two-way River Avenue processes moderate traffic volumes apart from Yankee games, when this street becomes heavily used. River Avenue intersections within the study area are signalized, with the exception of 150th Street.
- The Grand Concourse is a high-capacity roadway that extends north-south over the full length of the Bronx. It serves substantial volumes of through and local traffic, and benefits from traffic signal timing patterns that allow traffic to proceed with good progression when traffic volumes are moderate and conditions allow. The Grand Concourse consists of three northbound and three southbound lanes between 138th and 161st Streets; north of 161st Street it separates into express and service lanes consisting of two lanes each per direction.
- Jerome Avenue is a two-lane, two-way roadway that carries moderate volumes without Yankee games and high volumes before and after Yankee games. Jerome Avenue intersections are signalized, with the exception of the Macombs Dam Bridge approach, which consists of a stop-controlled “T” intersection.
- Cromwell Avenue is a minor two-way, two-lane street carrying extremely low traffic volumes due to the cul-de-sac at its north end. It connects to Exterior and 150th Streets.
- Gerard and Walton Avenues are one-lane streets that compose a one-way pair, carry much lower volumes than the Grand Concourse, and traverse residential blocks north of 149th Street.

The major east-west cross-streets consist of 138th, 149th and 161st Streets, which provide access to and from the Major Deegan Expressway and the Harlem River bridge to Manhattan. Less-trafficked cross-streets include 150th, 151st, 153rd, 157th, and 158th Streets.

- East 138th Street connects to the Madison Avenue Bridge, the Major Deegan Expressway and its northbound service road, and the Grand Concourse. The street consists of two lanes per direction and is signalized at major intersections. Large volumes of peak hour traffic are served by this east-west connector that spans the entire south Bronx.
- East 149th Street consists of two lanes per direction and connects to the 145th Street Bridge, River Avenue, and the Grand Concourse. Moderate volumes of peak hour traffic use 149th Street to traverse the South Bronx, and significant volumes of traffic use the 145th Street Bridge during peak hours.
- East 161st Street connects to the Macombs Dam Bridge via an approach road as well as Jerome Avenue, River Avenue, and the Grand Concourse. 161st Street consists of one express lane and one to two local lanes per direction. Heavy traffic volumes prevail at 161st Street near River Avenue before and after Yankee games. However, traffic is largely uncongested apart from Yankee games due to the capacity provided by express and local lanes.
- East 150th Street is a one-lane, one-way westbound street approaching River Avenue, where it is controlled by a stop sign. West of River Avenue, it is two-way where it crosses Exterior Street and Cromwell Avenue. It carries low to moderate traffic volumes.

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- East 151st Street is a two-lane, two-way street between River Avenue and the Grand Concourse with stop-sign control at the River Avenue intersection. Traffic volumes are relatively low at all times on this street.
- East 153rd Street is an important connector road before and after Yankee games, but typically serves low traffic volumes. It consists of one lane per direction and connects to East 157th Street at Ruppert Place and River Avenue.
- East 157th Street carries large volumes of traffic before and after Yankee games between River Avenue and parking garages, but is predominantly inactive at all other times. It has one lane per direction with traffic signal control at River Avenue and stop sign or flashing stop light control at other intersections.
- East 158th Street is a two-lane, two-way street between River Avenue and the Grand Concourse with traffic signal control at River Avenue. This street serves moderate traffic volumes before and after Yankee games and low volumes at all other times.

The traffic study area developed for this DEIS includes the following 15 intersections, which are shown in Figures 16-1 and 16-2 (all intersections are signalized unless otherwise noted):

1. East 138th Street at the Grand Concourse (two intersections, one signalized and one unsignalized);
2. East 149th Street at the Grand Concourse;
3. East 149th Street at Exterior Street/River Avenue/northbound Major Deegan Expressway Exit 4;
4. West 145th Street/145th Street Bridge approach at Lenox Avenue;
5. East 150th Street at Exterior Street/Cromwell Avenue (unsignalized; analyzed as free-flow under Build conditions due to demapping of 150th Street and Cromwell Avenue);
6. East 150th Street at River Avenue (unsignalized; includes access to Bronx Terminal Market Southern “Pocket” Parking Lot under Build conditions);
7. East 151st Street at River Avenue;
8. East 153rd Street at River Avenue;
9. East 157th Street at River Avenue;
10. East 161st Street at River Avenue;
11. East 161st Street at the Grand Concourse;
12. East 161st Street at Jerome Avenue/Woodycrest Avenue;
13. East 157th Street at the northbound Major Deegan Expressway service road;
14. Jerome Avenue at Ogden Avenue/northbound Major Deegan Expressway service road ramp to Macombs Dam Bridge; and
15. West 155th Street at Macombs Place/Macombs Dam Bridge approach.

Six additional intersections created by the design of the Bronx Terminal Market project are also analyzed under Build Conditions:

16. Exterior Street at Bronx Terminal Market Northern Truck Access;

- 17. Exterior Street at Bronx Terminal Market Garage Northern Exit;
- 18. Exterior Street at Bronx Terminal Market Garage Southern Entrance;
- 19. Exterior Street at Bronx Terminal Market Southern Truck Access;
- 20. Exterior Street at Bronx Terminal Market Southern “Pocket” Parking Lot; and
- 21. River Avenue at Bronx Terminal Market Garage Exit (the River Avenue garage entrance would provide access across from East 151st Street, which is already included in the existing study area).

Portions of the Major Deegan Expressway were also analyzed, including:

- The weaving segment on the northbound Major Deegan Expressway between the 138th Street on-ramp and Exit 4/149th Street off-ramp; and
- The southbound Major Deegan Expressway diverges at Exit 6/Bronx Terminal Market and Exit 5/Macombs Dam Bridge.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

All new traffic counts were conducted for this DEIS in late April and early May 2004 using manual intersection counts and 24-hour Automatic Traffic Recorder (ATR) machine counts. These volumes were used, along with observations of actual traffic conditions, to determine levels of service for six peak hours, which are detailed in Table 16-1.

**Table 16-1
Traffic Study Peak Hours**

Day	Without Yankee Game		With Yankee Game	
	Time	Peak Hour	Time	Peak Hour
Weekday	1:00–2:00 PM	Non-game midday	Not analyzed ¹	
	5:00–6:00 PM	Non-game PM	5:15–6:15 PM	Pre-night game PM
Saturday	1:00–2:00 PM	Non-game midday	12:00–1:00 PM	Pre-day game midday
	Not analyzed ²		4:00–5:00 PM	Post-day game PM

Note: ¹ Weekday midday peak hour conditions are the same as without a Yankee game.
² There is no Saturday evening peak without a Yankee game.

Analyses of traffic conditions in urban areas are based on critical conditions at intersections and are defined in terms of levels of service. According to the *2000 Highway Capacity Manual* (HCM) that was used for these analyses, levels of service (LOS) at signalized intersections are defined in terms of a vehicle’s total stopped delay at an intersection, as follows:

- LOS A describes operations with very low delays, i.e., 10.0 seconds or less per vehicle. This occurs when signal progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all.
- LOS B describes operations with delays in the range of 10.1 to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.
- LOS C describes operations with delays in the range of 20.1 to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The

number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

- LOS D describes operations with delays in the range of 35.1 to 55.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Delays of 45.0 seconds or greater are considered marginally unacceptable; delays under 45.0 seconds are considered marginally acceptable.
- LOS E describes operations with delays in the range of 55.1 to 80.0 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios.
- LOS F describes operations with delays in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with cycle failures. Poor progression and long cycle lengths may also contribute to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

Levels of service A, B, and C are considered acceptable; LOS D is generally considered marginally acceptable up to mid-LOS D (45 seconds of delay for signalized intersections), and is considered unacceptable above mid-LOS D. LOS E and F are considered unacceptable.

Although 13 analyzed intersections are signalized, three are not. For these unsignalized intersections, delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line: LOS A describes operations with very low delay, i.e., 10.0 seconds or less per vehicle; LOS B describes operations with delays in the range of 10.1 to 15.0 seconds; LOS C has delays in the range of 15.1 to 25.0 seconds; LOS D, 25.1 to 35.0 seconds per vehicle; and LOS E, 35.1 to 50.0 seconds per vehicle, which is considered to be the limit of acceptable delay. LOS F describes operation with delays in excess of 50.0 seconds per vehicle, which is considered unacceptable to most drivers. This condition exists when there are insufficient gaps of suitable size to allow side street traffic to cross safely through a major vehicular traffic stream.

Table 16-2 provides an overview of the levels of service that characterize the traffic study area during the peak hours. A summary description is also provided below:

- In the non-game weekday midday peak hour, four of the 13 signalized intersections analyzed are operating at overall unacceptable LOS E or F and two other intersections are operating at LOS D. “Overall” LOS E or F means that serious congestion exists—either one specific traffic movement has severe delays, or two or more of the specific traffic movements at the intersection are at LOS E or F with very significant delays (the overall intersection LOS is a weighted average of all of the individual traffic movements). Seventeen specific traffic movements (e.g., left turns from one street to another, through traffic on one street passing through the intersection, etc.) out of approximately 65 total traffic movements analyzed are at LOS E or F conditions.
- In the non-game weekday PM peak hour, three signalized intersections are operating at overall LOS E or F, while four are at overall LOS D. Fifteen traffic movements are operating at LOS E or F.

**Table 16-2
Existing Traffic Levels of Service Summary**

Signalized Intersections (13 Total)	Without Yankee Game			With Yankee Game		
	Existing Non-game Weekday Midday	Existing Non-game Weekday PM	Existing Non-game Saturday Midday	Existing Pre-game Weekday PM	Existing Pre-game Saturday Midday	Existing Post-game Saturday PM
Overall Intersection LOS A/B	5	3	5	3	2	2
Overall Intersection LOS C	2	3	2	4	7	2
Overall Intersection LOS D	2	4	4	4	3	3
Overall Intersection LOS E/F	4	3	2	2	1	6
Number of Signalized Intersection Movements at LOS E or F (of approximately 65 total)	17	15	13	17	9	25
Note:	The east leg of East 138th Street/the Grand Concourse is unsignalized and the west leg is signalized; they are counted separately. All three unsignalized intersections analyzed (the east leg of East 138th Street/the Grand Concourse, East 150th Street/Exterior Street, and East 150th Street/River Avenue) operate at LOS A, B, or C during all analysis hours.					

- In the non-game Saturday midday peak hour, two signalized intersections are operating at overall LOS E or F, while four are at overall LOS D. Thirteen traffic movements are operating at LOS E or F.
- In the pre-game weekday PM peak hour, two signalized intersections are operating at overall LOS E or F, while four are at overall LOS D. Seventeen traffic movements are operating at LOS E or F.
- In the pre-game Saturday midday peak hour, only one signalized intersection is operating at overall LOS E or F, and three are at overall LOS D. Only nine traffic movements of approximately 65 are operating at LOS E or F.
- In the post-game Saturday PM peak hour, six signalized intersections are operating at overall LOS E or F, while three are at overall LOS D. Twenty-five traffic movements are operating at LOS E or F.
- Each of the three unsignalized intersections analyzed operate at acceptable levels of service during each of the traffic analysis hours.

Another representation of overall existing levels of service can be seen in Figures 16-3 through 16-8. In Figure 16-3, which illustrates non-game weekday midday peak hour levels of service, acceptable LOS A, B, or C conditions prevail at River Avenue intersections, with the exception of River Avenue at 149th Street, which operates at LOS E. Along 161st Street, overall levels of service are acceptable, with the exception of East 161st Street at the Grand Concourse, which operates at an unacceptable LOS D. Across the Harlem River, the first Manhattan intersections motorists pass through going westbound across the 145th Street and Macombs Dam Bridges operate at acceptable LOS C or D conditions.

In Figure 16-4, which shows non-game weekday PM levels of service, conditions are generally the same as the non-game weekday midday peak hour, but with unacceptable LOS E and acceptable LOS D conditions at 161st Street at the Grand Concourse and 161st Street at Jerome Avenue, respectively.

In Figure 16-5, which shows non-game Saturday midday levels of service, at the intersection of 149th Street and the Grand Concourse, overall level of service conditions worsen to LOS E

compared to an unacceptable LOS D in the weekday peak hours. Non-game Saturday midday conditions are the same or show improvements over non-game weekday peak hours at other intersections.

In Figure 16-6, which illustrates game-day weekday PM peak hour levels of service, acceptable levels of service prevail at River Avenue intersections, with the exception of River Avenue at 149th Street, which operates at LOS F. Along 161st Street, intersections operate at acceptable conditions with the exception of 161st Street at the Grand Concourse, which operates at an unacceptable LOS D. Across the Harlem River, 145th Street/Lenox Avenue operates at acceptable LOS C and 155th Street/Macombs Dam Bridge approach operates at LOS E conditions.

In Figure 16-7, which shows game-day Saturday midday levels of service, conditions are generally the same as game-day weekday PM conditions, but with acceptable LOS C conditions at 161st Street and the Grand Concourse.

In Figure 16-8, which shows game-day Saturday PM levels of service, conditions generally worsen at all intersections by about one level of service when compared to the game-day Saturday midday peak hour.

A more detailed presentation of traffic volumes and levels of service by corridor are provided below. (Details of the level of service analyses for each traffic movement at each of the intersections analyzed, as well as detailed traffic volume maps, appear in Appendix A.)

EXTERIOR STREET

Exterior Street is traveled by approximately 250–500 vehicles per hour (vph) per direction on non-game days and approximately 275–525 vph per direction on game days. Levels of service are clearly acceptable on Exterior Street near 150th Street, operating at LOS A or B for all peak periods. However, approaching the 149th Street intersection, southbound Exterior Street functions poorly at LOS D or E during non-game peak periods and LOS D, E, or F on game days during peak hours.

MAJOR DEEGAN EXPRESSWAY NORTHBOUND 149TH STREET OFF-RAMP

The northbound 149th Street off-ramp is used by approximately 375–500 vph approaching 149th Street on non-game days. Approximately 650–900 vph use the off-ramp in the pre-game weekday PM and Saturday midday peak hours, and approximately 275 vph exit the Major Deegan during the post-game Saturday PM peak hour. The northbound approach of the 149th Street off-ramp operates at an unacceptable LOS F for all peak hours except the post-game Saturday PM peak hour. Frequently before Yankee games, the ramp traffic queues back along the northbound Major Deegan Expressway.

145TH STREET BRIDGE

The 145th Street Bridge is traveled by approximately 700–950 vph per direction on non-game days and approximately 750–1,250 vph per direction on game days. Levels of service are acceptable on the west side of the bridge at Lenox Avenue/145th Street, with all movements generally operating at LOS C or better. However, on the east side of the bridge approaching Exterior Street/River Avenue, LOS E and F conditions persist in all peak hours except the pre-game Saturday midday peak hour.

RIVER AVENUE

River Avenue is traveled by approximately 175–500 vph per direction on non-game days and approximately 175–725 vph per direction on game days in the vicinity of 149th Street. Approaching the 149th Street intersection, southbound River Avenue functions poorly with LOS D or E during non-game peak periods and LOS D, E, or F on game days during peak hours.

The River Avenue intersections at East 150th, 151st, 153rd, and 157th Streets operate at acceptable levels of service on non-game days, with all movements at LOS C or better. On game days, LOS D or better conditions for all movements occur during the pre-game weekday PM and Saturday midday peak hours. During the post-game Saturday PM peak hour, LOS E or F conditions prevail at the 151st and 153rd Street intersections and LOS C or better conditions occur at the 150th and 157th Street intersections. During the post-game period, southbound River Avenue is closed between 161st and 157th Streets to facilitate pedestrian movements away from Yankee Stadium.

River Avenue is traveled by approximately 175–400 vph per direction on non-game days and approximately 150–550 vph per direction on game days in the vicinity of 161st Street (southbound River Avenue is closed in this vicinity in the post-game period). Levels of service range from marginally unacceptable to acceptable on River Avenue near 161st Street on non-game days, operating at LOS D or better for all movements and peak periods. However, while conditions on the northbound and southbound approaches of River Avenue at 161st Street operate at LOS C or better during pre-game weekday PM peak hour conditions, these approaches operate at LOS D, E, or F conditions in the Saturday pre-game and post-game peak hours.

149TH STREET

The 149th Street corridor between River Avenue and the Grand Concourse is traveled by approximately 600–800 vph per direction on non-game and game days. Levels of service on non-game days range from acceptable LOS D to unacceptable LOS F conditions on the eastbound and westbound approaches at the River Avenue and the Grand Concourse intersections. On game days during the weekday pre-game PM peak hour, unacceptable LOS E or F conditions prevail; during the Saturday pre-game midday peak hour, LOS C or unacceptable LOS D conditions occur; and during the post-game Saturday PM peak hour, unacceptable LOS D conditions occur at the Grand Concourse, and LOS E and F conditions occur at River Avenue.

THE GRAND CONCOURSE

The Grand Concourse is traveled by approximately 850–1,400 vph per direction on non-game and game days in the vicinity of 149th Street. Levels of service are at acceptable conditions on the Grand Concourse near 149th Street during the non-game weekday midday and PM peak hours. However, approaching 149th Street, the northbound and southbound Grand Concourse functions poorly with LOS E conditions during the non-game Saturday midday peak hour. The Grand Concourse approaches operate at marginally acceptable LOS D conditions during all peak hours on game days.

The Grand Concourse is traveled by approximately 750–1,450 vph per direction on non-game and game days in the vicinity of 161st Street. The southbound approach at 161st Street operates at unacceptable LOS D, E or F conditions during all peak hours. The northbound approach operates at LOS E conditions in the non-game weekday midday and PM peak hours, and post-

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game Saturday PM peak hour; it operates at LOS D conditions in the pre-game weekday PM peak hour; and it operates at LOS B or C conditions during the non-game Saturday midday and pre-game Saturday midday peak hours.

153RD STREET

153rd Street is traveled by approximately 175–375 vph per direction on non-game days and approximately 80–500 vph per direction on game days. Levels of service are acceptable on non-game days, with LOS C or better conditions on the eastbound and westbound approaches at River Avenue. Conditions are acceptable with LOS C or better conditions before weekday and Saturday games, but the post-game Saturday PM peak hour operates at LOS E in the eastbound and westbound directions.

MACOMBS DAM BRIDGE

The Macombs Dam Bridge is used by approximately 700–1,450 vph per direction on non-game days and approximately 975–1,350 vph per direction on game days. Levels of service are unacceptable on the west side of the bridge at Macombs Place/155th Street, with at least one movement operating at LOS E for all peak periods except the non-game Saturday midday peak hour, where three of six movements operate at marginally acceptable LOS D.

JEROME AVENUE

Jerome Avenue is oriented east-west on its southernmost portion before terminating at the northbound Major Deegan Expressway service road. This area of Jerome Avenue between Ogden Avenue and 161st Street/Woodycrest Avenue is traveled by approximately 475–650 vph per direction on non-game days and approximately 550–1,050 vph per direction on game days. Levels of service are acceptable at the Ogden Avenue eastbound and westbound approaches with LOS B conditions during the non-game day periods and pre-game weekday PM and Saturday midday peak hours; marginally acceptable LOS D conditions occur in the post-game Saturday PM peak hour. At 161st Street/Woodycrest Avenue, the eastbound and westbound approaches of Jerome Avenue operate at unacceptable LOS D or better conditions for all peak periods.

161ST STREET

The 161st Street corridor near Jerome Avenue is traveled by approximately 250–550 vph per direction on non-game days and approximately 450–1,100 vph per direction on game days. Levels of service on the westbound approach of 161st Street at Jerome Avenue are acceptable during the non-game weekday midday, and PM peak hours, as well as the pre-game Saturday midday peak hour, with LOS B or C conditions. Marginally acceptable LOS D conditions occur during the non-game Saturday midday, pre-game weekday PM, and post-game Saturday PM peak hours.

The 161st Street corridor between River Avenue and the Grand Concourse is separated into local and express lanes, and is traveled by approximately 275–525 vph per direction in the local and express lanes on non-game days. It is traveled by approximately 275–600 vph per direction in the local lanes (except the eastbound local lanes at River Avenue, which are closed before and after the game) and approximately 175–700 vph per direction in the express lanes on game days. Levels of service are acceptable with LOS B or C conditions on the eastbound and westbound approaches of the local and express lanes of 161st Street at River Avenue during the non-game peak periods, and the pre-game weekday PM and Saturday midday peak hours. However, during

the post-game Saturday PM peak hour, the eastbound express lanes operate at LOS F due to game-exiting traffic being routed exclusively onto the express lanes; the westbound express lanes operate at LOS F and the westbound local lanes operate at a marginally unacceptable LOS D. On the eastbound and westbound approaches of 161st Street at the Grand Concourse, the eastbound and westbound approaches operate at unacceptable LOS D, E, or F conditions during all peak hours.

NORTHBOUND MAJOR DEEGAN EXPRESSWAY SERVICE ROAD AT 157TH STREET

The northbound Major Deegan Expressway service road including the on-ramp from Exterior Street and off-ramp from Exit 5 is traveled by approximately 1,000–1,250 vph approaching 157th Street; the westbound 157th Street approach consists of approximately 200–450 vph on non-game days. The northbound Major Deegan Expressway service road is traveled by approximately 850–1,400 vph and the westbound 157th Street approach consists of approximately 200–800 vph on game days since this location is the focal point for traffic leaving the stadium heading northbound toward the Cross Bronx Expressway, George Washington Bridge, and points north in Westchester. The Major Deegan Expressway Exit 5 off-ramp operates at unacceptable LOS E or F on non-game days. In the pre-game weekday PM peak hour, this approach operates at an unacceptable LOS D; during the pre-game Saturday midday peak hour, it operates at a marginally acceptable LOS D (delays are lower within LOS D). Because traffic control agents close the Exit 5 approach and allow the westbound 157th Street and northbound Exterior Street approaches to operate freely using traffic cones to separate traffic, LOS A conditions occur on this section of the service road in the post-game Saturday PM peak hour.

PARKING

An inventory of public parking lots and garages within the area bounded by 150th and 165th Streets east of the Harlem River and west of the Grand Concourse was conducted along with hourly parking facility occupancy surveys between 8 AM and 8 PM on a typical weekday and 10 AM and 6 PM on a typical Saturday without a Yankee game (see Tables 16-3 and 16-4) and with a Yankee game (see Tables 16-5 and 16-6). These inventories were conducted for days with typical high attendance games at the stadium. This study area constitutes an area within approximately ½ mile, or slightly more, from the Bronx Terminal Market site. Overall, there are 19 public parking lots or garages in the area (see Figure 16-9), the majority of which have capacities in the 100- to 600-vehicle range. Most serve Yankee Stadium only; 14 of these facilities are closed on a typical weekday and 16 are closed on a typical Saturday.

NON-GAME DAY PARKING

As shown in Table 16-3, the 19 public parking facilities surveyed contain approximately 7,516 spaces, with a maximum occupancy level of about seven percent between 1-2 PM on a typical weekday without a Yankee game. This means that at 1-2 PM and 5-6 PM, i.e., the weekday midday and PM peak shopping hours, respectively, there are about 7,000 unoccupied spaces available within off-street lots and garages, increasing to about 7,350 spaces in the PM peak hour. When considering only the five garages containing approximately 1,070 spaces that are open on a typical weekday without a Yankee game, there are approximately 520 unoccupied spaces between 1-2 PM, increasing to approximately 985 unoccupied spaces between 6-7 PM.

Table 16-3

Hourly Parking Occupancy by Percentage and Occupied Spaces per Facility

Off-Street Parking Survey - Weekday without Yankee Game													
Parking Facility	Capacity	8-9 AM	9-10 AM	10-11 AM	11 AM-12 PM	12-1 PM	1-2 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	7-8 PM
Yankee Stadium Parking Lot # 1	<u>412</u>	7%	8%	8%	8%	8%	8%	7%	7%	0%	0%	0%	0%
Yankee Stadium Parking Lot # 2	<u>91</u>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Yankee Stadium Parking Lot # 3	<u>1,205</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 5	<u>59</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 6	<u>76</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 7	<u>150</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 8	<u>2,411</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 9	<u>76</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 10	<u>114</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 11	<u>176</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 12	<u>470</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 13A	<u>400</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 13B	<u>504</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 13C	<u>210</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 13D	<u>296</u>	*	*	*	*	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 14	<u>231</u>	38%	41%	37%	71%	80%	90%	98%	92%	90%	20%	14%	11%
Yankee Stadium Parking Lot # 15	<u>205</u>	*	*	*	*	*	*	*	*	*	*	*	*
REX Parking Corp.	225	35%	43%	50%	40%	42%	80%	70%	80%	87%	32%	1%	1%
Bautista Parking	50	74%	88%	94%	98%	86%	76%	96%	98%	88%	76%	72%	74%
Kinney Parking	155	13%	52%	71%	68%	52%	58%	41%	26%	27%	14%	11%	16%
TOTAL	<u>7,516</u>	3%	4%	5%	6%	6%	7%	7%	7%	6%	2%	1%	1%

Note: * = denotes that the parking lot is closed.

**Table 16-4
Hourly Parking Occupancy by Percentage and Occupied Spaces per Facility**

Off-Street Parking Survey - Saturday without Yankee Game									
Parking Facility	Capacity	10-11 AM	11 AM-12 PM	12-1 PM	1-2 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM
Yankee Stadium Parking Lot # 1	<u>412</u>	*	*	*	*	*	*	*	*
<u>Yankee Stadium Parking Lot # 2</u>	<u>91</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Yankee Stadium Parking Lot # 3	<u>1,205</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 5	<u>59</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 6	<u>76</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 7	<u>150</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 8	<u>2,411</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 9	<u>76</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 10	<u>114</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 11	<u>176</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 12	<u>470</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 13A	<u>400</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 13B	<u>504</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 13C	<u>210</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 13D	<u>296</u>	*	*	*	*	*	*	*	*
Yankee Stadium Parking Lot # 14	<u>231</u>	11%	11%	19%	19%	18%	17%	18%	17%
Yankee Stadium Parking Lot # 15	<u>205</u>	*	*	*	*	*	*	*	*
REX Parking Corp.	225	18%	19%	*	*	*	*	*	*
Bautista Parking	50	2%	2%	2%	2%	5%	6%	4%	2%
Kinney Parking	155	15%	14%	13%	12%	9%	8%	14%	17%
TOTAL	<u>7,516</u>	1%	1%	1%	1%	1%	1%	1%	1%
Note: * = denotes that the parking lot is closed.									

Table 16-5
Hourly Parking Occupancy by Percentage and Occupied Spaces per Facility

Off-Street Parking Survey - Weekday with Yankee Game													
Parking Facility	Capacity	8-9 AM	9-10 AM	10-1 AM	11 AM-12 PM	12-PM	1-2 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-PM	7-8 PM
Yankee Stadium Parking Lot # 1	<u>412</u>	1%	1%	1%	1%	1%	1%	5%	9%	11%	19%	44%	100%
Yankee Stadium Parking Lot #2	<u>91</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Yankee Stadium Parking Lot # 3	<u>1,205</u>	*	*	*	*	*	*	*	*	15%	40%	95%	99%
Yankee Stadium Parking Lot # 5	<u>59</u>	*	*	*	*	*	*	*	*	*	4%	22%	100%
Yankee Stadium Parking Lot # 6	<u>76</u>	*	*	*	*	*	*	*	*	*	1%	24%	74%
Yankee Stadium Parking Lot # 7	<u>150</u>	*	*	*	*	*	*	*	*	*	1%	2%	80%
Yankee Stadium Parking Lot # 8	<u>2,411</u>	1%	1%	2%	3%	3%	4%	6%	11%	24%	51%	85%	88%
Yankee Stadium Parking Lot # 9	<u>76</u>	*	*	*	*	*	*	*	0%	1%	64%	101%	101%
Yankee Stadium Parking Lot # 10	<u>114</u>	*	*	*	1%	1%	1%	34%	43%	49%	56%	90%	100%
Yankee Stadium Parking Lot # 11	<u>176</u>	*	*	*	*	*	*	*	0%	1%	1%	101%	102%
Yankee Stadium Parking Lot # 12	<u>470</u>	*	*	*	*	*	*	*	*	1%	2%	68%	85%
Yankee Stadium Parking Lot # 13A	<u>400</u>	*	*	*	*	*	*	*	1%	1%	1%	23%	59%
Yankee Stadium Parking Lot # 13B	<u>504</u>	*	*	*	*	*	*	*	0%	1%	1%	1%	36%
Yankee Stadium Parking Lot # 13C	<u>210</u>	*	*	*	*	*	*	*	1%	3%	29%	43%	70%
Yankee Stadium Parking Lot # 13D	<u>296</u>	*	*	*	*	*	*	*	1%	1%	27%	44%	67%
Yankee Stadium Parking Lot # 14	<u>231</u>	8%	8%	13%	13%	13%	12%	10%	9%	11%	14%	23%	37%
Yankee Stadium Parking Lot # 15	<u>205</u>	8%	10%	10%	10%	8%	8%	10%	10%	10%	10%	10%	11%
REX Parking Corp.	225	38%	39%	39%	38%	38%	36%	36%	39%	36%	30%	17%	66%
Bautista Parking	50	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Kinney Parking	155	23%	23%	68%	71%	39%	26%	26%	19%	19%	19%	36%	84%
TOTAL	<u>7,516</u>	3%	3%	4%	4%	4%	4%	5%	7%	14%	29%	59%	76%
Note: * = denotes that the parking lot is closed.													

**Table 16-6
Hourly Parking Occupancy by Percentage and Occupied Spaces per Facility**

Off-Street Parking Survey - Saturday with Yankee Game									
Parking Facility	Capacity	10-11 AM	11 AM-12 PM	12-1 PM	1-2 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM
Yankee Stadium Parking Lot # 1	<u>412</u>	1%	28%	80%	100%	100%	100%	95%	90%
<u>Yankee Stadium Parking Lot #2</u>	<u>91</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Yankee Stadium Parking Lot # 3	<u>1,205</u>	0%	45%	90%	98%	99%	99%	40%	1%
Yankee Stadium Parking Lot # 5	<u>59</u>	0%	45%	22%	36%	60%	57%	44%	0%
Yankee Stadium Parking Lot # 6	<u>76</u>	*	1%	24%	90%	102%	95%	40%	*
Yankee Stadium Parking Lot # 7	<u>150</u>	*	*	1%	23%	80%	98%	90%	10%
Yankee Stadium Parking Lot # 8	<u>2,411</u>	0%	48%	79%	79%	76%	52%	1%	1%
Yankee Stadium Parking Lot # 9	<u>76</u>	29%	43%	100%	100%	100%	80%	23%	1%
Yankee Stadium Parking Lot # 10	<u>114</u>	16%	43%	100%	100%	100%	92%	25%	*
Yankee Stadium Parking Lot # 11	<u>176</u>	1%	11%	92%	100%	100%	91%	13%	1%
Yankee Stadium Parking Lot # 12	<u>470</u>	1%	1%	77%	85%	107%	98%	61%	1%
Yankee Stadium Parking Lot # 13A	<u>400</u>	0%	50%	95%	100%	100%	95%	89%	45%
Yankee Stadium Parking Lot # 13B	<u>504</u>	0%	65%	90%	98%	100%	92%	88%	13%
Yankee Stadium Parking Lot # 13C	<u>210</u>	0%	80%	98%	98%	99%	101%	95%	1%
Yankee Stadium Parking Lot # 13D	<u>296</u>	0%	60%	97%	99%	99%	85%	79%	1%
Yankee Stadium Parking Lot # 14	<u>231</u>	0%	85%	98%	99%	100%	89%	78%	3%
Yankee Stadium Parking Lot # 15	<u>205</u>	0%	45%	80%	85%	90%	90%	75%	15%
REX Parking Corp.	225	0%	70%	85%	100%	100%	65%	61%	1%
Bautista Parking	50	0%	1%	1%	16%	100%	84%	66%	52%
Kinney Parking	155	0%	45%	97%	100%	100%	77%	39%	19%
TOTAL	<u>7,516</u>	1%	45%	82%	88%	91%	80%	45%	10%

Note: * = denotes that the parking lot is closed.

As shown in Table 16-4, the occupancy level is about one percent between the hours of 10 AM and 6 PM on a typical Saturday without a Yankee game. This means that at 1-2 PM, i.e., the Saturday midday peak shopping hour, there are about 7,400 unoccupied spaces available within off-street lots and garages. When considering only the three garages containing approximately 440 spaces that are open on a typical Saturday without a Yankee game, there are approximately 370 unoccupied spaces between 1–2 PM.

GAME DAY PARKING

On a typical weekday with a Yankee game, parking occupancy is lower than on a typical non-game day by approximately 50 to 100 vehicles per hour, from 8 AM until approximately 3 PM when many of the parking lots that are closed on non-game days open. Although typical non-game and game days were surveyed, it is possible that because of daily fluctuations in parking occupancy, the observed game day parking before 3 PM was less than the corresponding non-game day hours. Also, it is possible that before 3 PM on game days, daily parking occupancy is lower than non-game days due to people avoiding the area because of Yankee game parking demand and traffic. Regardless, by 5 PM on game days, parking is approximately 130 percent higher than by 5 PM on non-game days, due to pre-game Yankee fan parking. As shown in Table 16-5, all 19 public parking facilities are open to their full capacity of approximately 7,516 spaces by about 5 PM on a typical weekday with a Yankee game. Between 6–7 PM, the hour before a typical weeknight Yankee game, approximately 3,080 vacant spaces exist within ½-mile of the Bronx Terminal Market site. Between 7–8 PM, during which time a typical game has started, occupancy is just over 75 percent, leaving approximately 1,800 vacant spaces within the area (many Yankee fans do not arrive and park until after the game has started).

As shown in Table 16-6, all 19 public parking facilities are open to their full capacity of approximately 7,516 spaces by about 12 PM on a typical Saturday with a Yankee game. On a typical Saturday with a Yankee game, parking occupancy begins to climb to approximately 45 percent between 11 AM and 12 PM when all but one parking lot is open. Between 1–2 PM, approximately 88 percent of the spaces are filled, with approximately 900 vacant spaces within ½-mile of the project site. The occupancy during a typical Saturday Yankee game peaks at approximately 91 percent between 2–3 PM, but drops to about 45 percent between 4–5 PM.

On sellout and nearly-sellout game days, some Yankee fan parking occurs at the Concourse Plaza Shopping Center located along the south side of East 161st Street, one to two blocks east of the Grand Concourse. This shopping center is open 24 hours per day, seven days a week, and has a posted capacity of 1,200 spaces. Yankee fan parking takes place on the below-grade level, with several hundred parking spaces typically available on game days.

On-street parking regulations were also inventoried for this same parking study area. Typical weekday parking regulations were recorded on a block-by-block basis, and the number of legal parking spaces available for use by future travelers into the area were detailed.

Both sides of River Avenue are most typically characterized by a blend of very stringent parking regulations, such as No Parking Anytime, Tow Away Zone-No Parking Stadium Event, and No Standing Anytime, with unmetered non-game day parking available except for “alternate side-of-the-street” parking between 153rd and 158th Streets. Exterior Street restrictions consist of Bronx Terminal Market-only customer parking in some areas and others between 149th Street and the Major Deegan Expressway ramps with no parking regulations. Grand Concourse parking regulations consist of a mix of No Parking Anytime, 1 Hour Meter Parking 8:30 AM–7 PM, and No Standing Bus Stop signs, with some blocks of “alternate side-of-the-street” parking

available. 161st Street parking regulations are stringent with No Parking Anytime between Jerome and River Avenues. 149th Street parking regulations consist of a blend of stringent parking regulations, such as No Parking Anytime between the 145th Street Bridge and Gerard Avenue, and less stringent regulations, such as 1 Hour Meter Parking 8:30 AM–7 PM, and No Standing Bus Stop 7 AM–7 PM between Gerard Avenue and the Grand Concourse. East-west cross-streets between 149th and 161st Streets, and north-south avenues such as Gerard and Walton Avenues’ regulations consist mainly of “alternate side-of-the-street” parking.

Overall, within the area surveyed, there are approximately 1,200 legal parking spaces available on-street, with the following maximum occupancy totals (see Table 16-7): just over 80 percent occupied between 10 and 11 AM on weekdays without Yankee games, just over 40 percent occupied between 12 and 1 PM on Saturdays without Yankee games, just over 70 percent occupied between 11 AM and 12 PM on weekdays with Yankee games, and just under 50 percent occupied between 12 and 1 PM on Saturdays with Yankee games.

**Table 16-7
Hourly Parking Occupancy by
Parking Spaces and Percentage for On-street Parking**

Time	Without Yankee Game		With Yankee Game	
	Existing Non-game Weekday	Existing Non-game Saturday	Existing Game-day Weekday	Existing Game-day Saturday
8:00–9:00 AM	688 (56%)	n/a	406 (33%)	n/a
9:00–10:00 AM	924 (75%)	n/a	593 (48%)	n/a
10:00–11:00 AM	1,017 (83%)	295 (24%)	821 (67%)	41 (3%)
11:00 AM–12:00 PM	1,011 (82%)	489 (40%)	878 (72%)	338 (28%)
12:00–1:00 PM	966 (79%)	522 (43%)	868 (71%)	576 (47%)
1:00–2:00 PM	980 (80%)	463 (38%)	876 (71%)	573 (47%)
2:00–3:00 PM	999 (81%)	424 (35%)	868 (71%)	531 (43%)
3:00–4:00 PM	902 (74%)	417 (34%)	764 (62%)	511 (42%)
4:00–5:00 PM	761 (62%)	386 (31%)	736 (60%)	452 (37%)
5:00–6:00 PM	673 (55%)	384 (31%)	635 (52%)	372 (30%)
6:00–7:00 PM	584 (48%)	n/a	617 (50%)	n/a
7:00–8:00 PM	542 (44%)	n/a	595 (48%)	n/a

Notes: The number of parking spaces observed to be occupied per hour are shown first, followed by the percentage of the total capacity occupied. The capacity is approximately 1,227 spaces within ½ mile of the site.

C. THE FUTURE WITHOUT THE PROPOSED ACTIONS

TRAFFIC CONDITIONS

The future without the proposed actions, i.e., the future No Build condition, is established in order to provide the baseline against which the impacts of the proposed actions can be compared. Future year conditions were analyzed for two years—an interim Build year (2009), and a final Build year (2014). Future No Build traffic volumes were developed by applying a background traffic growth rate of one-half percent per year as stipulated in the *City Environmental Quality Review (CEQR) Technical Manual*. After consulting the New York City Department of City Planning (NYCDCP) in preparing the Draft EIS, it was determined that no

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significant developments would be constructed in the vicinity of the project site. However, information subsequently received from the New York City Department of Transportation (NYCDOT) indicated that three developments can be expected to be in place by the Proposed Project's first phase of development in its 2009 Build year: Phase 2 development of the Bronx County Courthouse along 161st Street one block east of the Grand Concourse; construction of the East 153rd Street Bridge, which would provide another route for traffic to cross from one side of the Grand Concourse to the other; and NYCDOT's planned construction of traffic improvements along the Grand Concourse from 161st Street to 165th Street. The first of these three traffic developments (Phase 2 of the Bronx County Courthouse) would generate new trips to the area, and those trips were added to the street network volumes as noted in that development's traffic and environmental review documents. The second and third developments noted above would not generate new trips, but would alter traffic patterns along and across the Grand Concourse. Projected traffic changes that would result from the East 153rd Street Bridge were taken from its EAS and extended through the proposed project's traffic study area and the intersections being analyzed in this EIS. Traffic pattern changes were also incorporated as a result of the planned NYCDOT traffic improvement plan for the Grand Concourse from 161st Street to 165th Street. This plan would add one southbound travel lane along the main road of the Grand Concourse while reducing the southbound local road by an equivalent lane; all local road traffic would need to make right turns onto 161st Street (current through traffic on the local road would be able to cross over to the main road before reaching 161st Street). Other lane designation changes and alignment improvements are part of the NYCDOT plan and all have been incorporated into the analyses within this FEIS.

There are three other roadway improvements being considered within the study area that are expected to begin or be completed by 2009. The New York State Department of Transportation (NYSDOT) is currently planning to reconstruct the deck of the elevated portion of the Major Deegan Expressway corridor between 138th Street and the Macombs Dam Bridge, including temporary widening of the elevated deck and several ramps so that the current six lanes of traffic can be maintained throughout reconstruction. This is a major construction project expected to begin in 2010 and last approximately three years. It would not add capacity or alter traffic patterns in the area.

Next, the New York City Department of Transportation (NYCDOT) is currently planning to reconstruct the 161st Street tunnel below the Grand Concourse as part of the Grand Concourse streetscaping and rehabilitation project between 161st and 166th Streets. NYCDOT's proposed streetscaping plan for the Grand Concourse in this area, and for reconstruction of Lou Gehrig Plaza just west of the Grand Concourse, would alter the distribution of traffic flows between the southbound Grand Concourse's main road and service road as well as through the Grand Concourse/161st Street intersection. The proposed streetscape design would require all southbound service road traffic to make right turns onto westbound 161st Street. (Under existing conditions, southbound service road traffic can proceed straight through the intersection or make right turns.)

The New York City Department of Design and Construction (NYCDDC) will be rehabilitating 149th Street between Exterior Street/River Avenue and Anthony J. Griffin Place beginning in 2007 and ending in 2009 to widen sidewalks, reconstruct the street, relocate utilities, and possibly create a striped median. NYCDDC has stated that this will not change the operation or capacity of the Exterior Street/River Avenue or the Grand Concourse intersections on 149th Street within the study area, and all lanes will be maintained during construction. These projects will not disrupt traffic in 2009 or 2014 because they will be complete; or if they are under

construction, the projects will maintain current traffic flows. Therefore, they would not affect the analysis of future No Build or Build conditions.

NYCDOT is also planning to reconstruct the 145th Street Bridge, but is not planning on increasing capacity or significantly modifying traffic operations on the bridge, so it would not affect the analysis of No Build or Build conditions. This reconstruction is expected to begin in early 2006 and be completed in 2007.

The No Build analyses reflect projected future conditions with the current Yankee Stadium still in operation. Potential conditions with the proposed new stadium relocated across 161st Street, and its parking facilities, are addressed in Chapter 22, “Future Conditions with a Relocated Yankee Stadium.”

2009

Traffic volumes on the study area street network would be expected to generally increase at relatively modest volumes, by a factor of just over 2.5 percent between 2004 and 2009, or one-half percent per year. At some locations, expected roadway improvements would provide better levels of service, as summarized below.

Table 16-8 provides an overview of the levels of service that would be expected to characterize the traffic study area during the peak hours.

**Table 16-8
2009 No Build Traffic Level of Service Summary**

Signalized Intersections (13 Total)	Without Yankee Game			With Yankee Game		
	No Build Non-game Weekday Midday	No Build Non-game Weekday PM	No Build Non-game Saturday Midday	No Build Pre-game Weekday PM	No Build Pre-game Saturday Midday	No Build Post-game Saturday PM
Overall Intersection LOS A/B	4	3	5	3	2	2
Overall Intersection LOS C	3	3	3	4	7	3
Overall Intersection LOS D	2	3	3	2	2	3
Overall Intersection LOS E/F	4	4	2	4	2	5
Number of Signalized Intersection Movements at LOS E or F (of approximately 64 total)	16	17	12	19	15	26
Notes:	The east leg of East 138th Street/the Grand Concourse is unsignalized and the west leg is signalized; they are counted separately. All three unsignalized intersections (the east leg of East 138th Street/Grand Concourse, East 150th Street/Exterior Street, and East 150th Street/River Avenue) analyzed would operate at LOS A, B or C during all analysis hours.					

- In the non-game weekday midday peak hour, the same number of signalized intersections, or four overall, would operate at overall unacceptable LOS E or F when compared to existing conditions. One less traffic movement, or 16 of approximately 64 total traffic movements analyzed, would operate at LOS E or F conditions, when compared to existing conditions.
- In the non-game weekday PM peak hour, one additional signalized intersection (four) would operate at overall LOS E or F as existing conditions (four in the No Build as compared to three in existing conditions). Two additional traffic movements than the existing conditions would operate at LOS E or F.

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- In the non-game Saturday midday peak hour, two signalized intersections would operate at overall LOS E or F—the same as existing conditions. Twelve traffic movements would operate at LOS E or F, which is one less than the existing conditions.
- In the pre-game weekday PM peak hour, two additional signalized intersections, or four overall, would operate at overall LOS E or F when compared to existing conditions. Nineteen traffic movements would operate at LOS E or F, up from 17 in existing conditions.
- In the pre-game Saturday midday peak hour, one additional signalized intersection, or two overall, would operate at overall LOS E or F when compared to existing conditions. Six additional traffic movements, for a total of 15, would operate at LOS E or F when compared to existing conditions.
- In the post-game Saturday PM peak hour, five signalized intersections would operate at overall LOS E or F, which would be one less than existing conditions. When compared to existing conditions, one additional traffic movement, or 26 total, would operate at LOS E or F.
- Each of the three unsignalized intersections analyzed would operate at acceptable levels of service during each of the traffic analysis hours.

Figures 16-10 through 16-15 present another representation of 2009 No Build levels.

2014

Traffic volumes on the study area street network would be expected to generally increase at relatively modest volumes, by a factor of just over 5.1 percent between 2004 and 2014, or one-half percent per year.

Table 16-9 provides an overview of the levels of service that would be expected to characterize the traffic study area during the peak hours.

**Table 16-9
2014 No Build Traffic Level of Service Summary**

Signalized Intersections (13 Total)	Without Yankee Game			With Yankee Game		
	No Build Non-game Weekday Midday	No Build Non-game Weekday PM	No Build Non-game Saturday Midday	No Build Pre-game Weekday PM	No Build Pre-game Saturday Midday	No Build Post-game Saturday PM
Overall Intersection LOS A/B	4	3	5	3	2	2
Overall Intersection LOS C	3	3	<u>3</u>	4	6	<u>3</u>
Overall Intersection LOS D	<u>2</u>	3	<u>3</u>	2	<u>3</u>	<u>2</u>
Overall Intersection LOS E/F	<u>4</u>	4	2	4	2	6
Number of Signalized Intersection Movements at LOS E or F (of approximately <u>64</u> total)	<u>21</u>	<u>22</u>	<u>16</u>	<u>21</u>	<u>17</u>	<u>27</u>
Notes:	The east leg of East 138th Street/the Grand Concourse is unsignalized and the west leg is signalized; they are counted separately. All three unsignalized intersections (the east leg of East 138th Street/Grand Concourse, East 150th Street/Exterior Street, and 150th Street/River Avenue) analyzed would operate at LOS A, B, or C during all analysis hours.					

- In the non-game weekday midday peak hour, the same number of signalized intersections, or four overall, would operate at overall unacceptable LOS E or F when compared to existing conditions. Four additional traffic movements, or 21 of approximately 64 total traffic

movements analyzed, would operate at LOS E or F conditions, when compared to existing conditions.

- In the non-game weekday PM peak hour, one additional signalized intersection, or four overall, would operate at overall LOS E or F when compared to existing conditions. Seven additional traffic movements than the existing conditions would operate at LOS E or F.
- In the non-game Saturday midday peak hour, two signalized intersections would operate at overall LOS E or F—the same as existing conditions. Sixteen traffic movements would operate at LOS E or F, which is three more than the existing conditions.
- In the pre-game weekday PM peak hour, two additional signalized intersections, or four overall, would operate at overall LOS E or F when compared to existing conditions. Twenty-one traffic movements would operate at LOS E or F, up from 17 in existing conditions.
- In the pre-game Saturday midday peak hour, two signalized intersections would operate at overall LOS E or F—one more than under existing conditions. Eight additional traffic movements, for a total of 17, would operate at LOS E or F when compared to existing conditions.
- In the post-game Saturday PM peak hour, six signalized intersections would operate at overall LOS E or F, which is the same number as existing conditions. When compared to existing conditions, two additional traffic movements, or 27 total, would operate at LOS E or F.
- Each of the three unsignalized intersections analyzed would operate at acceptable levels of service during each of the traffic analysis hours.

Figures 16-16 through 16-21 present another representation of 2014 No Build levels of service..

PARKING

Based on a background traffic growth rate of one-half percent per year, occupancy of public parking facilities and on-street parking in the area can be expected to increase by the same rate. The maximum occupancy level for parking facilities on non-game days would not increase more than one-half to one percent in 2009 or 2014 from the existing maximum of seven percent between 1–2 PM on a typical weekday without a Yankee game. On a typical Saturday without a Yankee game, similar to existing conditions, the 2009 or 2014 conditions would consist of parking facilities at approximately one percent occupied.

On a typical weekday Yankee game day, the maximum occupancy would peak between 7–8 PM at about 78 percent in 2009 and 80 percent in 2014, compared to approximately 76 percent in 2004. On a typical Saturday game day, the maximum occupancy would peak between 2–3 PM at about 94 percent in 2009 and 96 percent in 2014, compared to approximately 91 percent in 2004. This is a very conservative assumption since it includes increases in Yankee fan parking, which are not really subject to annual increases.

The on-street parking occupancy would increase by one-half percent to the following maximum daily levels: approximately 85 percent in 2009 and 87 percent in 2014 occupied between 10–11 AM on weekdays without Yankee games compared to approximately 83 percent in 2004; and approximately 44 percent in 2009 and 45 percent in 2014 occupied between 12–1 PM on Saturdays without Yankee games compared to approximately 43 percent in 2004.

On a typical weekday with a Yankee game, approximately 73 percent in 2009 and 75 percent in 2014 of on-street parking would be occupied between 11 AM and 12 PM compared with approximately 72 percent in 2004. On a typical Saturday with a Yankee game, approximately 48 percent in 2009 and 49 percent in 2014 of on-street parking would be occupied between 12–1 PM compared with approximately 47 percent in 2004.

D. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

This section presents an analysis of future traffic and parking conditions with the Proposed Project. The Proposed Project would consist of retail and parking on the east side of Exterior Street by 2009, and the development of a hotel by 2014. This section includes a determination of the volume of vehicle trips generated under Build conditions, their distribution within the study area roadway network, the analysis of future traffic levels of service, and the identification of significant impacts as per *CEQR Technical Manual* guidelines. These analyses are presented for two separate future analysis conditions—2009 and 2014. Mitigation measures are discussed in Chapter 23, “Mitigation.”

Upon completion of the Proposed Project, there would be several changes to the roadway network, including some benefits. The construction of the Proposed Project would necessitate closing 150th Street between River Avenue and Exterior Street, Cromwell Avenue from Exterior/150th Streets to its northern terminus, and 151st Street west of River Avenue. These are “minor” street segments carrying very small traffic volumes. Also as part of this project, Exterior Street between 149th Street and its northern terminus and River Avenue between 149th and 153rd Streets would be substantially upgraded to include pavement resurfacing, dedicated turning lanes into the site, and widening along certain sections to provide two full travel lanes in each direction. New traffic signals would also be installed at several intersections in order to facilitate vehicle access in and out of the proposed parking garages.

TRIP GENERATION AND MODAL SPLIT

Travel demand projections were prepared for the development of approximately 950,000 gross square feet (gsf) of destination retail space, and approximately 3,000 parking spaces in 2009. By 2014, a 250-room hotel, including a 30,000-gsf banquet facility and 225 additional parking spaces, would be built. The off-site public open space that would be developed by the City by the Proposed Project’s Build year of 2009 was included in this projection (see discussion below).

Trip generation rates, modal split characteristics, and vehicle occupancy rates were taken from standard professional references, census data, original survey data, information from other development studies, and reasonable planning assumptions. For each of the land use categories envisioned under the 2009 and 2014 development scenarios (including destination retail, hotel, and banquet facility), sources with similar geographic and/or user characteristics were selected. These trip generation factors are summarized in Table 16-10, and described further below.

DESTINATION RETAIL

A combination of data sources were used to project trips associated with the destination retail component of the Proposed Project. Original surveys were conducted at Queens Place (88–01 Queens Boulevard, Elmhurst, New York), and these data were supplemented with analyses performed for projects in Harlem and Brooklyn.

**Table 16-10
Trip Generation Factors for Proposed Development Program**

Non-Game Day			
	Destination Retail (per 1,000 sf)	Hotel (per Room)	Public Open Space (per Acre)
Person Trip Rate			
Weekday Midday Peak Hour	3.1 per hour	9.3 per day	139 per day
Weekday PM Peak Hour	6.8 per hour	9.3 per day	139 per day
Saturday Midday Peak Hour	9.2 per hour	9.3 per day	158 per day
Temporal Distribution (Total % In / %Out)			
Weekday Midday Peak Hour	100% (51.8% / 48.2%)	7.1% (69.0% / 31.0%)	12% (50% / 50%)
Weekday PM Peak Hour	100% (51.8% / 48.2%)	9.2% (57.6% / 42.4%)	10% (45% / 55%)
Saturday Midday Peak Hour	100% (50.7% / 49.3%)	13.3% (54.5% / 45.5%)	20% (55% / 45%)
Modal Split (Weekday / Saturday)			
Auto	59.0% / 59.0%	70%	12% / 12%
Taxi	3.0% / 5.0%	15%	0% / 0%
Subway	15% / 13%	5%	5% / 5%
Local Bus	18% / 18%	5%	5% / 5%
Walking/Other	5.0% / 5.0%	5%	78% / 70%
Average Vehicle Occupancy (Weekday / Saturday)			
Auto	2.05 / 2.49	1.60 / 2.30	2.80 / 2.80
Taxi	2.00 / 2.80	1.40 / 2.80	N/A
Delivery Trips			
Daily Rate	0.35 per 1,000 sf	0.10 per hotel room	N/A
Weekday Midday Peak Hour	8.6%	8.6%	N/A
Weekday PM Peak Hour	5.1%	5.1%	N/A
Saturday Midday Peak Hour	1.0%	0.0%	N/A
Game Day			
	Destination Retail (per 1,000 sf)	Hotel (per Room)	Public Open Space (per Acre)
Peak Hour Person Trip Rate per 1,000 sf or Hotel Room			
Weekday Pre-Game Peak Hour	6.1 per hour	9.3 per day	139 per day
Saturday Pre-Game Peak Hour	7.4 per hour	9.3 per day	158 per day
Saturday Post-Game Peak Hour	5.5 per hour	9.3 per day	158 per day
Temporal Distribution (In / Out)			
Weekday Pre-Game Peak Hour	100% (51.8% / 48.2%)	9.2% (57.6% / 42.4%)	10% (45% / 55%)
Saturday Pre-Game Peak Hour	100% (53.6% / 46.4%)	13.3% (54.5% / 45.5%)	20% (55% / 45%)
Saturday Post-Game Peak Hour	100% (47.5% / 52.5%)	13.3% (54.5% / 45.5%)	14% (34% / 66%)
Modal Split (Weekday / Saturday)			
Auto	59.0% / 59.0%	70.0% / 70.0%	12% / 12%
Taxi	3.0% / 5.0%	15.0% / 15.0%	0% / 0%
Subway	15% / 13%	5.0% / 5.0%	5% / 5%
Local Bus	18% / 18%	5.0% / 5.0%	5% / 5%
Walking/Other	5.0% / 5.0%	5.0% / 5.0%	78% / 70%
Average Vehicle Occupancy (Weekday / Saturday)			
Auto	2.05 / 2.49	1.60 / 2.30	2.80 / 2.80
Taxi	2.00 / 2.80	1.40 / 2.80	N/A
Delivery Trips			
Daily Rate	0.35 per 1,000 sf	0.10 per hotel room	N/A
Weekday Pre-Game Peak Hour	5.1%	5.1%	N/A
Saturday Pre-Game Peak Hour	1.0%	0.0%	N/A
Saturday Post-Game Peak Hour	1.0%	0.0%	N/A
Sources: (Destination Retail): Surveys conducted by AKRF, Inc. at Queens Place (May 2004); Results of PHA survey in Atlantic Center, Brooklyn (1997); Federal Highway Administration, "Curbside Pickup and Delivery and Arterial Traffic Impacts." Final Report. (February 1981); Wilber Smith Associates, <i>Motor Trucks in the Metropolis</i> , 1969; East River Plaza FEIS (August 1999); Atlantic Center EA (February 1999) (Hotel): Surveys conducted by AKRF, Inc. at the Renaissance Plaza Hotel, Downtown Brooklyn (March 1999); Wilber Smith Associates, <i>Motor Trucks in the Metropolis</i> , 1969; USDOT; Harlem Park Development EAS (May 7, 2004) (Public Open Space): <i>Gateway Estates Final Environmental Impact Statement</i> (April 1996); Institute for Transportation Engineers, <i>Trip Generation 7th Edition</i> (2003).			

Gateway Center at Bronx Terminal Market FEIS

Queens Place is a destination retail center located on Queens Boulevard at 55th Avenue. It contains approximately 434,100 square feet of retail stores, including Target, DSW Shoe Warehouse, Macy's Furniture, Best Buy, and Daffy's. The retail stores are encircled by the site's parking structure, which contains a total of 1,200 spaces. It is accessible by auto from the Long Island Expressway (Exit 19) and Queens Boulevard, and by subway at the Grand Avenue-Newton station served by the R, V, and G lines, which is located less than ½-mile from the site. Five New York City Transit (NYCT) bus routes stop in the vicinity of Queens Place.

Vehicle and pedestrian door counts were conducted at Queens Place in May 2004 on a weekday and Saturday. These data were used to project the peak hours, peak hour trip rates, temporal and direction distributions and percent of travel, and vehicle occupancies for the Proposed Project. Data collected at Queens Place were supplemented with factors from previously published environmental impact statements to generate travel demand projections for the Proposed Project including East River Plaza in Harlem and Atlantic Center in Brooklyn. Delivery trips were estimated using rates from the U.S. Federal Highway Administration's *Curbside Pickup and Delivery and Arterial Impacts* (February 1981).

Given its proximity to Yankee Stadium, retail patronage and local traffic conditions at and near the project site would be influenced by activities at the stadium. While the weekday midday peak hour trips generated by the Proposed Project would be similar for game and non-game days, the weekday PM, Saturday pre-game, and Saturday post-game peaks vary since background traffic would be much higher before and after a Yankee game than during the typical retail peak.

Generally, the factors applied for the generation of game day trips to the Proposed Project are the same as those used for the non-game day scenario. However, two adjustments were made in anticipation of travel behavior relative to local traffic conditions associated with the stadium. The first was an adjustment in the peak periods. The peak periods of adjacent traffic on a game day would not correspond to the peak period of retail traffic. Therefore, trip rates were adjusted based on the surveys at Queens Place to reflect retail activity during the peak periods of adjacent traffic. The second adjustment was a 10 percent shifting of trips during the weekday PM, Saturday pre-game, and Saturday post-game peaks based on the assumption that patrons would choose other times of the day to visit the Proposed Project rather than immediately before or after a Yankee game. This is a conservative assumption; in reality, a much greater shift would occur away from the peak arrival and departure hours on Yankee game days. Shoppers would avoid going to the Proposed Project's retail development during the hour immediately before and after game crowds arrive and leave.

PUBLIC OPEN SPACE

It is anticipated that the City—with contributions from the project sponsor—would develop an approximately 2-acre waterfront public open space on a portion of the Bronx Terminal Market area west of Exterior Street. The City is committed to developing the off-site public open space by the Proposed Project's 2009 Build year. The programming of this open space and the actions required for its development are yet to be determined. The proposed public open space is not expected to generate a significant volume of vehicle trips (generally two vehicle trips in peak hours, not included in Table 16-2).

HOTEL

Trip rates, temporal distribution, direction distribution, and auto and taxi occupancies for the Proposed Project's hotel component were derived from surveys conducted at the Marriott Hotel in downtown Brooklyn. These data were also compared to the recently-approved Harlem Park development project in Manhattan. Delivery trips were estimated using rates from the U.S. Federal Highway Administration's *Curbside Pickup and Delivery and Arterial Impacts* (February 1981).

The Marriott Hotel and Harlem Park development projects are well served by transit. Since the proposed hotel at the Proposed Project would be further from subways and buses as well as further from major tourist destinations than the Brooklyn Marriott, modal split distributions from the hotel surveys were adjusted to reflect local conditions. Hotel trips are not expected to vary considerably between game and non-game days, so the same rates were used for both scenarios.

TOTAL TRIP GENERATION

The total volume of person trips and vehicle trips that would be generated by the Proposed Project in 2009 and 2014 is presented in Table 16-11. The auto trips in Table 16-12 were derived by dividing the person trips shown in Table 16-11 by the vehicle occupancy rates in Table 16-10 documented for each peak hour.

In 2009, the Proposed Project would generate approximately 3,000 person trips (i.e., by all travel modes) in the non-game weekday midday peak hour, 6,500 person trips in the non-game weekday PM peak hour, and 8,800 person trips in the non-game Saturday midday peak hour. Equivalent peak hours on game days would generate slightly lower volumes of person trips, because a portion of retail shoppers would be drawn to off-peak periods to avoid peak game day traffic arrival and departure hours. The game day peak hours are expected to generate 5,850 person trips in the pre-game weekday PM peak hour compared to 6,500 in the non-game weekday PM peak hour, and 7,050 person trips in the pre-game Saturday midday peak hour compared to 8,800 in the non-game Saturday midday peak hour; the Proposed Project is estimated to generate approximately 5,300 person trips in the post-game Saturday PM peak hour.

In 2009, the Proposed Project would generate approximately 985 vehicle trips (i.e., by autos, taxis, and trucks) in the non-game weekday midday peak hour, 2,045 vehicle trips in the non-game weekday PM peak hour, and 2,323 vehicle trips in the non-game Saturday midday peak hour (it should be noted that taxis "count" as two trips—the inbound taxi with passengers and its departure either with or without passengers). The Proposed Project is estimated to generate 1,884 vehicle trips in the pre-game weekday PM peak hour, 1,857 vehicle trips in the pre-game Saturday midday peak hour, and 1,405 vehicle trips in the post-game Saturday PM peak hour. As noted previously, these may well be significantly conservative projections (i.e., higher than what may realistically be expected), as many more shoppers may choose to drive at times not as heavily trafficked by Yankee fans going to or leaving a game.

With the development of a hotel on the project site by 2014, the Proposed Project would generate a total of 3,182 person trips by all modes in the weekday non-game midday peak hour, 6,713 trips in the weekday non-game PM peak hour, and 9,120 trips in the Saturday non-game peak hour. On game days, the project would generate 6,071 person trips in the weekday PM peak hour 7,380 trips in the Saturday midday pre-game peak hour, and 5,631 trips in the Saturday PM post-game peak hour. In 2014, the Proposed Project is estimated to generate 1,077, 2,163, and 2,446 vehicle trips in the weekday non-game midday peak hour, the weekday non-

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game PM peak hour, and the Saturday non-game midday peak hour, respectively. On game days, the project would generate 2,002 vehicle trips in the weekday PM peak hour, 1,980 vehicle trips in the Saturday midday pre-game peak hour, and 1,528 vehicle trips in the Saturday midday post-game peak hour.

Table 16-11
Person Trips Generated by Proposed Development Program in 2009 and 2014

Use	Auto		Taxi		Subway		Local Bus		Walk/ Other		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Non-Game Day												
Weekday Non-Game Midday Peak Hour												
Retail	910	847	46	43	231	215	278	258	77	72	1543	1436
Public Open Space	2	2	0	0	1	1	1	1	13	13	17	17
2009 Total	912	849	46	43	232	216	279	259	90	85	1560	1453
Hotel	82	37	17	8	6	3	6	3	6	3	117	52
2014 Total	994	886	63	51	238	219	285	262	96	88	1677	1505
Weekday Non-Game PM Peak Hour												
Retail	1974	1837	100	93	502	467	602	560	167	156	3346	3114
Public Open Space	2	2	0	0	1	1	1	1	13	13	17	17
2009 Total	1976	1839	100	93	503	468	603	561	180	169	3363	3131
Hotel	88	65	19	14	6	5	6	5	6	5	126	93
2014 Total	2064	1904	119	107	509	473	609	566	186	174	3489	3224
Saturday Non-Game Midday Peak Hour												
Retail	2614	2542	222	215	576	560	798	776	222	215	4431	4309
Public Open Space	4	3	0	0	2	1	2	1	27	23	35	28
2009 Total	2618	2545	222	215	578	561	800	777	249	238	4466	4337
Hotel	121	101	26	22	9	7	9	7	9	7	173	144
2014 Total	2739	2646	248	237	587	568	809	779	258	245	4639	4481
Game Day												
Weekday Pre-Game PM Peak Hour												
Retail	1777	1653	90	84	452	420	542	504	151	140	3012	2802
Public Open Space	2	2	0	0	1	1	1	1	9	11	13	15
2009 Total	1779	1655	90	84	453	421	543	505	160	151	3025	2827
Hotel	88	65	19	14	6	5	6	5	6	5	126	93
2014 Total	1867	1920	109	98	459	426	549	510	166	156	3151	2920
Saturday Pre-Game Midday Peak Hour												
Retail	2214	1917	188	162	486	422	675	585	188	162	3752	3248
Public Open Space	4	3	0	0	2	1	2	1	27	23	35	28
2009 Total	2218	1920	188	162	488	423	677	586	215	185	3787	3276
Hotel	121	101	26	22	9	7	9	7	9	7	173	144
2014 Total	2339	2021	214	184	497	430	686	593	224	192	3960	3420
Saturday Post-Game PM Peak Hour												
Retail	1477	1632	125	138	325	360	451	498	125	138	2503	2767
Public Open Space	2	3	0	0	1	1	1	1	11	24	15	29
2009 Total	1479	1635	126	138	326	361	452	499	136	162	2518	2796
Hotel	121	101	26	22	9	7	9	7	9	7	173	144
2014 Total	1600	1736	152	160	335	368	461	506	145	169	2691	2940

TRIP DISTRIBUTION AND ASSIGNMENT TO THE ROADWAY NETWORK

The volume of vehicular traffic generated by the Proposed Project was assigned to the roadway network based on an original marketing and demographics study including trip origin data available from the 2000 U.S. Census. The study estimated what share of the population within a

3-mile trade area (in Northern Manhattan and the Bronx) would be drawn to destination retailers at the project site. These neighborhood percentage shares were assigned to major approach routes including the northbound and southbound Major Deegan Expressway, the Macombs Dam and 145th Street Bridges, 149th Street, 161st Street, the Grand Concourse, and River and Jerome Avenues. An overview of the regional distribution of generated traffic is described below.

Table 16-12
Vehicle Trips Generated by Proposed Development Program in 2009 and 2014

Use	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
Non-Game Day									
Weekday Non-Game Midday Peak Hour									
Retail	444	413	35	35	29	29	508	477	985
2009 Total	445	414	35	35	29	29	509	478	987
Hotel	51	23	7	7	2	2	60	32	92
2014 Total	496	437	42	42	31	31	569	510	1079
Weekday Non-Game PM Peak Hour									
Retail	963	896	76	76	17	17	1056	989	2045
2009 Total	964	897	76	76	17	17	1057	990	2047
Hotel	55	41	10	10	1	1	66	52	118
2014 Total	1019	938	86	86	18	18	1123	1042	2165
Saturday Non-Game Midday Peak Hour									
Retail	1050	1021	123	123	3	3	1176	1147	2323
2009 Total	1051	1022	123	123	3	3	1177	1148	2325
Hotel	53	44	13	13	0	0	66	57	123
2014 Total	1104	1066	136	136	3	3	1243	1205	2448
Game Day									
Weekday Pre-Game PM Peak Hour									
Retail	867	807	88	88	17	17	972	912	1884
2009 Total	868	808	88	88	17	17	973	913	1886
Hotel	55	41	10	10	1	1	66	52	118
2014 Total	923	849	98	98	18	18	1039	965	2004
Saturday Pre-Game Midday Peak Hour									
Retail	889	770	96	96	3	3	988	889	1857
2009 Total	890	771	96	96	3	3	989	890	1859
Hotel	53	44	13	13	0	0	66	57	123
2014 Total	943	815	109	109	3	3	1055	1047	1982
Saturday Post-Game PM Peak Hour									
Retail	593	656	75	75	3	3	671	734	1405
2009 Total	594	657	75	75	3	3	672	735	1407
Hotel	53	44	13	13	0	0	66	57	123
Game Day	647	701	88	88	3	3	738	792	1530
Note: The person trips generated by public open space were negligible and therefore not included.									

TRAFFIC ASSIGNMENTS

2009

Autos. For destination retail trips, it was estimated that approximately 30 to 35 percent of autos would access the site by traveling southbound on the Major Deegan directly to Exterior Street or

River Avenue and the project site, which includes trips from central Bronx and the Cross Bronx Expressway. Between 25 to 30 percent of autos would access the site by traveling northbound on the Major Deegan Expressway to 149th Street, which includes trips from southern and eastern neighborhoods in the Bronx including 138th Street. Approximately five percent of autos would cross the Harlem River at the Macombs Dam Bridge, and approximately ten percent would cross at the 145th Street Bridge. Local auto trips would come from points north and east by the following approximate totals: five percent on 149th Street, five percent on 161st Street, five to ten percent on the Grand Concourse, and five to ten percent on River and Jerome Avenues.

Because of its excellent vehicular accessibility from all directions, the project site's access would not vary significantly during Yankee games when a handful of street prohibitions disrupt local through traffic patterns. For instance, if the southbound Major Deegan Expressway flyover ramp to 153rd Street was closed as it commonly is before Yankee games, Proposed Project-bound motorists would shift to Exterior Street. Following Yankee games, when southbound River Avenue is closed between 161st and 158th Streets, traffic would shift to Jerome Avenue to Exterior Street or the Grand Concourse to 149th Street. Also following Yankee games, when the northbound Exterior Street traffic approaching 157th Street is forced onto the mainline northbound Major Deegan, motorists destined to Jerome Avenue would use River Avenue instead.

Taxis. Taxis would approach the project site for destination retail drop-offs or pick-ups by approximately 20 to 25 percent on the southbound Major Deegan Expressway, 10 to 15 percent on the northbound Major Deegan Expressway, 10 to 15 percent on the Grand Concourse, and about five to ten percent on each of following routes: River and Jerome Avenues; 149th and 161st Streets; and the Macombs Dam and 145th Street Bridges.

Trucks. Deliveries to the site would predominantly approach using the Major Deegan Expressway. Approximately 60–70 percent of trucks would come from the southbound Major Deegan Expressway and 15–20 percent of trucks from the northbound Major Deegan Expressway. Approximately five percent or fewer trucks would approach using the Macombs Dam and 145th Street Bridges, and a similar percent would approach the site on 149th and 161st Streets. Because the Grand Concourse is not listed by NYCDOT as a designated truck route, trucks would not approach the site from the Grand Concourse. Approximately five to ten percent of trucks would approach on River or Jerome Avenues.

2014

Autos. For hotel trips, it was estimated that approximately 45 to 55 percent of autos would access the site by traveling southbound on the Major Deegan Expressway directly to Exterior Street. Between 25 to 30 percent of autos would access the site by traveling northbound on the Major Deegan to 149th Street, which includes trips from southern and eastern neighborhoods in the Bronx including 138th Street. Approximately five percent of autos would cross the Harlem River at the Macombs Dam or 145th Street Bridges. Local auto trips would come from points north and east by the following approximate totals: fewer than five percent on 149th and 161st Streets; five to ten percent on the Grand Concourse; and fewer than five percent on River and Jerome Avenues.

Taxis. Taxis would approach the project site for hotel drop-offs or pick-ups by approximately 40 to 45 percent on the southbound Major Deegan Expressway, 20 to 25 percent on the northbound Major Deegan Expressway, and about five to ten percent on each of following

routes: the Grand Concourse; River and Jerome Avenues; 149th and 161st Streets; and the Macombs Dam and 145th Street Bridges.

Trucks. Deliveries to the hotel would generally follow the same routes as the destination retail trucks.

GENERATED TRAFFIC VOLUMES

The above trip generation-modal split-trip distribution process produced specific roadway-by-roadway and intersection-by-intersection traffic volume projections within the study area, an overview of which is provided below. Specific block-by-block generated volume projections are provided in detail in Appendix A.

2009

Overall, in 2009, the Proposed Project would generate an increase in traffic volumes of about 10 to 20 percent when comparing the overall background traffic volume entering and exiting the primary traffic study area along its various streets and roadways (the cordon line for this calculation includes the Macombs Dam and 145th Street Bridges, the northbound and southbound Major Deegan Expressway Exits 4, 5, and 6, 149th Street, 161st Street, the Grand Concourse, Exterior Street, and River and Jerome Avenues). The approximately 1,000 to 2,400 vph that would be generated by the destination retail component of the Proposed Project in the non-game weekday midday and Saturday midday peak hours, respectively, would represent approximately a 10 to 20 percent increase overall as compared to the total volume of traffic that would be entering and exiting the study area on these roadways in 2009 (approximately 12,000 to 17,000 vph depending on the peak period).

The destination retail-generated traffic volumes approaching the site would be approximately: 120 to 280 vph exiting the northbound Major Deegan Expressway at 149th Street; 60 to 160 vph on westbound 149th Street, which includes part of the Grand Concourse traffic; 60 to 130 vph on the 145th Street Bridge; 70 to 180 vph on southbound River Avenue at 153rd Street, which includes part of the Jerome Avenue traffic; 10 to 50 vph on westbound 151st Street, which includes part of the Grand Concourse traffic; and 210 to 490 vph on southbound Exterior Street, which is fed by the Macombs Dam Bridge, the southbound Major Deegan Expressway Exits 5 and 6, and partially by Jerome Avenue.

Because destination retail trips are typically split 50 percent inbound and outbound for peak hours, Proposed Project traffic exiting the site would consist of similar volumes. However, Exterior Street traffic would be an exception; since access to the southbound Major Deegan Expressway is available (and preferable) by traveling north on Exterior Street to a direct southbound Major Deegan Expressway ramp, fewer trips would access the southbound Major Deegan Expressway by exiting onto southbound Exterior Street to travel under the Major Deegan Expressway viaduct on the service road.

Project-generated volumes further from the site on the Macombs Dam Bridge, the Grand Concourse, and Jerome and River Avenues north of 161st Street would be lower than the aforementioned totals because their increased distance from the site would diminish the concentration of traffic on those routes.

2014

Overall, in 2014 after the completion of the proposed hotel component of the Proposed Project, the proposed hotel itself would generate an increase in traffic volumes of only about one percent

when comparing the overall background traffic volume entering and exiting the primary traffic study area along its various streets and roadways (the cordon line for this calculation is the same as presented for the 2009 destination retail component)—i.e., the approximately 100 vph that would be generated by the hotel component of the Proposed Project in the peak hours would represent approximately a one percent increase overall as compared to the total volume of traffic that would be entering and exiting the study area on these roadways in 2014, including the addition of 2009 destination retail trips.

The hotel-generated traffic volumes approaching the project site would be approximately: 15 to 20 vph exiting the northbound Major Deegan Expressway at 149th Street; five to ten vph approaching the site on westbound 149th Street; fewer than five vph approaching the site on the 145th Street Bridge; fewer than five vph on southbound River Avenue at 153rd Street; and 35 to 40 vph on southbound Exterior Street, which is fed by Jerome Avenue, the Macombs Dam Bridge, and the southbound Major Deegan Expressway Exits 5 and 6. Exiting trips generated by the proposed hotel would be comparable to inbound trips.

PROGRAMMED IMPROVEMENTS, STREET CLOSURES, AND PARKING DISPLACEMENT

EXTERIOR STREET IMPROVEMENTS

Exterior Street, currently a wide, unstriped, cobblestone street with significant damage to the roadway surface, would be completely rebuilt with the Proposed Project. Upgrades include widening to two travel lanes per direction, a dedicated southbound left-turn lane into the parking garage on the east side of Exterior Street, pavement resurfacing, crosswalks at exits and entrances to parking areas, traffic signals at parking garage driveways, lane striping, signage, upgraded lighting, and aesthetically-pleasing streetscaping designs. Signal warrant analyses indicate that all three proposed traffic signals would be warranted.

RIVER AVENUE IMPROVEMENTS

River Avenue would be restriped with the Proposed Project to include crosswalks at 150th and 151st Streets and the proposed garage exit, two travel lanes per direction, shared left-turn/through lanes at 150th and 151st Streets, and streetscaping treatments. Motorists would experience improved levels of service before and after Yankee games along River Avenue due to the added capacity within the four-lane section between 149th and 151st Streets.

MAJOR DEEGAN EXPRESSWAY IMPROVEMENTS

As part of their redecking of the Major Deegan Expressway project, NYSDOT has been considering widening the northbound Exit4/149th Street off-ramp to two lanes, which would increase the capacity of the 149th Street/Exterior Street/River Avenue intersection. However, this ramp widening is unlikely to be built by NYSDOT, unless it is committed as mitigation needed by the Proposed Project, and its cost is borne by the project's developer. Therefore, it is not included as a No Build improvement, but is addressed in Chapter 23, "Mitigation."

MINOR STREET CLOSURES

Portions of three streets would be closed as a result of the Proposed Project. 150th Street would be closed between River Avenue and Exterior Street, Cromwell Avenue would be closed north of 150th Street, and 151st Street west of River Avenue would become an entrance to the Proposed

Project's parking garage. Of the street closures, 150th Street between River Avenue and Exterior Street is the only segment that currently carries traffic in excess of 50 vehicles per hour.

A moderate number of trips (between 50 to 80 vph per direction) on 150th Street currently use this street as a cut-through between Exterior Street and River Avenue; very few motorists are through-trips along westbound 150th Street to Exterior Street—only about 20 to 30 vph. 150th Street allows southbound River Avenue motorists to access northbound Exterior Street and vice-versa without waiting at the 149th Street/Exterior Street/River Avenue intersection's traffic signal. Also, westbound 149th Street motorists destined to northbound Exterior Street bypass the traffic signal by using the stop-controlled channelized right-turn lane and make a left onto 150th Street. So, as a result of the proposed street closure, approximately 40 to 50 vph per direction would likely divert from 150th Street to the 149th Street/Exterior Street/River Avenue intersection in the 2009 and 2014 Build conditions. This is accounted for in the Build analyses.

YANKEE STADIUM PARKING DISPLACEMENT

Existing Yankee Stadium parking facilities would be displaced by the Proposed Project, which is discussed in more detail in the Parking section. Two medium-sized off-street parking facilities consisting of approximately 400 spaces each, six small facilities with fewer than 250 spaces each, and on-street parking totaling approximately 200 spaces on Exterior Street lie within the project site and would be displaced. Although just over 2,000 parking spaces would be displaced, observations from a typical weeknight and Saturday Yankee game indicate that no more than 800 to 1,200 of these parking spaces are occupied and only the two medium-sized facilities are typically open.

The off-street parking facilities at the Proposed Project would total 2,610 spaces in 2009, with an additional 225 spaces added in 2014. During Yankee regular season and post-season games, the Proposed Project's parking facilities would not fill to their capacity, and excess parking would be available for displaced Yankee Stadium parking activity.

Excess parking capacity at the site would accommodate nearly all displaced Yankee-game parking. But to be conservative, approximately ten percent of the peak hour trips inbound to the existing project site parking facilities, or 55 to 65 existing hourly parking trips in the weekday and Saturday pre-game peak hours, respectively, have been assumed to divert to other parking facilities such as the Concourse Plaza shopping center where approximately 200 or more available parking spaces have been observed during Yankee games. This diversion would result in additional trips along River Avenue, the Grand Concourse, and 161st Street. In the Saturday post-game peak hour, approximately ten percent of the peak hour trips outbound from parking at the site, or about 120 hourly parking trips, have similarly been assumed to exit the Concourse Plaza shopping center facility and other facilities in the area. This is accounted for in the Build analyses and the diverted trips generally do not significantly impact traffic conditions.

TRAFFIC LEVELS OF SERVICE AND IMPACTS

The assessment of potential significant traffic impacts of the Proposed Project is based on significant impact criteria defined in the *CEQR Technical Manual*. For No Build LOS A, B, or C conditions that deteriorate to unacceptable LOS D, E, or F in the future Build condition, a significant traffic impact is defined. For future No Build LOS A, B, or C conditions that deteriorate to LOS D, mitigation to mid-LOS D (45.0 seconds of delay for signalized intersections and 30.0 seconds of delay for unsignalized intersections) is required.

For a No Build LOS D, an increase of Build delay by 5 or more seconds is considered a significant impact if the Build delay meets or exceeds 45.0 seconds. For a No Build LOS E, the threshold is a 4-second increase in Build delay; for a No Build LOS F, a 3-second increase in Build delay is significant. However, if a No Build LOS F condition already has delays in excess of 120 seconds, an increase in Build delay of more than 1 second is considered significant, unless the proposed action would generate fewer than 5 vehicles through that intersection in the peak hour (signalized intersections) and fewer than 5 passenger-car-equivalents (PCEs) in the peak along the critical approach (unsignalized intersections). In addition, for unsignalized intersections, for the minor street to generate a significant impact, 90 PCEs must be identified in the Build condition in any peak hour.

2009

2009 Build traffic volumes were developed by adding 2009 project-generated volumes to 2009 No Build volumes. 2009 traffic levels of service were then evaluated and compared to levels of service without the Proposed Project in order to determine where significant impacts would occur. Table 16-13 provides a summary comparison of 2009 No Build and Build conditions; a detailed discussion of levels of service follows this table. It should be noted that three more signalized intersections and three more unsignalized intersections are evaluated in the Build condition since all access points to the project's parking and service facilities have been included (the number of traffic movements has also increased from 64 to 77 under the Build conditions).

- In the non-game weekday midday peak hour, the same number of signalized intersections (four) would operate at overall unacceptable LOS E or F in the Build condition when compared to the No Build condition. Four additional traffic movements, or 20 overall, would operate at LOS E or F conditions, and five intersections would be significantly impacted.
- In the non-game weekday PM peak hour, four additional signalized intersections, or a total of eight overall, would operate at overall LOS E or F in the Build condition when compared to the No Build condition. Eleven additional traffic movements, or 28 overall, would operate at LOS E or F conditions, and 10 intersections would be significantly impacted.
- In the non-game Saturday midday peak hour, one additional signalized intersection, or three overall, would operate at overall LOS E or F when compared to the No Build condition. Seven additional traffic movements, or 19 overall, would operate at LOS E or F conditions, and seven intersections would be significantly impacted.
- In the pre-game weekday PM peak hour, one additional signalized intersection, or a total of five overall, would operate at overall LOS E or F in the Build condition when compared to the No Build condition. Three additional traffic movements, or 22 overall, would operate at LOS E or F conditions, and eight intersections would be significantly impacted.
- In the pre-game Saturday midday peak hour, three additional signalized intersections, or a total of five overall, would operate at overall LOS E or F in the Build condition when compared to the No Build condition. Two additional traffic movements, or 17 overall, would operate at LOS E or F conditions, and eight intersections would be significantly impacted.
- In the post-game Saturday PM peak hour, one additional signalized intersection, or a total of six overall, would operate at overall LOS E or F in the Build condition when compared to the No Build condition. Four additional traffic movements, or 30 overall, would operate at LOS E or F conditions, and 10 intersections would be significantly impacted.

- Four of the five unsignalized intersections analyzed would operate at acceptable levels of service during each of the traffic analysis hours. One intersection would operate at unacceptable LOS D, E, or F in four of the six traffic analysis hours.

Table 16-13

2009 No Build versus 2009 Build Traffic Level of Service Summary

Signalized Intersections (13 Total in No Build and 16 Total in Build)	No Build			Build		
	No Build Non-game Weekday Midday	No Build Non-game Weekday PM	No Build Non-game Saturday Midday	Build Non- game Weekday Midday	Build Non- game Weekday PM	Build Non- game Saturday Midday
Without Yankee Game						
Overall Intersection LOS A/B	4	3	5	7	3	4
Overall Intersection LOS C	3	3	3	2	3	6
Overall Intersection LOS D	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	2	<u>3</u>
Overall Intersection LOS E/F	4	4	2	4	8	3
Number of Signalized Intersection Movements at LOS E or F (of approximately <u>64</u> total in No Build and <u>77</u> total in Build)	<u>16</u>	<u>17</u>	<u>12</u>	<u>20</u>	<u>28</u>	<u>19</u>
	No Build Pre-game Weekday PM	No Build Pre-game Saturday Midday	No Build Post-game Saturday PM	Build Pre- game Weekday PM	Build Pre- game Saturday Midday	Build Post- game Saturday PM
With Yankee Game						
Overall Intersection LOS A/B	3	2	2	3	2	3
Overall Intersection LOS C	4	7	3	6	5	3
Overall Intersection LOS D	2	<u>2</u>	<u>3</u>	2	4	<u>4</u>
Overall Intersection LOS E/F	4	2	5	5	5	<u>6</u>
Number of Signalized Intersection Movements at LOS E or F (of approximately <u>64</u> total in No Build and <u>77</u> total in Build)	<u>19</u>	<u>15</u>	<u>26</u>	<u>22</u>	<u>17</u>	<u>30</u>
Note:	The <u>five</u> unsignalized intersections analyzed (the east leg of East 138th Street/Grand Concourse, Exterior Street/South "Pocket" Parking Lot, Exterior Street/North Truck Access, Exterior Street/South Truck Access) operate at LOS A, B or C, with the exception of East 150th Street/River Avenue, which would operate in the non-game weekday PM peak hour at LOS D, in the pre-game weekday PM and pre-game Saturday peak hours at LOS E or F, <u>and in the post-game Saturday peak hour at LOS D.</u>					

Table 16-14 provides an overview of where and in what time period significant impacts would occur in the 2009 Build condition.

Another representation of 2009 Build levels of service can be seen in Figures 16-22 through 16-27, and mitigation alternatives for significantly-impacted locations are discussed in Chapter 23, "Mitigation."

2014

2014 Build year traffic volumes were developed by adding 2009 and 2014 project-generated volumes to 2014 No Build volumes. Year 2014 traffic levels of service were then evaluated and compared to levels of service without the Proposed Project in order to determine where significant impacts would occur. Table 16-15 provides a summary comparison of 2014 No Build and Build conditions; a detailed discussion of levels of service follows this table. It should be noted that three more signalized intersections and three more unsignalized intersections are evaluated in the Build condition since all access points to the project's parking and service

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facilities have been included (the number of traffic movements has also increased from 64 to 77 under the Build conditions).

**Table 16-14
2009 Build Condition Significant Impact Summary**

Intersections	Without Yankee Game			With Yankee Game		
	Non-game Weekday Midday	Non-game Weekday PM	Non-game Saturday Midday	Pre-game Weekday PM	Pre-game Saturday Midday	Post-game Saturday PM
East 138th Street at the Grand Concourse						
East 138th Street at the Grand Concourse (unsignalized)						
East 149th Street at the Grand Concourse	●	●	●	●	●	●
East 149th Street at Exterior Street/River Avenue/northbound Major Deegan Expressway	●	●	●	●	●	●
145th Street Bridge approach at Lenox Avenue		●	●	●		●
East 150th Street at Exterior Street/Cromwell Avenue (free-flow conditions in 2009 Build)						
East 150th Street at River Avenue/Bronx Terminal Market Southern "Pocket" Parking Lot				●	●	●
East 151st Street at River Avenue		●				●
East 153rd Street at River Avenue		●		●	●	●
East 157th Street at River Avenue						
East 161st Street at River Avenue	●	●	●		●	●
East 161st Street at the Grand Concourse	●	●	●	●	●	●
East 161st Street at Jerome Avenue/Woodycrest Avenue		●	●	●		
East 157th Street at the northbound Major Deegan Expressway service road		●			●	
Jerome Avenue at Ogden Avenue						●
West 155th Street at Macombs Place/Macombs Dam Bridge approach	●	●	●	●	●	●
Notes: ● Means the intersection would be significantly impacted. The six new study intersections formed by the Proposed Project are not shown; they would be designed to operate at acceptable levels of service.						

- In the non-game weekday midday peak hour, the same number of signalized intersections (four) would operate at overall unacceptable LOS E or F in the Build condition when compared to the No Build condition. One additional traffic movement, or 22 overall, would operate at LOS E or F conditions, and five intersections would be significantly impacted.
- In the non-game weekday PM peak hour, four additional signalized intersections, or a total of eight overall, would operate at overall LOS E or F in the Build condition when compared to the No Build condition. Seven additional traffic movements, or 29 overall, would operate at LOS E or F conditions, and 10 intersections would be significantly impacted.
- In the non-game Saturday midday peak hour, one additional signalized intersection, or three overall, would operate at overall LOS E or F when compared to the No Build condition.

Four additional traffic movements, or 20 overall, would operate at LOS E or F conditions, and seven intersections would be significantly impacted.

Table 16-15

2014 No Build versus Build Traffic Level of Service Summary

(13 Total in No Build and 16 Total in Build)	No Build			Build		
	No Build Non-game Weekday Midday	No Build Non-game Weekday PM	No Build Non-game Saturday Midday	Build Non-game Weekday Midday	Build Non-game Weekday PM	Build Non-game Saturday Midday
Without Yankee Game						
Overall Intersection LOS A/B	4	3	5	6	2	4
Overall Intersection LOS C	3	3	<u>3</u>	<u>3</u>	<u>3</u>	<u>5</u>
Overall Intersection LOS D	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>
Overall Intersection LOS E/F	<u>4</u>	<u>4</u>	2	<u>4</u>	<u>8</u>	3
Number of Signalized Intersection Movements at LOS E or F (of approximately <u>64</u> total in No Build and <u>77</u> total in Build)	<u>21</u>	<u>22</u>	<u>16</u>	<u>22</u>	<u>29</u>	<u>20</u>
	No Build Pre-game Weekday PM	No Build Pre-game Saturday Midday	No Build Post-game Saturday PM	Build Pre-game Weekday PM	Build Pre-game Saturday Midday	Build Post-game Saturday PM
With Yankee Game						
Overall Intersection LOS A/B	3	2	2	3	2	<u>2</u>
Overall Intersection LOS C	4	6	<u>3</u>	5	5	<u>4</u>
Overall Intersection LOS D	2	<u>3</u>	<u>2</u>	3	3	<u>4</u>
Overall Intersection LOS E/F	4	<u>2</u>	6	5	6	<u>6</u>
Number of Signalized Intersection Movements at LOS E or F (of approximately <u>64</u> total in No Build and <u>77</u> total in Build)	<u>21</u>	<u>17</u>	<u>27</u>	<u>24</u>	18	<u>31</u>
Note:	The <u>five</u> unsignalized intersections analyzed (the east leg of East 138th Street/Grand Concourse, Exterior Street/South "Pocket" Parking Lot, Exterior Street/North Truck Access, Exterior Street/South Truck Access) operate at LOS A, B, or C, with the exception of East 150th Street/River Avenue, which would operate in the non-game weekday PM peak hour at LOS D, and in the pre-game weekday PM and pre-game and post-game Saturday peak hours at LOS E or F.					

- In the pre-game weekday PM peak hour, one additional signalized intersection, or a total of five overall, would operate at overall LOS E or F in the Build condition when compared to the No Build condition. Three additional traffic movements, or 24 overall, would operate at LOS E or F conditions, and eight intersections would be significantly impacted.
- In the pre-game Saturday midday peak hour, four additional signalized intersections, or a total of six overall, would operate at overall LOS E or F in the Build condition when compared to the No Build condition. One additional traffic movement, or 18 overall, would operate at LOS E or F conditions, and nine intersections would be significantly impacted.
- In the post-game Saturday PM peak hour, the same number of signalized intersections would operate at overall LOS E or F in the Build condition when compared to the No Build condition. Four additional traffic movements, or 31 overall, would operate at LOS E or F conditions, and nine intersections would be significantly impacted.

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- Four of the five unsignalized intersections analyzed would operate at acceptable levels of service during each of the traffic analysis hours. One intersection would operate at unacceptable LOS D, E, or F in four of the six traffic analysis hours.

Table 16-16 shows where and in what time period significant impacts would occur in the 2014 Build condition.

Table 16-16
2014 Build Condition Significant Impact Summary

Intersections	Without Yankee Game			With Yankee Game		
	Non-game Weekday Midday	Non-game Weekday PM	Non-game Saturday Midday	Pre-game Weekday PM	Pre-game Saturday Midday	Post-game Saturday PM
East 138th Street at the Grand Concourse						
East 138th Street at the Grand Concourse (unsignalized)						
East 149th Street at the Grand Concourse	•	•	•	•	•	•
East 149th Street at Exterior Street/River Avenue/northbound Major Deegan Expressway	•	•	•	•	•	•
145th Street Bridge approach at Lenox Avenue		•	•	•		•
East 150th Street at Exterior Street/Cromwell Avenue (free-flow conditions in 2009 Build)						
East 150th Street at River Avenue/Bronx Terminal Market Southern "Pocket" Parking Lot				•	•	•
East 151st Street at River Avenue		•			•	•
East 153rd Street at River Avenue		•		•	•	•
East 157th Street at River Avenue						
East 161st Street at River Avenue	•	•	•		•	•
East 161st Street at the Grand Concourse	•	•	•	•		•
East 161st Street at Jerome Avenue/Woodycrest Avenue		•	•	•	•	
East 157th Street at the northbound Major Deegan Expressway service road		•	•	•	•	
Jerome Avenue at Ogden Avenue						•
West 155th Street at Macombs Place/Macombs Dam Bridge approach	•	•	•	•	•	•

Notes: • Means the intersection would be significantly impacted.
The six new study intersections formed by the proposed development are not shown; they would be designed to operate at acceptable levels of service.

Another representation of 2014 Build levels of service can be seen in Figures 16-28 through 16-33, and mitigation alternatives for significantly-impacted locations are discussed in Chapter 23, “Mitigation.”

PARKING

The proposed development of the project site would result in the addition of 2,610 parking spaces in 2009 with 225 more in 2014 (see Figure 16-34). It is anticipated that these parking spaces will have a payment structure with lower fees for one, two, and three hour parking than for parked cars staying more than three hours, so that fees for the longer parking duration would be commensurate with fees charged for Yankee Stadium parking lots accommodating fans on game days. A similar type of fee payment structure is used today at the Concourse Plaza Shopping Center on 161st Street.

The analyses have concluded that all site-generated traffic would be accommodated by the Proposed Project’s parking facilities. However, eight off-street parking facilities and on-street parking along Exterior Street currently used by Yankee fans would be displaced when construction begins and become permanently displaced upon completion of the proposed development. According to information provided by the New York Yankees through BTM Development Partners, the displaced facilities include:

- Bronx House of Detention parking garage—shown as Lot 12 on Figure 16-9—is accessed via the west side of River Avenue between 150th and 151st Streets, and has a capacity of approximately 470 spaces;
- Northern Bronx Terminal Market parking lot—shown as Lot 13D on Figure 16-9—is accessed via the east side of Exterior Street just south of the northbound Major Deegan Expressway service road on-ramp, provides direct access to the Metro-North Rail Road overpass, and has a capacity of approximately 296 spaces;
- Middle Bronx Terminal Market parking lot—which is not shown on Yankee Stadium parking diagrams and was not open during weekday or Saturday off-street parking observations—is accessed via the east side of Exterior Street just south of the 153rd Street flyover ramp, which is overhead, and has a capacity of approximately 265 spaces;
- Southern Bronx Terminal Market parking lot—which is not shown on Yankee Stadium parking diagrams and was not open during weekday or Saturday off-street parking observations—is accessed via the east side of Exterior Street between 150th Street and the middle Bronx Terminal Market parking lot, and has a capacity of approximately 120 spaces;
- Northern Harlem River parking lot—which is not shown on Yankee Stadium parking diagrams and was not open during weekday or Saturday off-street parking observations—is accessed via the west side of Exterior Street just south of the northbound Major Deegan service road on-ramp, and has a capacity of approximately 235 spaces;
- Northern Harlem River overflow parking lot—which is not shown on Yankee Stadium parking diagrams and was not open during weekday or Saturday off-street parking observations—is located west of and accessed by going through the northern Harlem River parking lot, and has a capacity of approximately 135 spaces;
- Middle Harlem River parking lot—which is not shown on Yankee Stadium parking diagrams and was not open during weekday or Saturday off-street parking observations—is

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accessed via the west side of Exterior Street between the northern Harlem River lot and 150th Street, and has a capacity of approximately 235 spaces;

- Southern Harlem River parking lot—which is not shown on Yankee Stadium parking diagrams and was not open during weekday or Saturday off-street parking observations—is accessed via the west side of Exterior Street just north of 150th Street, and has a capacity of approximately 130 spaces; and
- Exterior Street on-street parking—which consists of unstriped, perpendicular parking along both sides of Exterior Street between 150th Street and the Major Deegan Expressway northbound on-ramp—has a capacity of approximately 210 spaces (a limited number of new parking spaces would be provided on Exterior Street by the Proposed Project).

Although approximately 1,885 striped parking spaces in off-street facilities and up to 210 on-street spaces on Exterior Street would be displaced, observations from the 2004 season indicate that during typical Yankee games, no more than 800 to 1,200 of these parking spaces are occupied, and only the Bronx House of Detention and northern Bronx Terminal Market parking facilities are typically open.

Excess parking capacity at the project site would accommodate nearly all displaced Yankee-game parking. However, to be conservative, 20 percent of existing parking trips have been assumed to divert to available on-street parking between River Avenue and the Grand Concourse, and to an off-street parking facility at the Concourse Plaza Shopping Center in the weekday and Saturday pre-game and Saturday post-game peak hours, as stated in the Build analyses. The remaining 80 percent of Yankee-game parking has been assigned to the Proposed Project's parking facilities.

Using parking duration observations and a temporal distribution developed from surveys and traffic counts at Queens Place in Elmhurst, New York, a parking accumulation table was prepared for the Proposed Project on a weekday and Saturday with a Yankee game. Table 16-17 shows the project site's projected parking accumulation and Yankee-game parking by hour on a typical weekday and Saturday Yankee game day in 2009.

As shown in Table 16-17, on a typical weekday during the Yankee baseball season, the parking need would peak from approximately 5 to 8 PM with about 65 percent of the site's facilities occupied by shoppers and Yankee-game parking. On a typical Saturday during the Yankee season, the parking facilities would peak at approximately 85 percent occupancy by shoppers and Yankee-game parking between 2 and 3 PM. The parking facilities would be sized for the peak shopping holiday season demand of approximately 2,610 spaces in December, but parking would be available on Yankee game days, which would accommodate Yankee fans.

Table 16-18 shows the Bronx Terminal Market site's projected parking accumulation by hour on a typical weekday and Saturday in 2009 without a Yankee game. Similar to the game day parking accumulation table, the non-game day accumulation by hour is computed from a calculation using trips into the parking facilities and their parking duration. As can be seen in the table, on a typical weekday without a Yankee game, the destination retail parking need would peak at approximately 6 to 7 PM with about 44 percent of the site's facilities occupied. On a typical Saturday without a Yankee game, the parking facilities would peak at approximately 64 percent occupancy between 2 and 3 PM.

Table 16-17

2009 Game Day Parking Accumulation for Destination Retail and Yankee Game

Time	Weekday			Saturday		
	In	Out	Accumulation	In	Out	Accumulation
12:00–1:00 AM	0	0	0	0	0	0
1:00–2:00 AM	0	0	0	0	0	0
2:00–3:00 AM	0	0	0	0	0	0
3:00–4:00 AM	0	0	0	0	0	0
4:00–5:00 AM	0	0	0	0	0	0
5:00–6:00 AM	0	0	0	0	0	0
6:00–7:00 AM	0	0	0	0	0	0
7:00–8:00 AM	0	0	0	0	0	0
8:00–9:00 AM	18	0	18	36	0	36
9:00–10:00 AM	38	8	48	240	16	260
10:00–11:00 AM	134	24	158	398	122	536
11:00 AM–12:00 PM	324	77	404	1,140	357	1,318
12:00–1:00 PM	475	203	676	1,284	770	1,832
1:00–2:00 PM	444	413	707	1,083	738	2,178
2:00–3:00 PM	480	426	761	862	831	2,208
3:00–4:00 PM	536	449	848	702	974	1,936
4:00–5:00 PM	777	486	1,138	593	1,140	1,389
5:00–6:00 PM	1,222	807	1,553	648	993	1,044
6:00–7:00 PM	881	740	1,694	865	750	1,159
7:00–8:00 PM	754	754	1,694	874	725	1,307
8:00–9:00 PM	254	673	1,275	437	819	928
9:00–10:00 PM	48	565	758	75	648	353
10:00–11:00 PM	10	643	125	13	284	82
11:00 PM–12:00 AM	0	125	0	0	82	0

Note: The total parking capacity would be approximately 2,610 spaces.

Table 16-18

2009 Non-Game Day Parking Accumulation for Destination Retail Only

Time	Weekday			Saturday		
	In	Out	Accumulation	In	Out	Accumulation
12:00–1:00 AM	0	0	0	0	0	0
1:00–2:00 AM	0	0	0	0	0	0
2:00–3:00 AM	0	0	0	0	0	0
3:00–4:00 AM	0	0	0	0	0	0
4:00–5:00 AM	0	0	0	0	0	0
5:00–6:00 AM	0	0	0	0	0	0
6:00–7:00 AM	0	0	0	0	0	0
7:00–8:00 AM	0	0	0	0	0	0
8:00–9:00 AM	17	0	17	34	0	34
9:00–10:00 AM	36	8	45	228	15	247
10:00–11:00 AM	127	23	150	296	116	427
11:00 AM–12:00 PM	307	73	384	568	228	767
12:00–1:00 PM	451	193	642	990	398	1,359
1:00–2:00 PM	444	413	673	995	708	1,646
2:00–3:00 PM	456	414	715	1,050	1,021	1,675
3:00–4:00 PM	502	436	781	691	984	1,382
4:00–5:00 PM	750	464	1,067	660	855	1,187
5:00–6:00 PM	963	896	1,134	589	825	952
6:00–7:00 PM	812	795	1,151	805	790	967
7:00–8:00 PM	527	838	840	790	782	975
8:00–9:00 PM	226	577	489	389	753	610
9:00–10:00 PM	46	333	201	71	422	259
10:00–11:00 PM	10	163	47	12	199	73
11:00 PM–12:00 AM	0	47	0	0	73	0

Note: The total parking capacity would be approximately 2,610 spaces.

The proposed hotel, which would be completed by 2014, would include a 225-space parking lot. As shown in Table 16-19, parking accumulation calculations have indicated that the planned parking lot size would be sufficient to accommodate peak weekday and weekend parking hourly accumulations of up to 204 vehicles at 5-6 PM and 122 vehicles at 2-3 PM, respectively. To be conservative, the traffic and parking analyses have assumed that existing Yankee Stadium Lot 13D, where the proposed hotel would be located, would be displaced in 2009. Hence, no additional displacement of Yankee stadium parking would occur between 2009 and 2014.

Table 16-19
2014 Non-Game Day Parking Accumulation for Hotel Only

Time	Weekday			Saturday		
	In	Out	Accumulation	In	Out	Accumulation
12:00–1:00 AM	0	0	140	0	0	100
1:00–2:00 AM	0	0	140	0	0	100
2:00–3:00 AM	0	0	140	0	0	100
3:00–4:00 AM	0	0	140	0	0	100
4:00–5:00 AM	0	0	140	0	0	100
5:00–6:00 AM	0	0	140	0	0	100
6:00–7:00 AM	4	13	131	0	0	100
7:00–8:00 AM	16	30	118	0	0	100
8:00–9:00 AM	41	50	109	1	1	100
9:00–10:00 AM	38	38	109	10	4	106
10:00–11:00 AM	27	27	109	13	13	106
11:00 AM–12:00 PM	28	22	114	25	28	103
12:00–1:00 PM	40	27	128	43	37	109
1:00–2:00 PM	50	22	156	40	34	114
2:00–3:00 PM	41	28	170	51	43	122
3:00–4:00 PM	30	25	175	28	34	116
4:00–5:00 PM	45	30	190	29	32	113
5:00–6:00 PM	54	40	204	26	31	108
6:00–7:00 PM	36	52	188	35	30	112
7:00–8:00 PM	33	54	167	34	34	112
8:00–9:00 PM	20	41	147	17	26	103
9:00–10:00 PM	4	9	142	3	5	101
10:00–11:00 PM	1	3	140	1	1	100
11:00 PM–12:00 AM	0	0	140	0	0	100

Note: Assumes 140 overnight parking weekday and 100 overnight parking Saturday. The hotel parking capacity would be approximately 225 spaces. Game day parking accumulation would be the same as Non-game parking.

E. THE MAJOR DEEGAN EXPRESSWAY

Because of its importance to regional travel and proximity to the project site, supplementary analyses were performed to assess the potential impacts of the Proposed Project on the Major Deegan Expressway. The key northbound and southbound Major Deegan Expressway segments in the vicinity of on-ramps and off-ramps (influence area) were analyzed, including the weaving segment on the northbound Major Deegan Expressway between the 138th Street on-ramp and Exit 4/149th Street off-ramp, and the southbound Major Deegan Expressway diverges at Exit 5/Macombs Dam Bridge and Exit 6/Bronx Terminal Market. These segments would carry significant volumes of site-generated traffic during peak hours to the project site.

After initially analyzing these segments using Highway Capacity Software, it was determined that the results did not adequately mirror the existing conditions collected during the speed-and-delay studies on the Major Deegan Expressway. It is beyond the scope of the 2000 HCM to

analyze a highway section that is operating at over-saturated conditions. A simulation of the Major Deegan Expressway corridor using the CORSIM model was used instead, because it better replicates existing and projected future conditions in the study area. The ability to account for traffic conditions that influence the immediate study area is crucial when modeling traffic conditions before and after Yankee games, and during any peak hour when delays on the northbound Major Deegan Expressway result from traffic congestion entering the Cross Bronx Expressway interchange north of the site.

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

- LOS A describes operations with very low densities (i.e., 0–10 pc/mi/ln) and high free flow speeds.
- LOS B describes operations with fairly low densities (i.e., 10.1–20 pc/mi/ln) and moderate to high free flow speeds.
- LOS C describes operations with moderate densities (i.e., 20.1–28 pc/mi/ln) and moderate free flow speeds.
- LOS D describes operations with moderate to high densities (i.e., 28.1–35 pc/mi/ln) and moderate to low free flow speeds. A mid-LOS D density of 30 pc/mi/ln is considered the high range of acceptable density. Densities greater than 30 pc/mi/ln are unacceptable but are commonplace on highways in New York City.
- LOS E describes operations with high densities (i.e., 35.1 and higher pc/mi/ln) and low free flow speeds. 45 pc/mi/ln is considered the maximum density for sustained flows at capacity on a typical freeway. Queuing can begin at densities higher than this.
- LOS F describes operations with very high densities and very low free flow speeds. Queuing is common within LOS F, which leads to failure conditions and congestion.

According to the *CEQR Technical Manual*, highway or ramp sections being analyzed—including mainline capacity sections, weaving areas, and ramp junctions—should not deteriorate more than one-half of a level of service between No Build and Build conditions when No Build level of service is in the D, E, or F range.

Additional discussions with NYCDCP staff have resulted in the following significant impact criteria, which will be used in the Build condition sections to assess potential impacts of the proposed development on the Major Deegan Expressway:

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

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1.75 pc/mi/ln. Therefore, an increase in the projected density of 2 pc/mi/ln or more between No Build and Build should be considered a significant impact.

- For No Build LOS E to Build LOS F: The same criteria as No Build LOS D to Build LOS E applies.

The northbound Major Deegan Expressway would be significantly impacted in all peak hours in 2009 and 2014 within the weaving area between the 138th Street on-ramp and 149th Street off-ramp.

The southbound Major Deegan would be significantly impacted just before the Bronx Terminal Market off-ramp in the non-game Saturday midday peak hour, and all three Yankee game day peak hours. The highway would not be impacted in the area of the Macombs Dam Bridge off-ramp in any peak hour.

NORTHBOUND MAJOR DEEGAN EXPRESSWAY

EXISTING CONDITIONS

Traffic volumes on the Major Deegan mainline between the 138th Street on-ramp and 149th Street off-ramp range from 3,630 to 4,410 vph on non-game days and 1,780 to 4,640 vph on game days. Existing traffic volumes exiting the Major Deegan Expressway at the 149th Street off-ramp range from approximately 380 to 500 vph on non-game days and 280 to 660 vph on game days, and range from approximately 8 to 20 percent of the total northbound mainline volume.

Table 16-20 shows existing levels of service, speeds and densities for the northbound Major Deegan Expressway. As shown in Table 16-20, existing conditions just before the 149th Street off-ramp are only at acceptable LOS C conditions in the non-game weekday midday peak hour; all other peak periods operate at unacceptable LOS E or F conditions. Recurring delays related to the Cross Bronx Expressway interchange further north frequently cause queues to extend into this area of the northbound Major Deegan Expressway.

NO BUILD CONDITIONS

2009

Traffic volumes on the Major Deegan Expressway mainline between the 138th Street on-ramp and the 149th Street off-ramp would grow at a rate of approximately 2.5 percent between 2004 and 2009. The growth would increase traffic volumes by about 45 to 115 vph on the mainline and 10 to 20 vph on the 149th Street off-ramp.

Table 16-21 shows 2009 No Build levels of service, speeds and densities for the northbound Major Deegan Expressway.

2009 No Build conditions just before the 149th Street off-ramp would operate at acceptable LOS C conditions in the non-game weekday midday peak hour; all other peak periods would operate at unacceptable LOS F conditions. Compared to the 2004 existing conditions, the levels of service just before the 149th Street off-ramp would be the same, except in the weekday pre-game peak hour, which would deteriorate from LOS E to F. Without design improvements or major new design initiatives at the Cross Bronx Expressway interchange, increased queues would result, causing higher densities and lower speeds in all peak hours except the non-game weekday midday peak hour.

Table 16-20
Existing Conditions on the Northbound Major Deegan Expressway

Approach	Existing Non-game Weekday Midday			Existing Non-game Weekday PM			Existing Non-game Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
South of East 138th Street On-Ramp Merge	48.4	22.1	C	28.8	50.8	F	31.0	43.0	E
North of East 138th Street On-Ramp Merge	45.7	23.3	C	31.5	44.5	E	32.5	39.8	E
Between East 138th On-Ramp and 149th Off-Ramp	48.3	25.0	C	31.0	52.5	F	33.2	45.5	F
South of East 149th Street Off-Ramp Diverge	47.7	25.4	C	29.7	54.7	F	33.1	45.6	F
North of East 149th Street Off-Ramp Diverge	48.6	22.7	C	33.1	44.5	E	33.2	42.1	E
Approach	Existing Pre-game Weekday PM			Existing Pre-game Saturday Midday			Existing Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
South of East 138th Street On-Ramp Merge	52.2	25.3	C	37.6	35.8	E	8.4	55.4	F
North of East 138th Street On-Ramp Merge	46.3	28.6	D	36.7	34.5	D	3.1	159.6	F
Between East 138th On-Ramp and 149th Off-Ramp	47.7	32.4	D	26.4	55.9	F	3.0	192.4	F
South of East 149th Street Off-Ramp Diverge	34.8	44.4	E	19.1	77.3	F	2.9	197.3	F
North of East 149th Street Off-Ramp Diverge	49.8	27.2	D	37.7	32.6	D	2.7	184.6	F

Table 16-21

2009 No Build Conditions on the Northbound Major Deegan Expressway

Approach	No Build Non-game Weekday Midday			No Build Non-game Weekday PM			No Build Non-game Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
South of East 138th Street On-Ramp Merge	48.3	22.7	C	22.1	68.0	F	31.0	43.5	E
North of East 138th Street On-Ramp Merge	45.7	23.3	C	30.2	47.6	F	32.5	40.7	E
Between East 138th On-Ramp and 149th Off-Ramp	48.3	25.7	C	31.0	52.5	F	33.0	46.7	F
South of East 149th Street Off-Ramp Diverge	47.7	25.9	C	29.7	54.7	F	33.1	46.6	F
North of East 149th Street Off-Ramp Diverge	48.6	23.3	C	33.1	46.3	F	33.2	43.0	E
Approach	No Build Pre-game Weekday PM			No Build Pre-game Saturday Midday			No Build Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
South of East 138th Street On-Ramp Merge	48.0	28.1	D	37.2	37.1	E	7.0	67.0	F
North of East 138th Street On-Ramp Merge	35.3	38.2	E	27.9	46.6	F	3.0	166.9	F
Between East 138th On-Ramp and 149th Off-Ramp	33.0	47.5	F	20.1	75.3	F	3.0	193.9	F
South of East 149th Street Off-Ramp Diverge	29.0	53.8	F	16.7	90.5	F	2.9	202.6	F
North of East 149th Street Off-Ramp Diverge	47.2	29.3	D	37.3	33.8	D	2.7	189.8	F

Table 16-22 shows 2014 No Build levels of service, speeds and densities for the northbound Major Deegan Expressway.

Table 16-22

2014 No Build Conditions on the Northbound Major Deegan Expressway

Approach	No Build Non-game Weekday Midday			No Build Non-game Weekday PM			No Build Non-game Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
South of East 138th Street On-Ramp Merge	48.1	23.4	C	21.1	72.9	F	28.5	49.1	F
North of East 138th Street On-Ramp Merge	45.4	24.0	C	29.8	49.4	F	32.0	42.2	E
Between East 138th On-Ramp and 149th Off-Ramp	48.1	26.5	D	31.0	52.5	F	33.0	47.6	F
South of East 149th Street Off-Ramp Diverge	46.8	27.2	D	29.7	54.7	F	33.1	47.5	F
North of East 149th Street Off-Ramp Diverge	48.3	23.9	C	33.1	46.3	F	33.2	44.6	E
Approach	No Build Pre-game Weekday PM			No Build Pre-game Saturday Midday			No Build Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
South of East 138th Street On-Ramp Merge	24.1	56.0	F	17.6	79.4	F	5.0	96.5	F
North of East 138th Street On-Ramp Merge	21.6	62.7	F	16.2	80.8	F	3.0	171.4	F
Between East 138th On-Ramp and 149th Off-Ramp	23.1	68.0	F	15.6	97.4	F	3.0	199.9	F
South of East 149th Street Off-Ramp Diverge	22.1	70.9	F	15.4	98.3	F	2.9	203.3	F
North of East 149th Street Off-Ramp Diverge	44.3	31.0	D	36.8	34.1	D	2.7	190.4	F

2014

Traffic volumes on the Major Deegan Expressway mainline between the 138th Street on-ramp and 149th Street off-ramp would grow at a rate of approximately 5.1 percent between 2004 and 2014. The growth would increase traffic volumes by about 90 to 235 vph on the mainline and 15 to 45 vph on the 149th Street off-ramp. 2014 No Build conditions just before the 149th Street off-ramp would operate at acceptable LOS D conditions in the non-game weekday midday peak hour; all other peak periods would operate at unacceptable LOS F conditions. Compared to the 2004 existing conditions, the levels of service just before the 149th Street off-ramp would be the same, except in the weekday pre-game peak hour, which would deteriorate from LOS E to F. Without major design initiatives to improve the Cross Bronx Expressway interchange would result in higher densities and lower speeds in all peak hours except the non-game weekday midday peak hour.

BUILD CONDITIONS

2009

Traffic generated by the Proposed Project would generally enter the northbound Major Deegan Expressway further south of the study area, appear as through traffic at the 138th Street on-ramp, and exit at the 149th Street off-ramp.

Project-generated traffic volumes exiting the northbound Major Deegan Expressway destined to the project site in 2009 would range from approximately 115 to 265 vph during non-game peak hours and between 150 and 225 vph during Yankee game day peak hours. The additional project-generated exiting volumes at 149th Street represent approximately three to eight percent of the total northbound Major Deegan Expressway traffic.

Table 16-23 shows projected 2009 Build levels of service, speeds, and densities for the northbound Major Deegan Expressway.

During the non-game weekday midday peak hour, conditions just before the 149th Street off-ramp would deteriorate from LOS C in the 2009 No Build condition to LOS F in the 2009 Build condition; all other peak hours would continue to operate at LOS F conditions with additional queuing, slower speeds, and higher densities. In all peak hours, queuing would occur along the 149th Street off-ramp onto the right lane of the Major Deegan Expressway. Motorists would react to the right lane queues by slowing in the center lane, and left lane speeds would decrease somewhat as well. In the post-game Saturday peak hour conditions, speeds would continue to be below 5 mph within the segment, and queuing would occur in all three travel lanes.

NYS DOT is considering widening the 149th Street off-ramp to two lanes as part of the Major Deegan Expressway redecking project. This improvement would mitigate the 2009 Build levels of service for all peak hours to the 2009 No Build conditions just before the 149th Street off-ramp. Mitigation measures are discussed in Chapter 23, "Mitigation."

Table 16-23
2009 Build Conditions on the Northbound Major Deegan Expressway

Approach	Build Non-game Weekday MIDDAY			Build Non-game Weekday PM			Build Non-game Saturday MIDDAY		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
South of East 138th Street On-Ramp Merge	20.3	55.4	F	8.5	144.0	F	8.4	143.6	F
North of East 138th Street On-Ramp Merge	14.7	73.4	F	9.1	131.3	F	8.5	135.4	F
Between East 138th On-Ramp and 149th Off-Ramp	14.9	83.8	F	11.6	120.6	F	10.9	123.8	F
South of East 149th Street Off-Ramp Diverge	14.3	87.4	F	12.1	115.2	F	11.4	117.7	F
North of East 149th Street Off-Ramp Diverge	45.6	24.8	C	33.1	37.5	E	32.8	37.0	E
Approach	Build Pre-game Weekday PM			Build Pre-game Saturday MIDDAY			Build Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
South of East 138th Street On-Ramp Merge	8.0	148.8	F	10.8	121.1	F	5.0	104.4	F
North of East 138th Street On-Ramp Merge	8.1	141.4	F	10.4	117.8	F	2.8	186.6	F
Between East 138th On-Ramp and 149th Off-Ramp	10.3	129.5	F	12.1	117.7	F	3.1	199.6	F
South of East 149th Street Off-Ramp Diverge	12.0	110.7	F	13.4	106.0	F	3.1	199.6	F
North of East 149th Street Off-Ramp Diverge	41.2	27.7	C	36.5	32.2	D	2.7	179.7	F

2014

Traffic generated by the Proposed Project would approach the study area similar to the 2009 Build conditions. Project-generated traffic volumes exiting the northbound Major Deegan Expressway destined to the site in 2014 would range from approximately 130 to 285 vph during non-game peak hours and between 165 and 240 vph during Yankee game day peak hours. The additional project-generated exiting volumes at 149th Street represent approximately three to nine percent of the total northbound Major Deegan Expressway traffic.

Table 16-24 shows 2014 Build levels of service, speeds, and densities for the northbound Major Deegan Expressway.

Table 16-24

2014 Build Conditions on the Northbound Major Deegan Expressway

Approach	Build Non-game Weekday Midday			Build Non-game Weekday PM			Build Non-game Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
South of East 138th Street On-Ramp Merge	16.7	69.2	F	8.4	144.0	F	8.2	145.7	F
North of East 138th Street On-Ramp Merge	13.4	82.8	F	9.2	128.3	F	8.7	133.4	F
Between East 138th On-Ramp and 149th Off-Ramp	14.8	86.6	F	11.5	119.8	F	10.8	125.1	F
South of East 149th Street Off-Ramp Diverge	14.2	90.0	F	12.2	113.5	F	11.5	117.6	F
North of East 149th Street Off-Ramp Diverge	44.5	26.0	C	32.9	37.6	E	32.8	37.3	E
Approach	Build Pre-game Weekday PM			Build Pre-game Saturday Midday			Build Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
South of East 138th Street On-Ramp Merge	7.8	150.2	F	9.9	128.2	F	4.1	131.4	F
North of East 138th Street On-Ramp Merge	8.2	142.2	F	9.4	126.7	F	2.8	184.4	F
Between East 138th On-Ramp and 149th Off-Ramp	10.6	128.7	F	11.5	120.8	F	3.0	197.5	F
South of East 149th Street Off-Ramp Diverge	11.9	114.5	F	13.3	104.6	F	3.0	197.5	F
North of East 149th Street Off-Ramp Diverge	40.7	28.9	D	36.6	31.0	D	2.7	177.4	F

During the non-game weekday midday peak hour, conditions just before the 149th Street off-ramp would deteriorate from LOS D in the 2014 No Build condition to LOS F in the 2014 Build condition; all other peak hours would continue to operate at LOS F conditions with additional queuing, slower speeds and higher densities. Similar to 2009 Build conditions, in all peak hours, queuing would occur along the 149th Street off-ramp onto the right lane of the Major Deegan Expressway. Motorists would react to the right lane queues by slowing in the center lane, and left lane speeds would decrease somewhat as well. In the post-game Saturday peak hour conditions, speeds would be below three mph within the segment, and queuing would occur in all three travel lanes.

The 149th Street off-ramp widening improvement would mitigate the 2014 Build levels of service for all peak hours to the 2014 No Build conditions just before the 149th Street off-ramp. Mitigation measures are discussed in Chapter 23, "Mitigation."

SOUTHBOUND MAJOR DEEGAN EXPRESSWAY

EXISTING CONDITIONS

Traffic volumes on the southbound Major Deegan mainline between the Bronx Terminal Market/Exit 6 off-ramp and the Macombs Dam Bridge/Exit 5 off-ramp range from 3,070 to 3,870 vph on non-game days and 2,180 to 3,410 vph on game days. Existing traffic volumes exiting the Major Deegan Expressway at the Bronx Terminal Market off-ramp range from approximately 310 to 360 vph on non-game days and 145 to 1,250 vph on game days, and range from approximately 4 to 36 percent of the total southbound mainline volume. Exiting traffic volumes at the Macombs Dam Bridge off-ramp range from approximately 710 to 720 vph on non-game days and 640 to 1,030 vph on game days, and range from approximately 18 to 30 percent of the total southbound mainline volume.

Table 16-25 shows existing levels of service, speeds, and densities for the southbound Major Deegan Expressway.

As shown in Table 16-25, existing conditions just before the Bronx Terminal Market and Macombs Dam Bridge off-ramps are at acceptable LOS D conditions or better in the non-game peak hours. However, on Yankee game days, the southbound Major Deegan Expressway operates at LOS E or F conditions just before the Bronx Terminal Market off-ramp in all game-day peak hours, and just before the Macombs Dam Bridge off-ramp, LOS F conditions occur in the Saturday post-game peak hour (LOS B and C conditions occur in the pre-game peak hours). Before and after Yankee games, large volumes of vehicles exit and enter the Major Deegan Expressway in this area to access parking areas, or are attempting to cross the Macombs Dam Bridge, which are the cause of poor levels of service on game days.

NO BUILD CONDITIONS

2009

Traffic volumes on the Major Deegan Expressway mainline between the Bronx Terminal Market and Macombs Dam Bridge off-ramps would grow at a rate of approximately 2.5 percent between 2004 and 2009. The growth would increase traffic volumes by about 55 to 95 vph on the mainline, 5 to 30 vph on the Bronx Terminal Market off-ramp, and 15 to 25 vph on the Macombs Dam Bridge off-ramp.

Table 16-25

Existing Conditions on the Southbound Major Deegan Expressway

Approach	Existing Non-game Weekday Midday			Existing Non-game Weekday PM			Existing Non-game Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
North of BTM Off-ramp Diverge	52.3	22.2	C	52.5	27.1	D	52.2	25.8	C
South of BTM Off-ramp Diverge	53.2	19.3	C	53.1	24.3	C	53.0	22.6	C
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	53.4	19.3	C	53.1	24.2	C	53.2	22.5	C
North of Macombs Dam Bridge Off-ramp Diverge	50.8	17.3	B	50.9	21.6	C	51.0	20.1	C
South of Macombs Dam Bridge Off-ramp Diverge	53.5	14.8	B	53.1	19.9	C	53.3	18.1	C
Approach	Existing Pre-game Weekday PM			Existing Pre-game Saturday Midday			Existing Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
North of BTM Off-ramp Diverge	32.6	47.7	F	31.7	36.6	E	19.0	61.5	F
South of BTM Off-ramp Diverge	48.7	23.6	C	43.2	16.9	B	19.1	57.8	F
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	51.9	22.1	C	43.8	16.6	B	18.9	58.2	F
North of Macombs Dam Bridge Off-ramp Diverge	49.3	19.9	C	41.9	14.9	B	17.8	52.9	F
South of Macombs Dam Bridge Off-ramp Diverge	53.2	15.2	B	44.2	11.6	B	19.4	45.0	E

Table 16-26 shows 2009 No Build levels of service, speeds, and densities for the southbound Major Deegan.

Table 16-26

2009 No Build Conditions on the Southbound Major Deegan Expressway

Approach	No Build Non-game Weekday Midday			No Build Non-game Weekday PM			No Build Non-game Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
North of BTM Off-ramp Diverge	52.1	22.9	C	52.5	27.7	D	52.1	26.5	D
South of BTM Off-ramp Diverge	53.1	19.9	C	52.8	25.1	C	52.8	23.1	C
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	53.3	19.8	C	53.1	25.1	C	53.1	23.0	C
North of Macombs Dam Bridge Off-ramp Diverge	50.6	17.9	B	50.9	22.3	C	50.7	20.6	C
South of Macombs Dam Bridge Off-ramp Diverge	53.2	15.1	B	52.9	20.8	C	53.0	18.6	C
Approach	No Build Pre-game Weekday PM			No Build Pre-game Saturday Midday			No Build Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
North of BTM Off-ramp Diverge	26.4	60.3	F	31.7	36.6	E	18.9	63.5	F
South of BTM Off-ramp Diverge	47.3	24.8	C	43.2	17.1	B	19.0	60.0	F
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	51.2	22.9	C	43.8	16.9	B	18.8	60.7	F
North of Macombs Dam Bridge Off-ramp Diverge	48.9	20.5	C	41.9	15.1	B	17.8	54.7	F
South of Macombs Dam Bridge Off-ramp Diverge	52.9	15.5	B	44.2	11.9	B	19.2	47.1	F

2009 No Build conditions before the Bronx Terminal Market and Macombs Dam Bridge off-ramps are projected to operate at acceptable LOS D conditions or better in the non-game peak hours. Levels of service would be identical to the existing conditions with the exception of the southbound Major Deegan Expressway before the Bronx Terminal Market off-ramp in the non-game Saturday midday peak hour, which would deteriorate from LOS C to LOS D.

However, on Yankee game days, the southbound Major Deegan Expressway would continue to operate at LOS E or F conditions just before the Bronx Terminal Market off-ramp in all game-day peak hours. Just before the Macombs Dam Bridge off-ramp, LOS F conditions would occur in the Saturday post-game peak hour (LOS B and C conditions occur in the pre-game peak hours), similar to existing conditions. Small increases in traffic due to annual growth would cause increased density and lower speeds.

2014

Traffic volumes on the Major Deegan Expressway mainline between the Bronx Terminal Market and Macombs Dam Bridge off-ramps would grow at a rate of approximately 5.1 percent between

Gateway Center at Bronx Terminal Market FEIS

2004 and 2014. The growth would increase traffic volumes by about 110 to 200 vph on the mainline, 5 to 65 vph on the Bronx Terminal Market off-ramp, and 30 to 50 vph on the Macombs Dam Bridge off-ramp.

Table 16-27 shows 2014 No Build levels of service, speeds, and densities for the southbound Major Deegan Expressway.

2014 No Build conditions before the Bronx Terminal Market and Macombs Dam Bridge off-ramps would operate at acceptable LOS D conditions or better in the non-game peak hours. Levels of service would be identical to the existing conditions with the exception of the southbound Major Deegan Expressway before the Bronx Terminal Market off-ramp in the non-game Saturday midday peak hour, which would deteriorate from LOS C to LOS D, and before the Macombs Dam Bridge off-ramp in the non-game weekday midday peak hour, which would deteriorate from LOS B to LOS C.

However, on Yankee game days, the southbound Major Deegan Expressway would continue to operate at LOS E or F conditions just before the Bronx Terminal Market off-ramp in all game-day peak hours, and just before the Macombs Dam Bridge off-ramp, LOS F conditions occur in the Saturday post-game peak hour (LOS B and C conditions occur in the pre-game peak hours), similar to existing and 2009 No Build conditions. Small increases in traffic beyond 2009 No Build conditions would cause increased density and lower speeds.

BUILD CONDITIONS

2009

Traffic generated by the Proposed Project would enter the southbound Major Deegan further north of the study area, either in the North Bronx, Westchester, or at the Cross Bronx Expressway interchange and predominantly exit at the Bronx Terminal Market off-ramp and less frequently exit at the Macombs Dam Bridge exit.

At the Bronx Terminal Market off-ramp, project-generated traffic volumes destined to the project site in 2009 would range from approximately 160 to 355 vph during non-game peak hours and between 215 and 320 vph during Yankee game day peak hours. Between 15 and 30 vph on non-game days and 5 to 10 vph on game days would exit at the Macombs Dam Bridge exit. The additional project-generated exiting volumes on the southbound Major Deegan Expressway mainline exiting at both off-ramps represent approximately five to nine percent of the total southbound Major Deegan Expressway traffic.

Table 16-27

2014 No Build Conditions on the Southbound Major Deegan Expressway

Approach	No Build Non-game Weekday MIDDAY			No Build Non-game Weekday PM			No Build Non-game Saturday MIDDAY		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
North of BTM Off-ramp Diverge	52.0	23.3	C	51.6	28.9	D	51.8	27.3	D
South of BTM Off-ramp Diverge	53.1	20.2	C	52.7	25.8	C	52.8	23.9	C
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	53.3	20.1	C	52.9	25.7	C	53.0	23.8	C
North of Macombs Dam Bridge Off-ramp Diverge	50.5	18.2	C	50.6	23.0	C	50.6	21.3	C
South of Macombs Dam Bridge Off-ramp Diverge	53.2	15.2	B	52.8	21.0	C	53.0	19.1	C
Approach	No Build Pre-game Weekday PM			No Build Pre-game Saturday MIDDAY			No Build Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
North of BTM Off-ramp Diverge	21.8	74.2	F	30.3	40.2	E	18.9	65.1	F
South of BTM Off-ramp Diverge	46.3	25.8	C	43.2	17.4	B	19.0	61.8	F
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	50.1	23.8	C	43.8	17.2	B	18.7	62.5	F
North of Macombs Dam Bridge Off-ramp Diverge	48.3	21.2	C	41.9	15.3	B	17.7	56.5	F
South of Macombs Dam Bridge Off-ramp Diverge	52.3	16.1	B	44.2	12.2	B	19.2	48.6	F

Table 16-28 shows 2009 Build levels of service, speeds, and densities for the southbound Major Deegan Expressway.

Table 16-28

2009 Build Conditions on the Southbound Major Deegan Expressway

Approach	Build Non-game Weekday MIDDAY			Build Non-game Weekday PM			Build Non-game Saturday MIDDAY		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
North of BTM Off-ramp Diverge	<u>52.1</u>	<u>24.0</u>	C	<u>48.2</u>	<u>32.7</u>	D	<u>48.2</u>	<u>31.3</u>	D
South of BTM Off-ramp Diverge	<u>53.1</u>	<u>20.1</u>	C	<u>51.2</u>	<u>26.0</u>	C	51.3	24.2	C
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	53.3	<u>20.0</u>	<u>B</u>	52.5	25.4	C	52.8	23.5	C
North of Macombs Dam Bridge Off-ramp Diverge	<u>50.6</u>	<u>18.0</u>	B	<u>50.2</u>	<u>22.7</u>	C	<u>50.8</u>	<u>20.9</u>	C
South of Macombs Dam Bridge Off-ramp Diverge	<u>53.5</u>	<u>15.2</u>	B	<u>52.6</u>	<u>20.4</u>	C	<u>53.3</u>	<u>18.5</u>	<u>B</u>
Approach	Build Pre-game Weekday PM			Build Pre-game Saturday MIDDAY			Build Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
North of BTM Off-ramp Diverge	<u>17.6</u>	<u>92.8</u>	F	<u>11.5</u>	108.7	F	18.5	<u>68.7</u>	F
South of BTM Off-ramp Diverge	<u>45.8</u>	<u>24.9</u>	C	<u>42.2</u>	17.6	B	19.0	<u>59.8</u>	F
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	50.3	<u>22.7</u>	C	<u>43.6</u>	<u>17.0</u>	B	<u>18.8</u>	60.5	F
North of Macombs Dam Bridge Off-ramp Diverge	<u>48.5</u>	<u>20.1</u>	C	<u>41.8</u>	<u>15.1</u>	B	17.8	<u>54.6</u>	F
South of Macombs Dam Bridge Off-ramp Diverge	<u>52.5</u>	<u>15.1</u>	B	<u>44.2</u>	<u>11.5</u>	B	19.2	<u>47.3</u>	F

During the non-game weekday midday peak hour, conditions just before the Bronx Terminal Market off-ramp would deteriorate from acceptable LOS D in the 2009 No Build conditions to unacceptable LOS D in the 2009 Build conditions; the same area would be significantly impacted in all three Yankee game day peak hours as densities progressed further into LOS F conditions. Levels of service would not change just before the Macombs Dam Bridge off-ramp between 2009 No Build and Build conditions. Mitigation measures are discussed in Chapter 23, "Mitigation."

2014

Traffic generated by the Proposed Project would approach the site on the southbound Major Deegan in generally the same proportions in 2014 as it would in 2009. At the proposed off-ramp, project-generated traffic volumes destined to the Proposed Project in 2014 would range from approximately 165 to 375 vph during non-game peak hours and between 240 and 340 vph during Yankee game day peak hours. Between 20 and 40 vph on non-game days and 5 to 15 vph on game days would exit at the Macombs Dam Bridge exit. The additional project-generated exiting volumes on the southbound Major Deegan Expressway mainline exiting at both off-ramps would again represent approximately five to nine percent of the total southbound Major Deegan Expressway traffic.

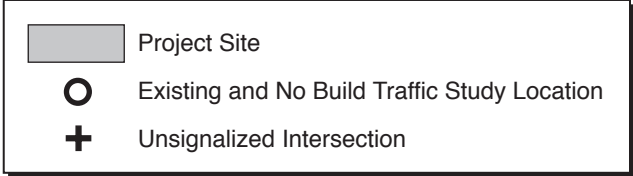
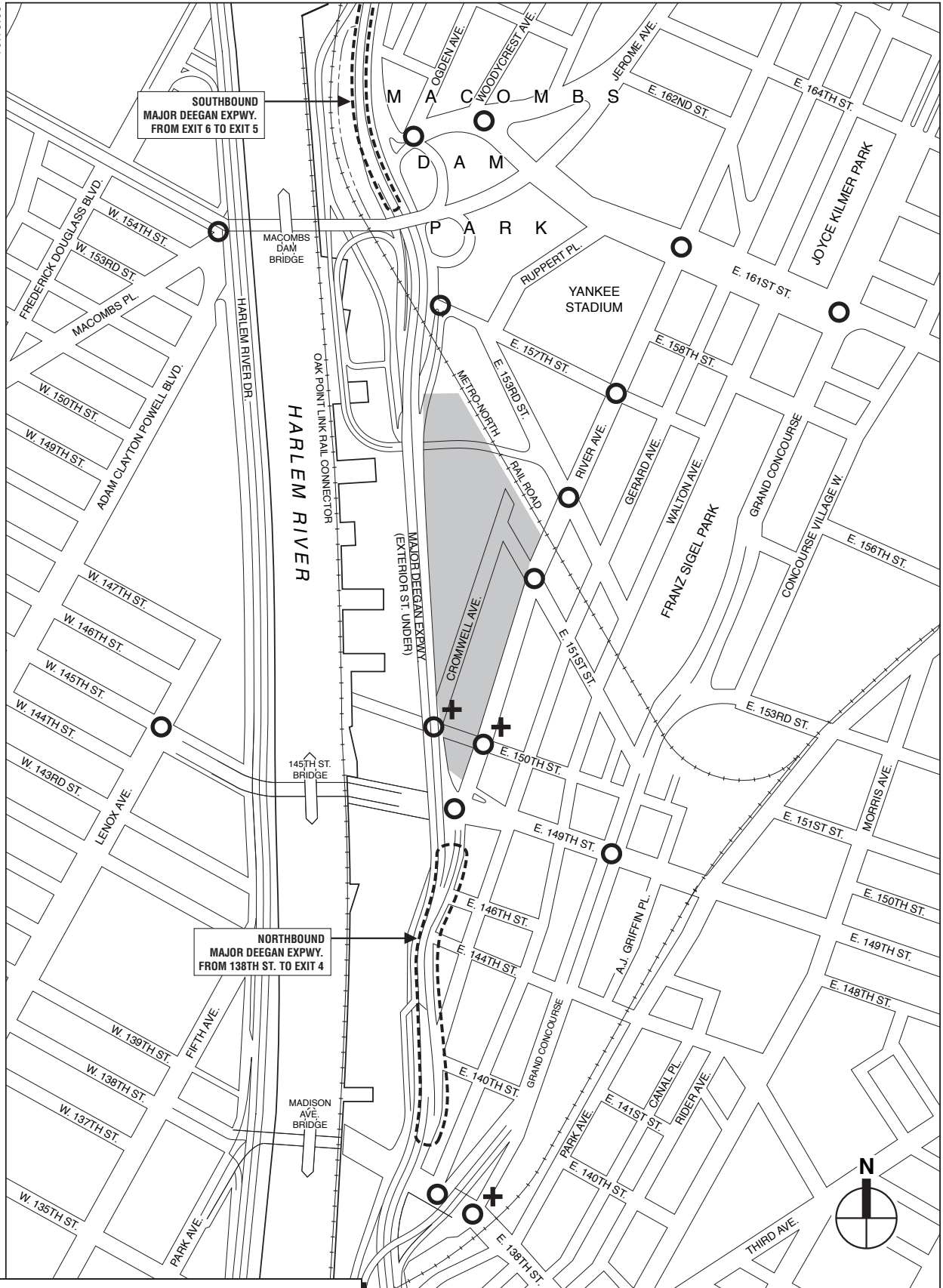
Table 16-29 shows 2014 Build levels of service, speeds, and densities for the southbound Major Deegan Expressway.

Table 16-29
2014 Build Conditions on the Southbound Major Deegan Expressway

Approach	Build Non-game Weekday Midday			Build Non-game Weekday PM			Build Non-game Saturday Midday		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Without Yankee Game									
North of BTM Off-ramp Diverge	51.5	25.0	C	48.6	33.3	D	48.0	32.3	D
South of BTM Off-ramp Diverge	52.7	20.3	C	51.1	26.8	C	51.6	24.6	C
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	53.1	20.1	C	52.4	26.2	C	52.9	24.0	C
North of Macombs Dam Bridge Off-ramp Diverge	50.7	18.0	B	50.1	23.4	C	50.8	21.3	C
South of Macombs Dam Bridge Off-ramp Diverge	53.4	15.5	B	52.6	20.9	C	53.0	19.2	B
Approach	Build Pre-game Weekday PM			Build Pre-game Saturday Midday			Build Post-game Saturday PM		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
With Yankee Game									
North of BTM Off-ramp Diverge	16.5	96.5	F	11.5	107.6	F	18.3	71.8	F
South of BTM Off-ramp Diverge	46.2	24.2	C	42.3	16.7	B	19.0	61.8	F
Between BTM Off-ramp and Macombs Dam Bridge Off-ramp	50.8	21.9	C	43.6	16.2	B	18.7	62.5	F
North of Macombs Dam Bridge Off-ramp Diverge	48.8	19.5	B	42.0	14.4	B	17.7	56.4	F
South of Macombs Dam Bridge Off-ramp Diverge	52.7	14.7	B	44.2	11.4	B	19.2	48.6	F

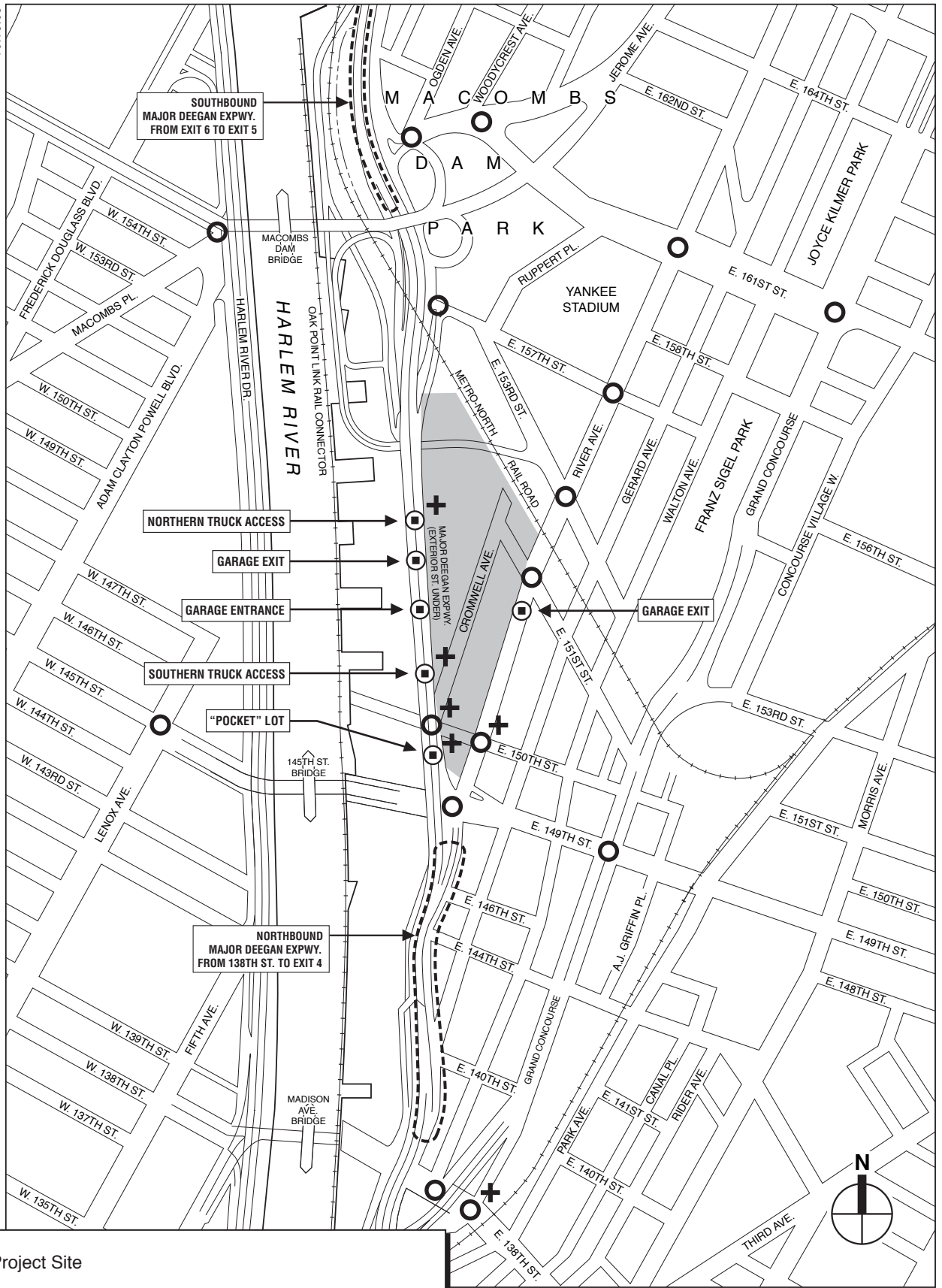
During the non-game weekday midday peak hour, levels of service just before the Bronx Terminal Market off-ramp would deteriorate from acceptable LOS D in the 2014 No Build conditions to unacceptable LOS D in the 2014 Build conditions, similar to the 2009 Build conditions; the same area would be significantly impacted in all three Yankee game day peak hours as densities progressed further into LOS F conditions. As was the case in the 2009 Build conditions, levels of service would not change just before the Macombs Dam Bridge off-ramp between 2014 No Build and Build conditions. Mitigation measures are discussed in Chapter 23, "Mitigation." *





10.18.05



Existing and No Build Traffic Study Locations

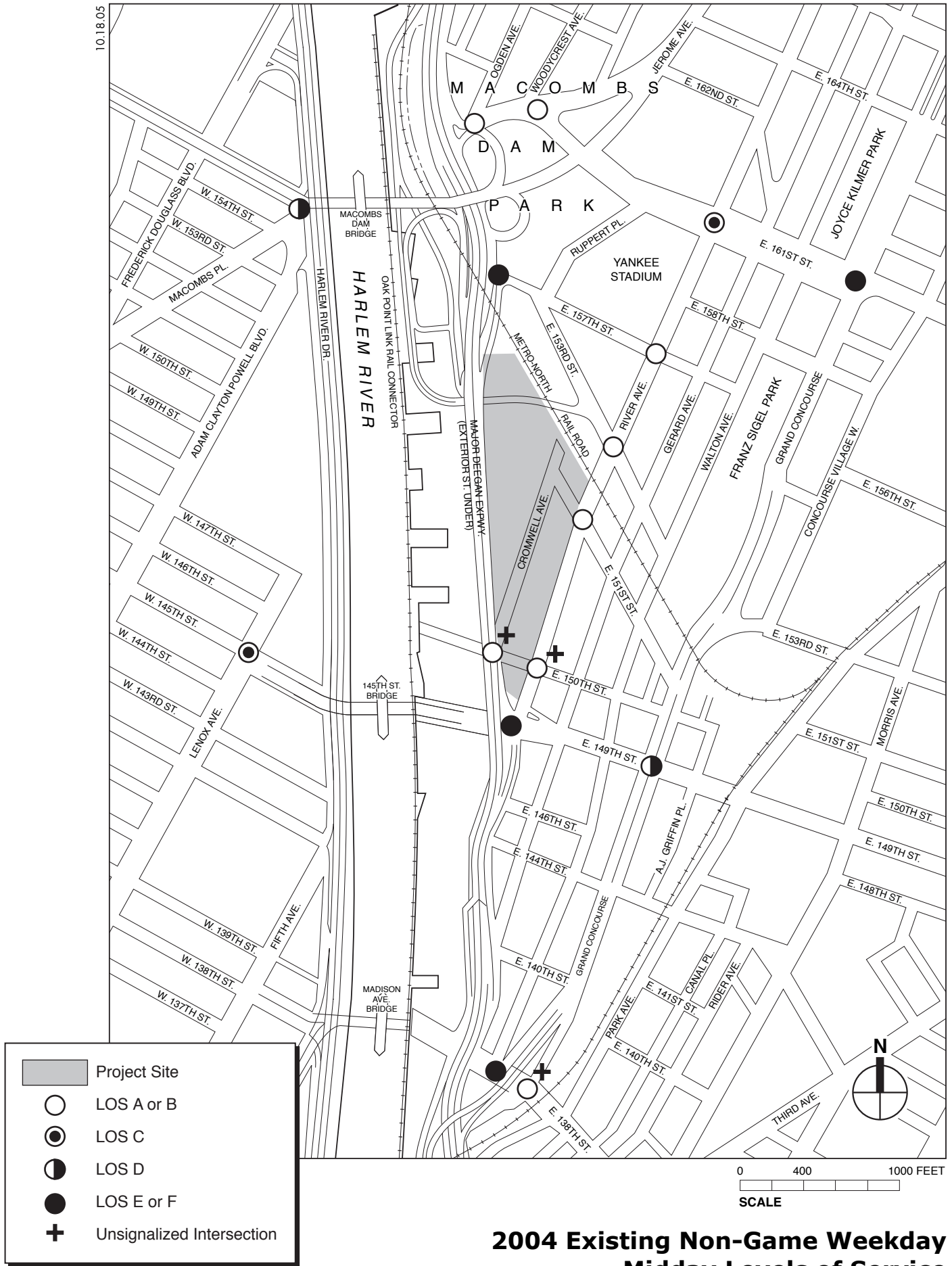
Figure 16-1

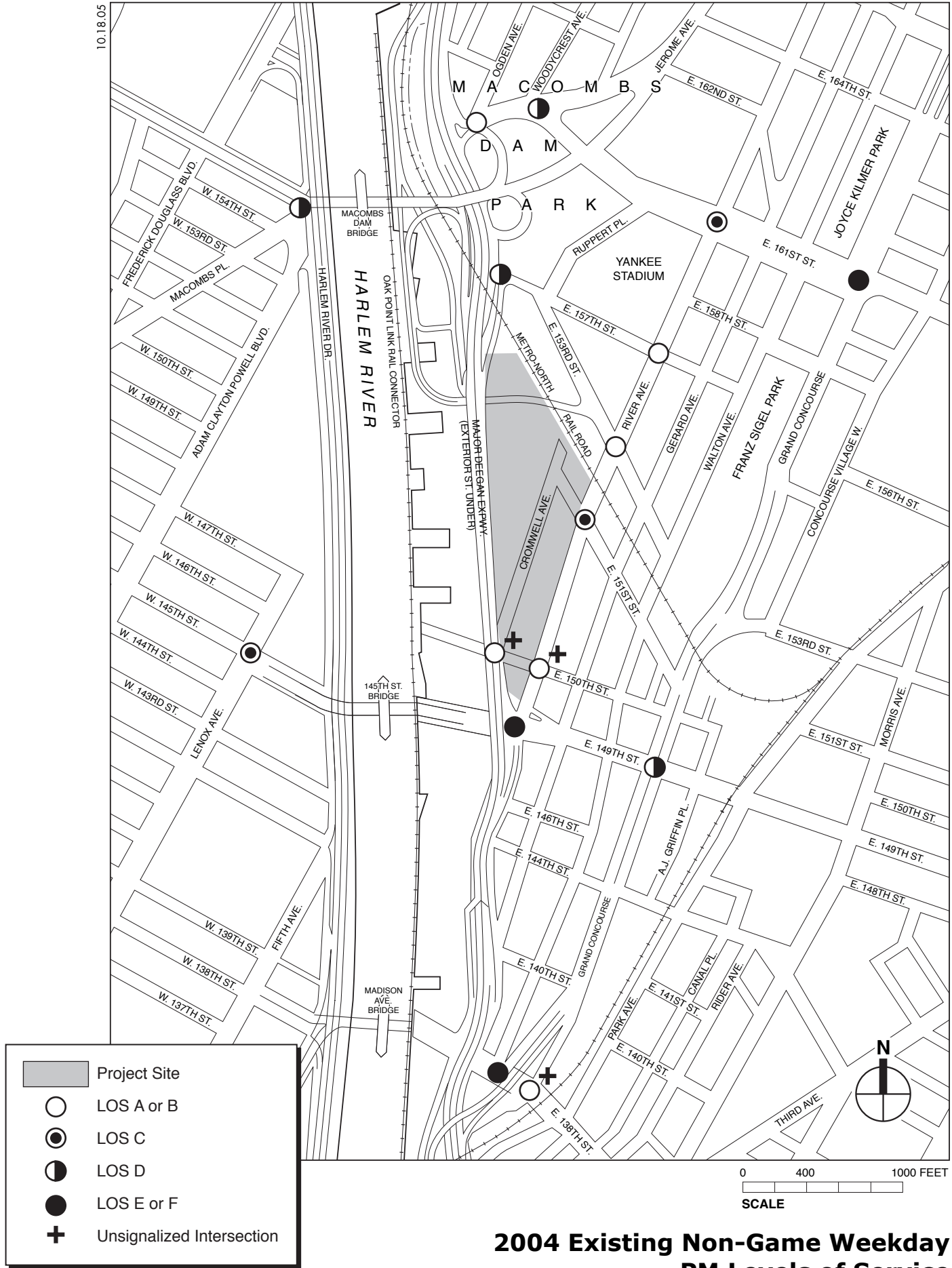


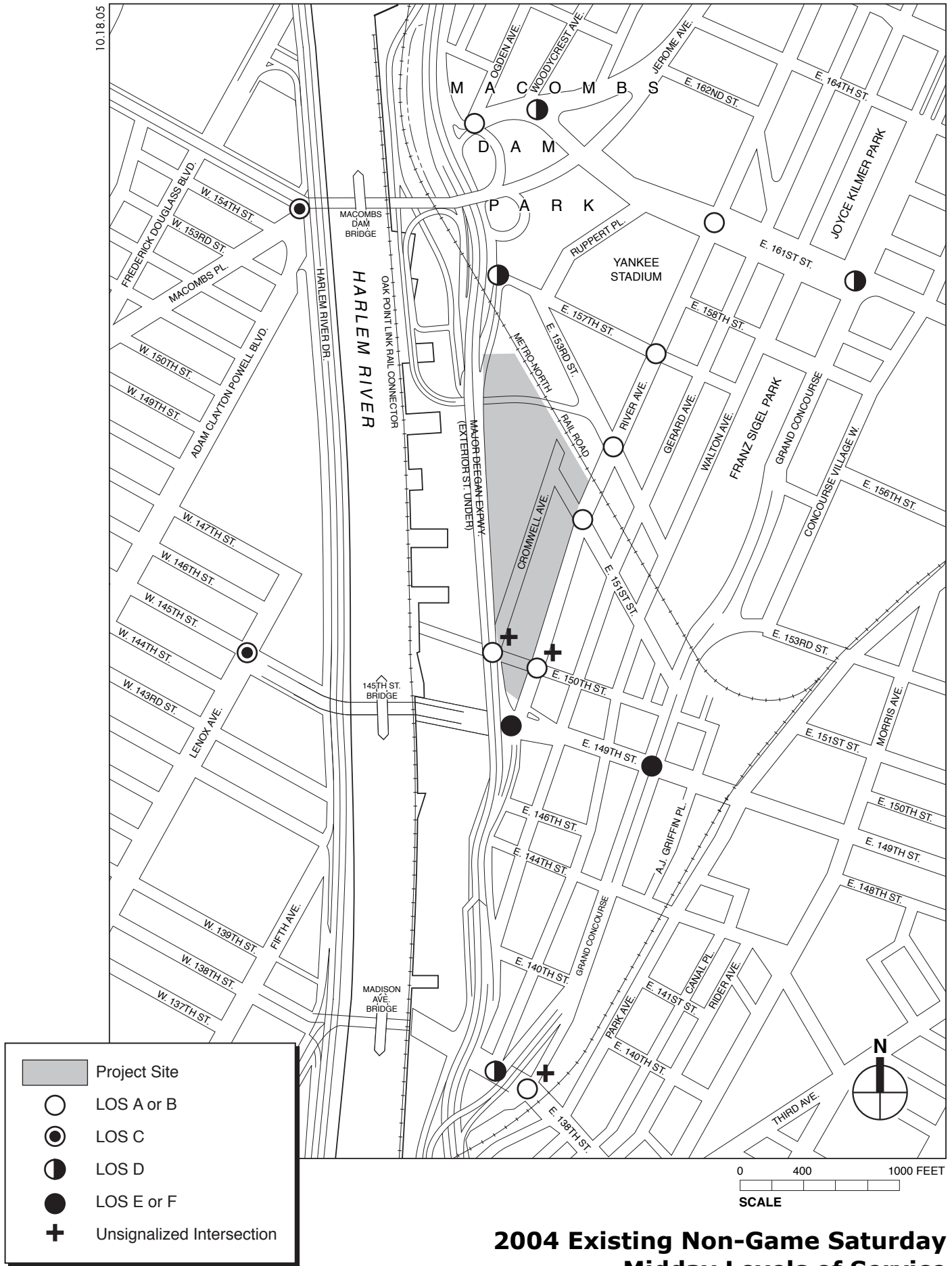
	Project Site
	Existing and No Build Conditions Traffic Study Location
	Build Conditions Traffic Study Location
	Unsignalized Intersection

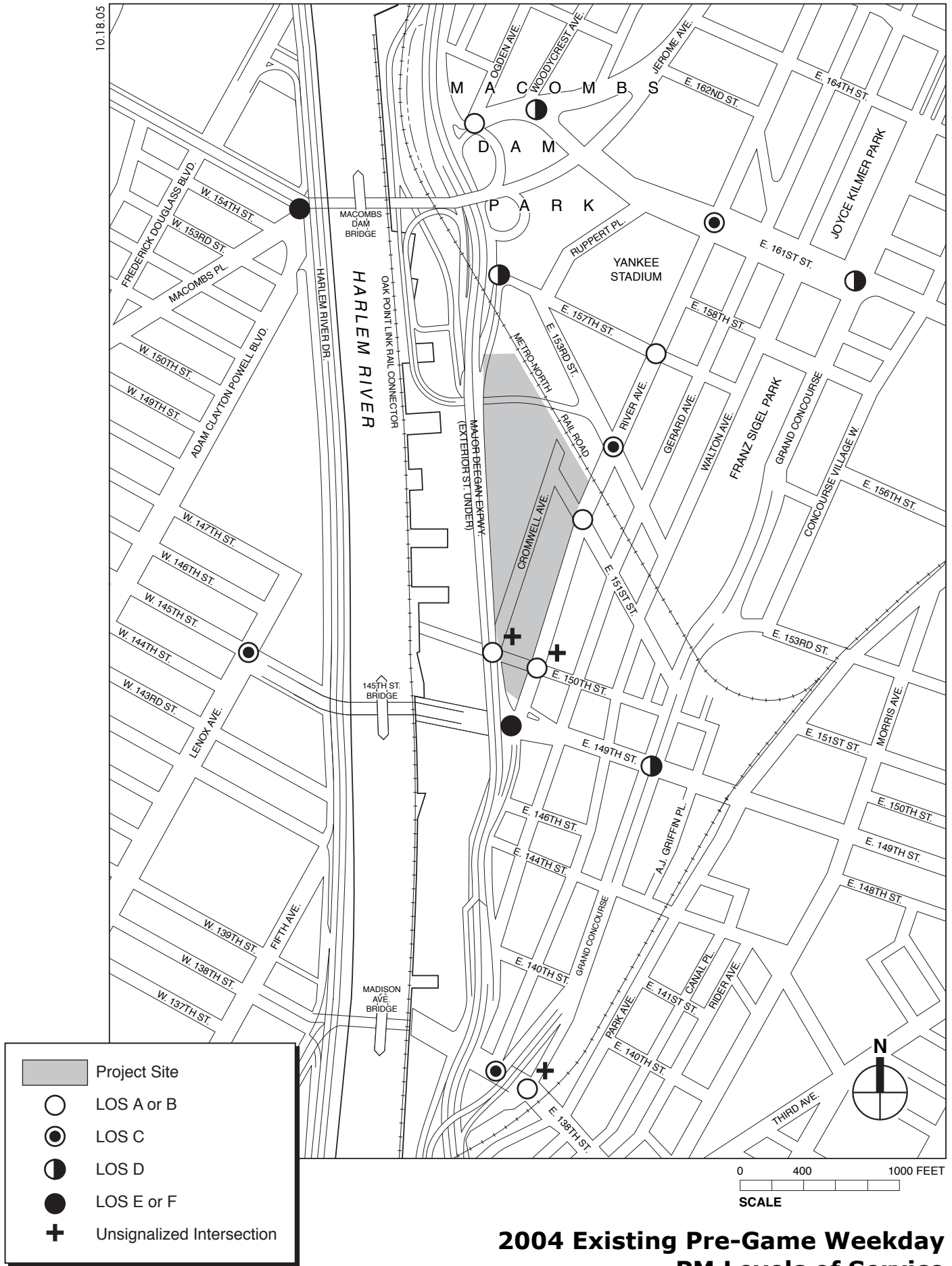


Build Traffic Study Locations
Figure 16-2



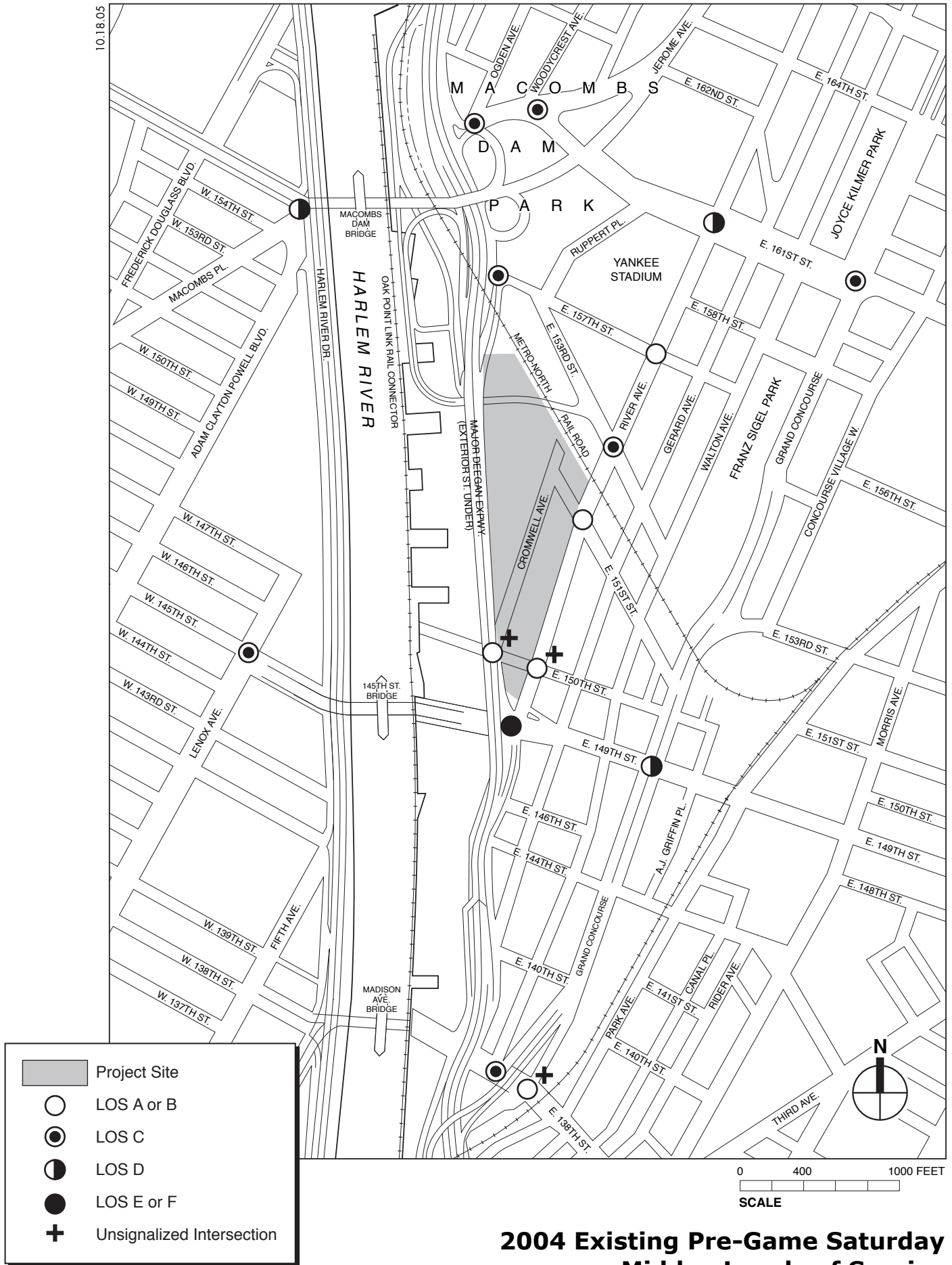




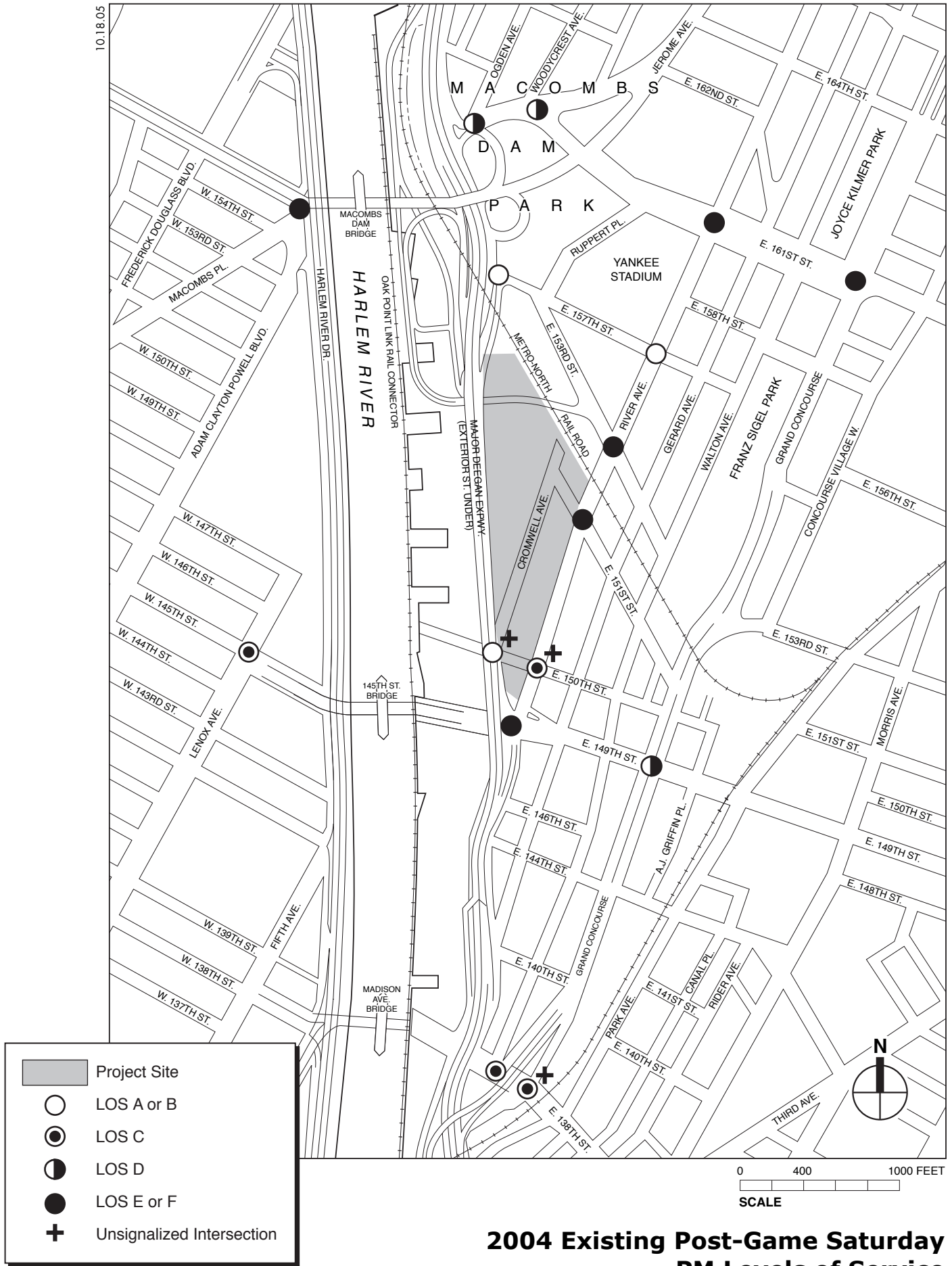


2004 Existing Pre-Game Weekday PM Levels of Service

Figure 16-6

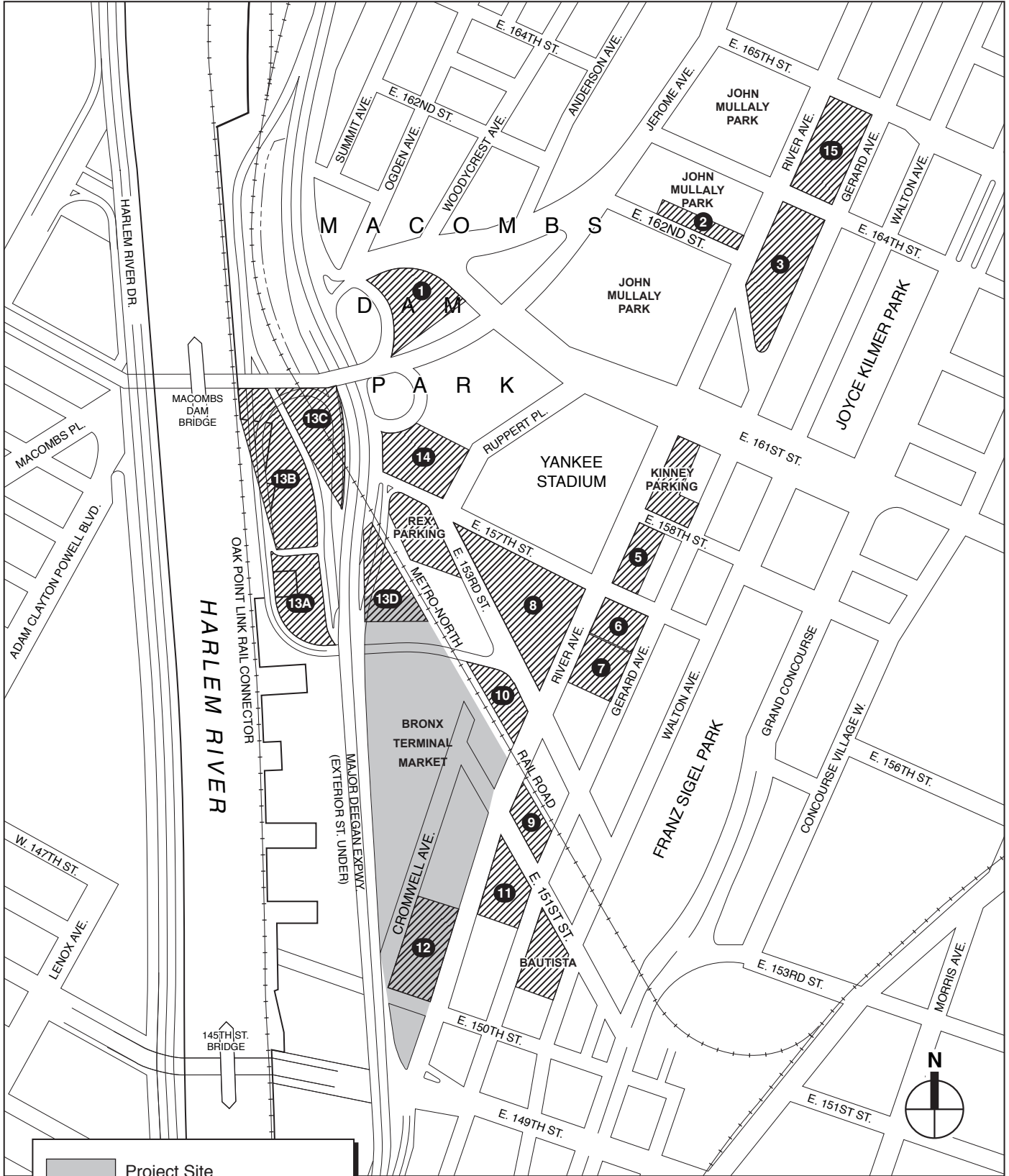


**2004 Existing Pre-Game Saturday
Midday Levels of Service**
Figure 16-7

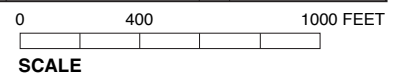


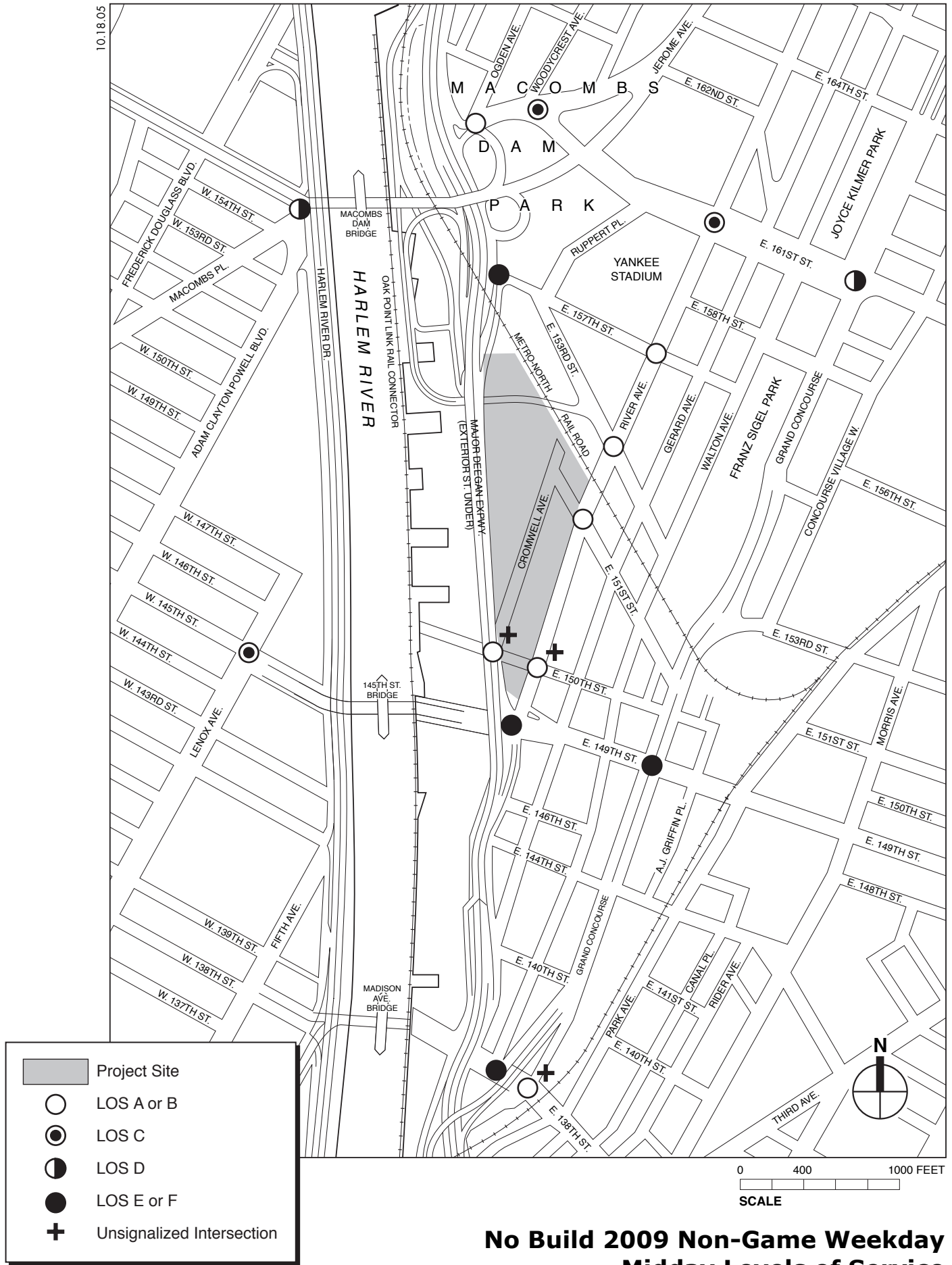
2004 Existing Post-Game Saturday PM Levels of Service

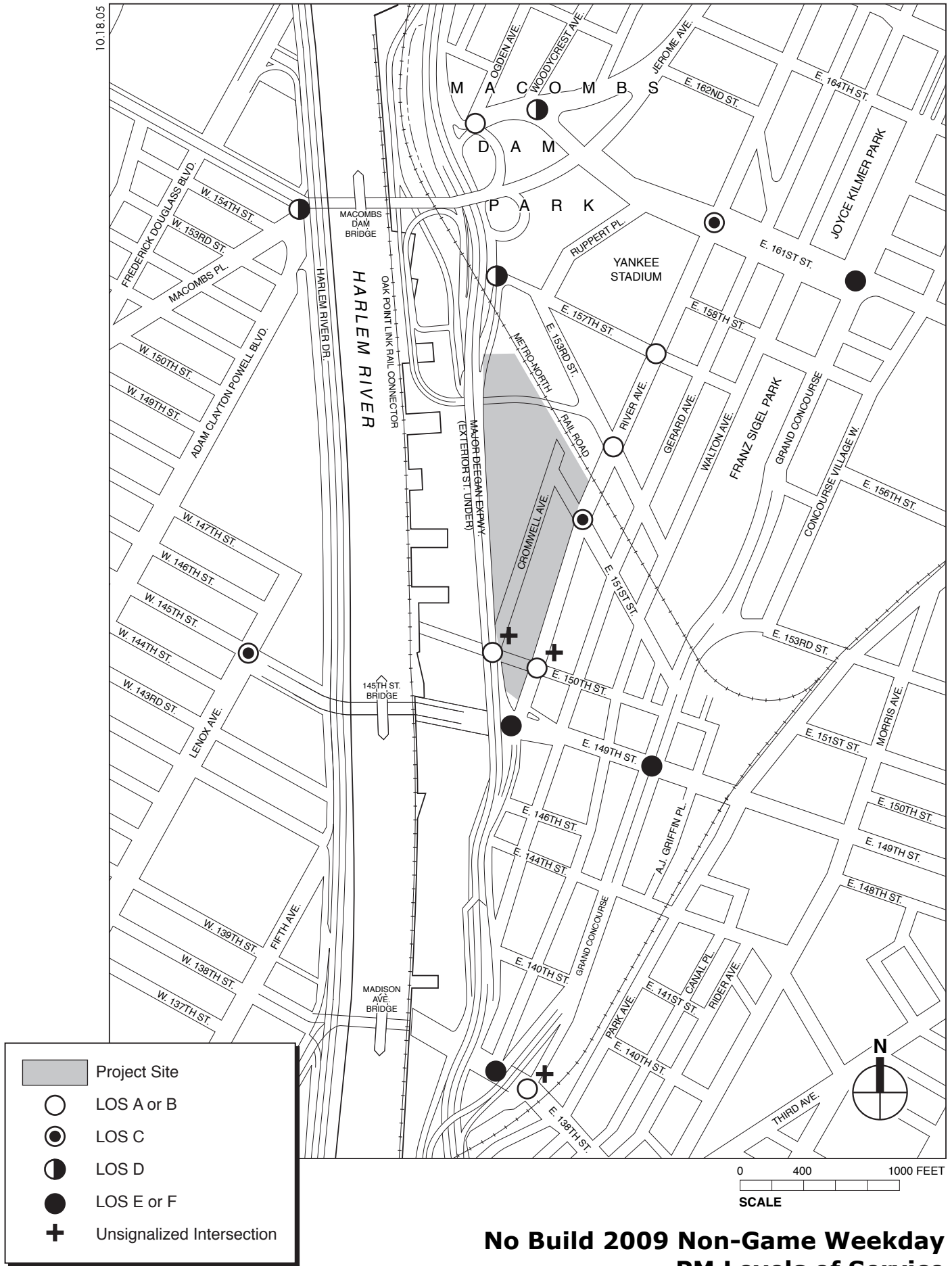
Figure 16-8

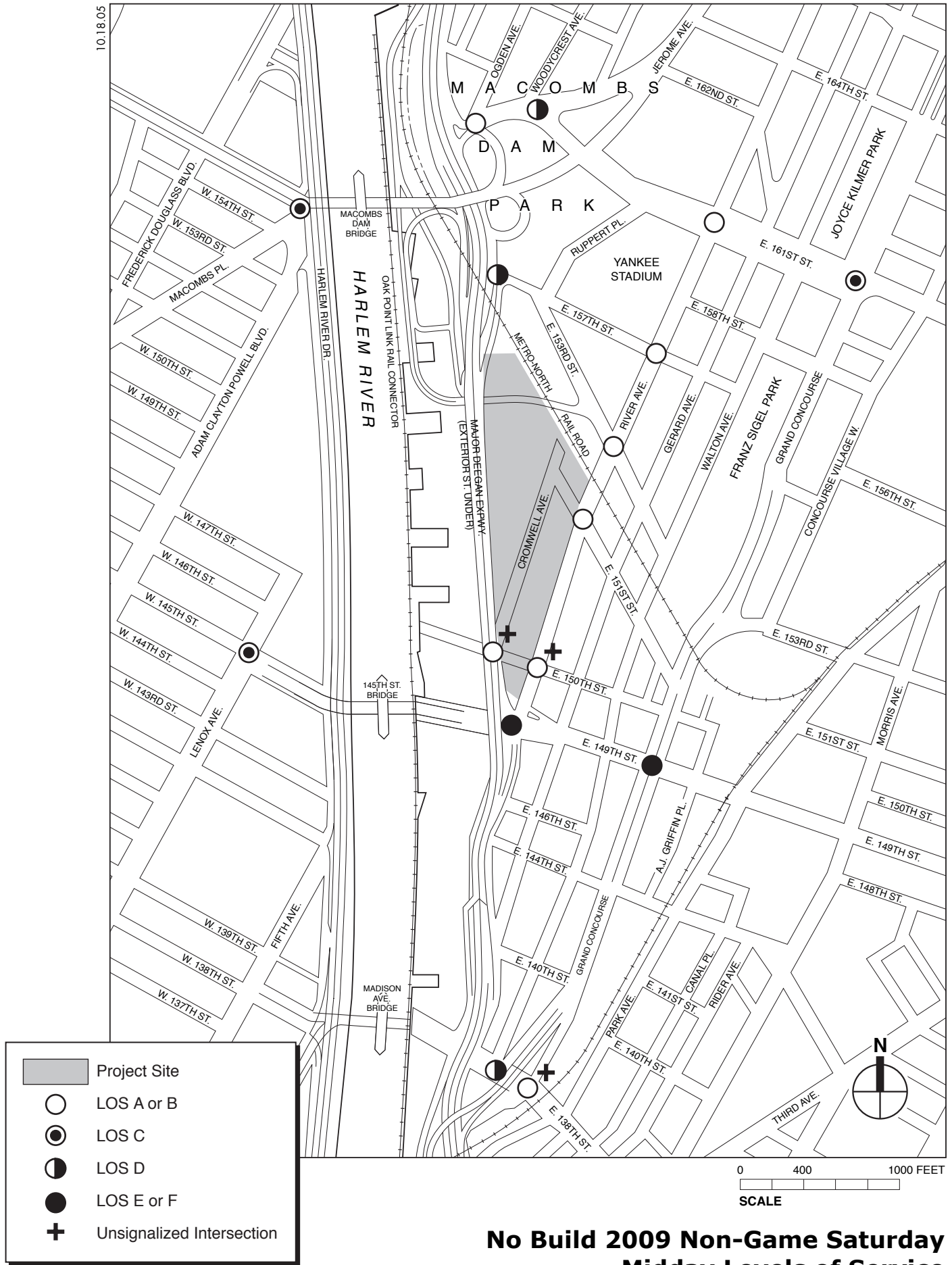


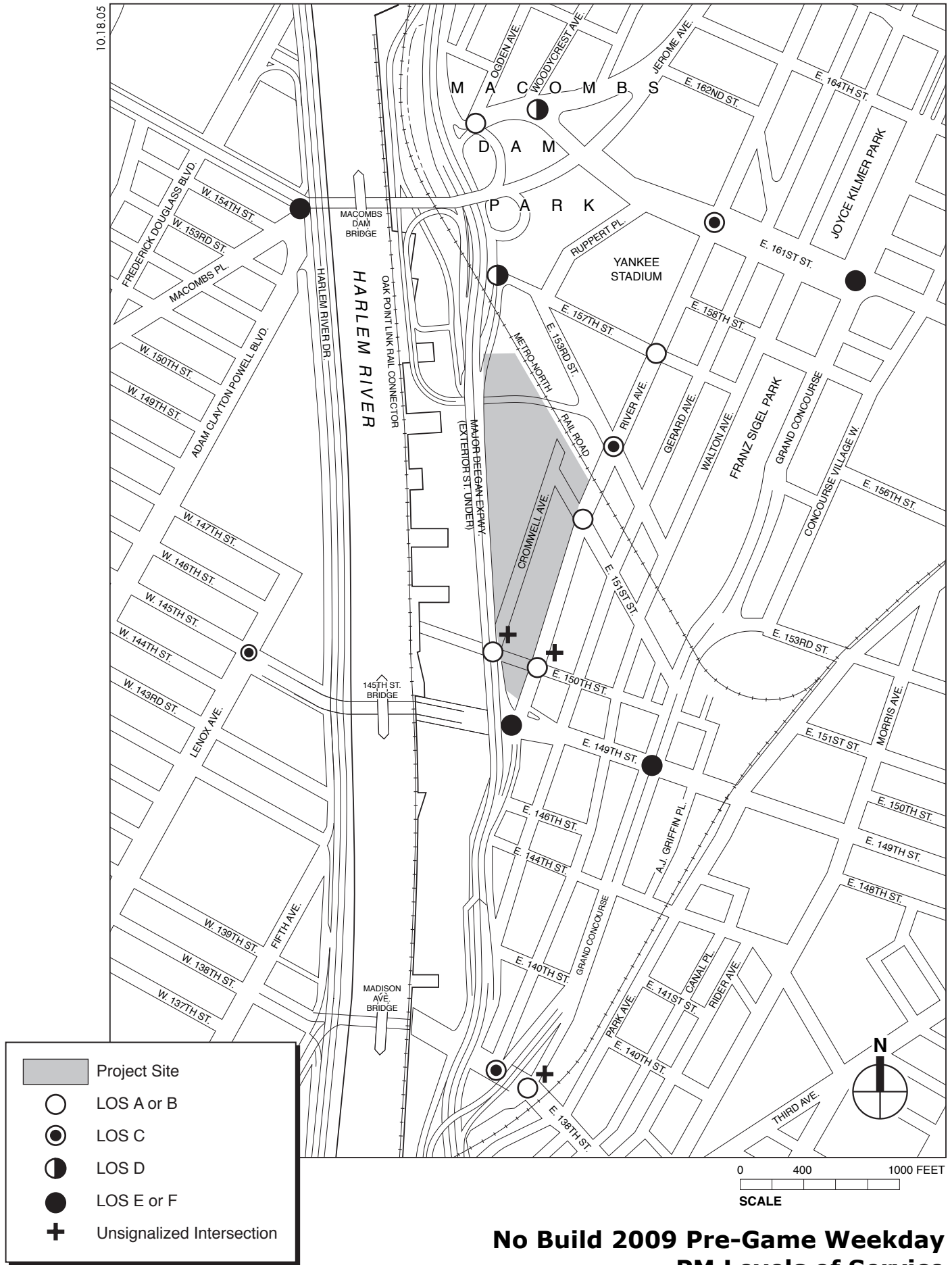
	Project Site
	Lot Number
	Public Parking Lot/Garages

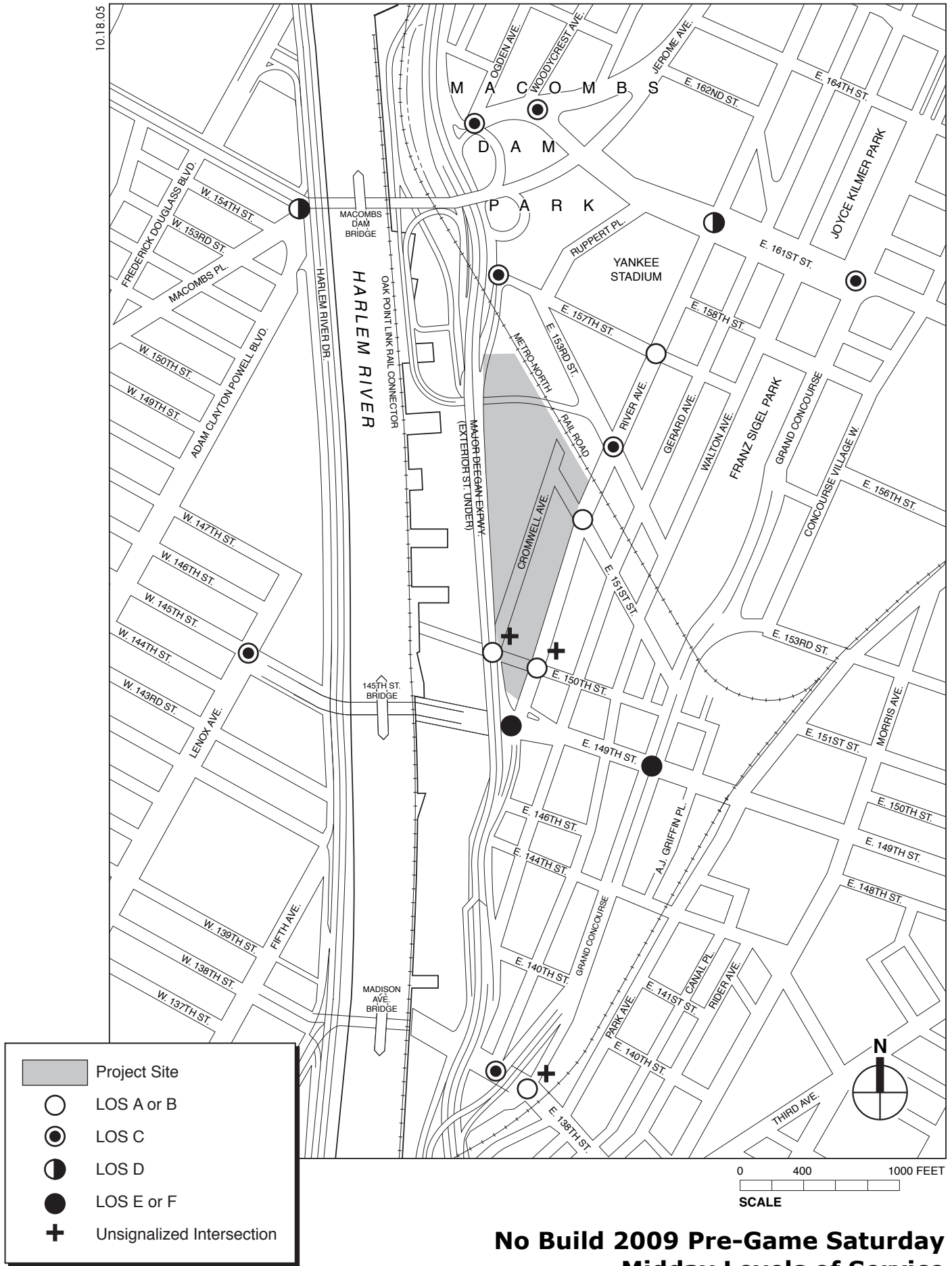


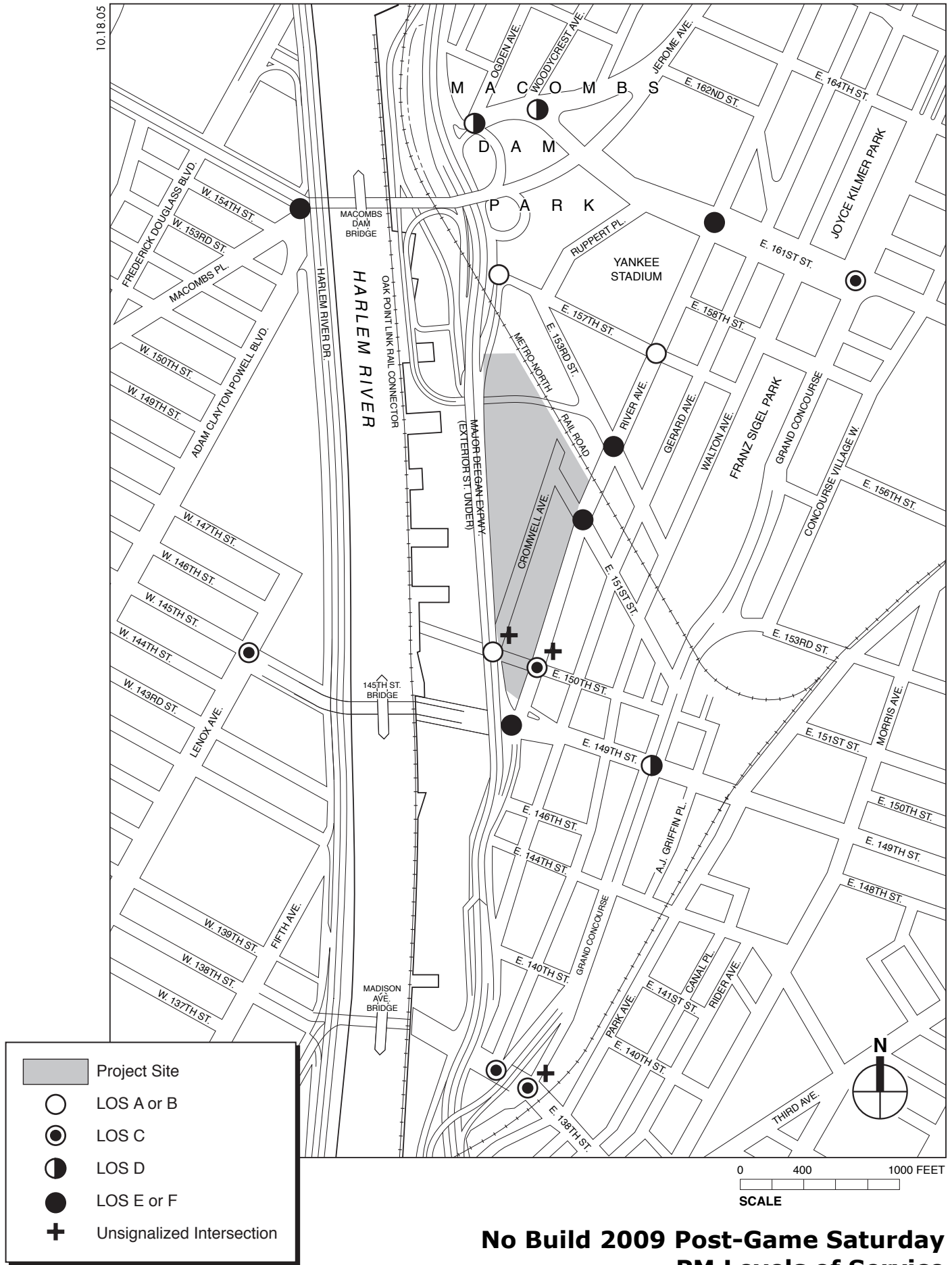






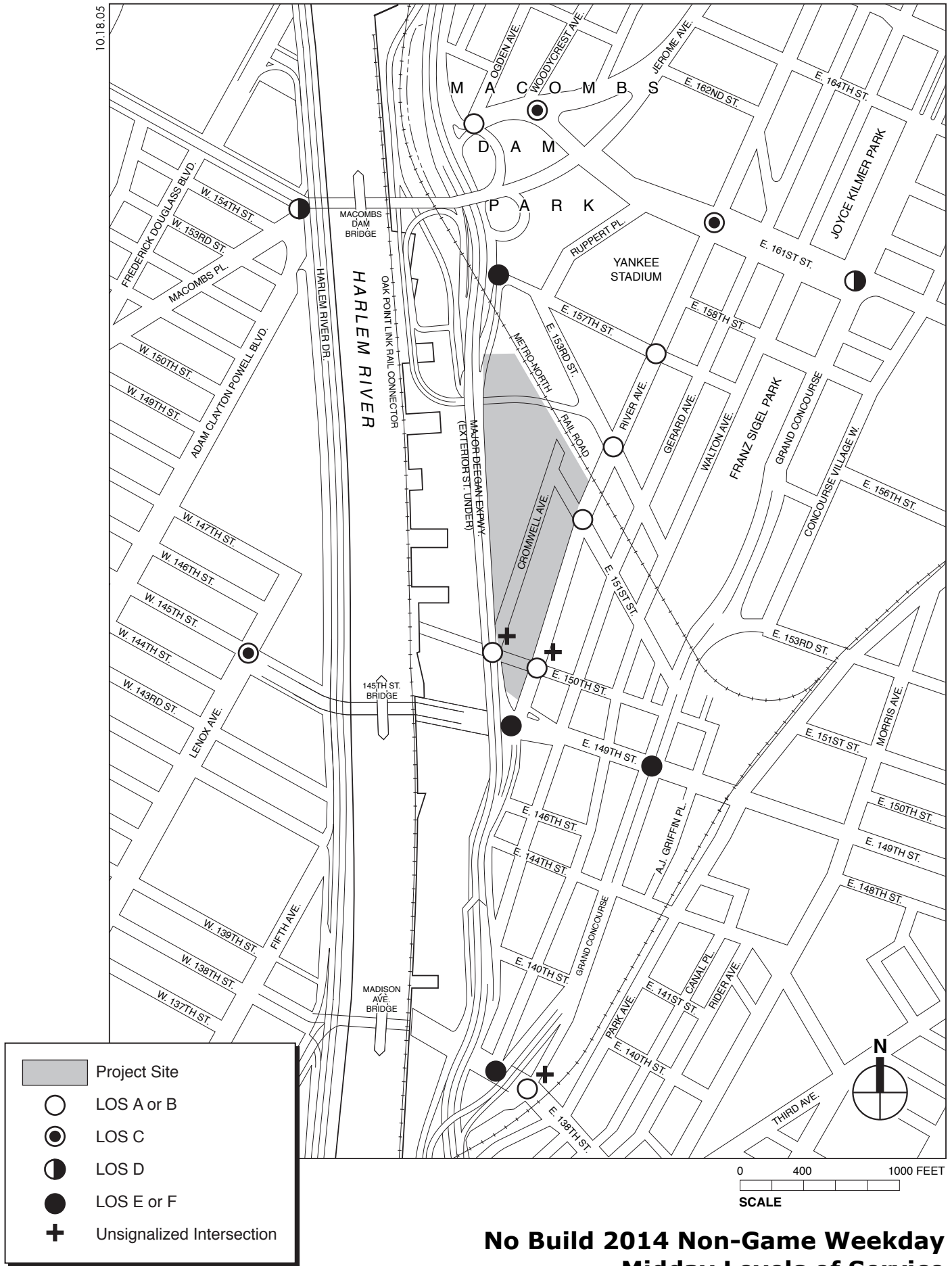






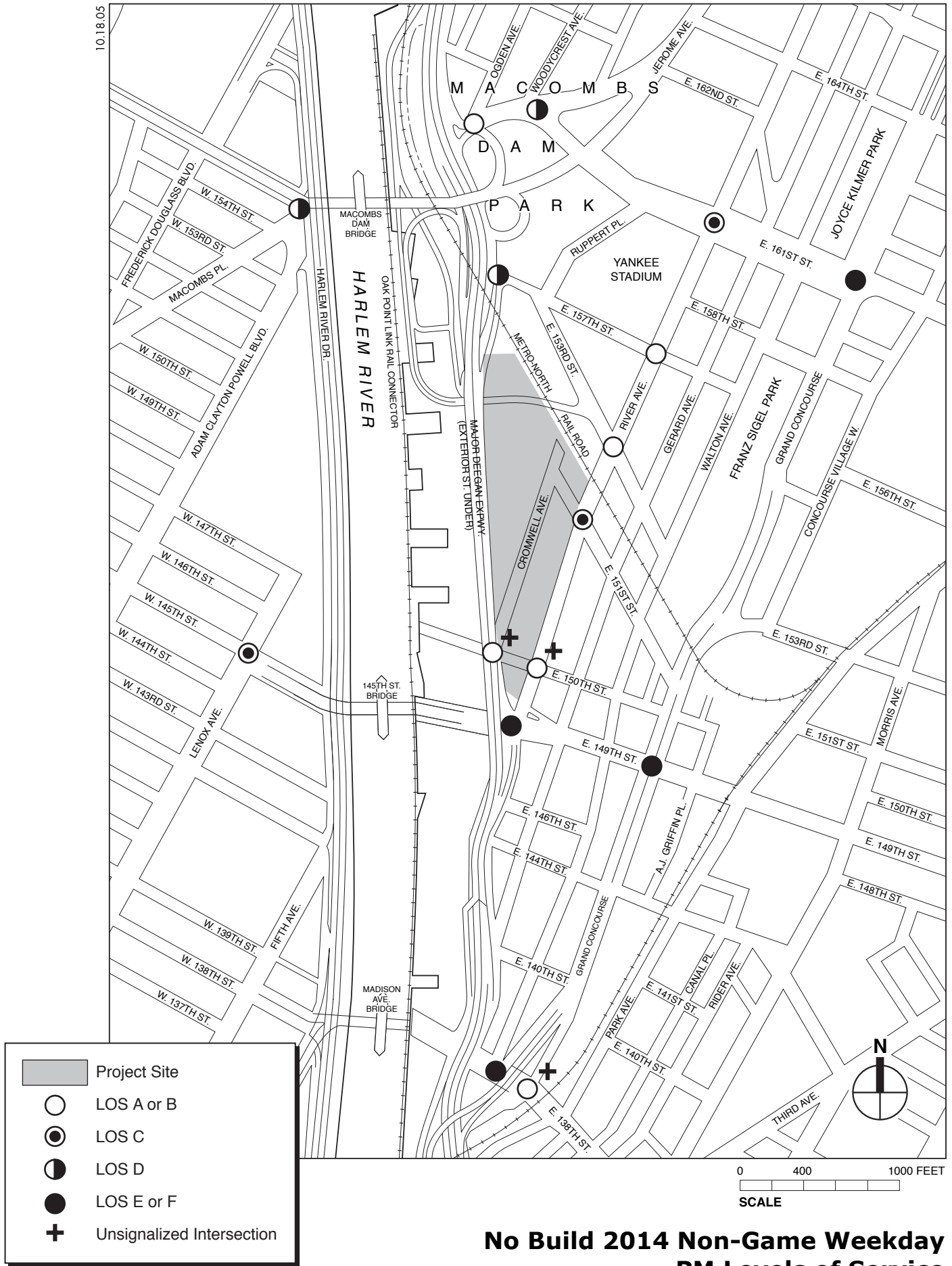
GATEWAY CENTER AT BRONX TERMINAL MARKET

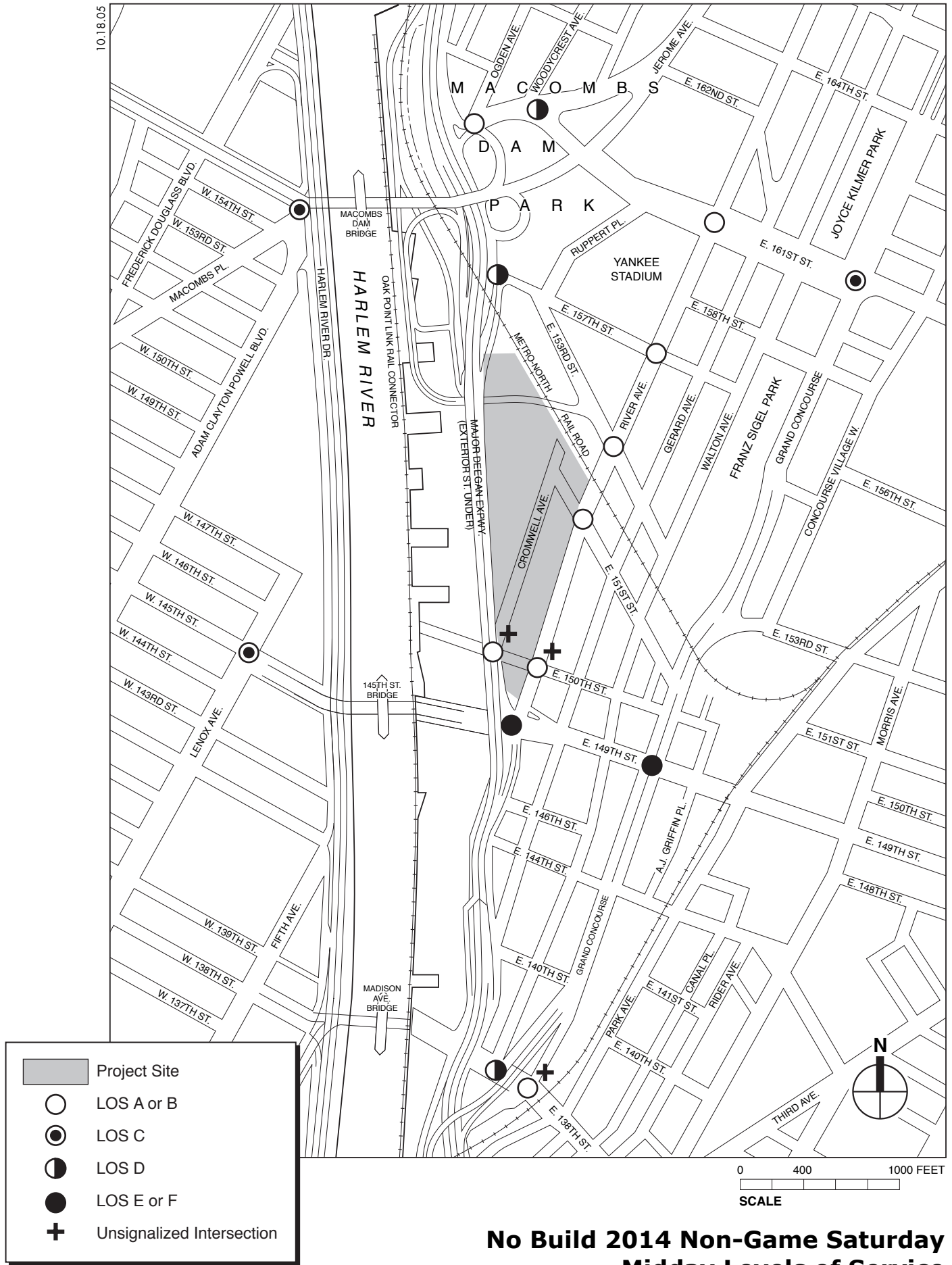
**No Build 2009 Post-Game Saturday
PM Levels of Service**
Figure 16-15

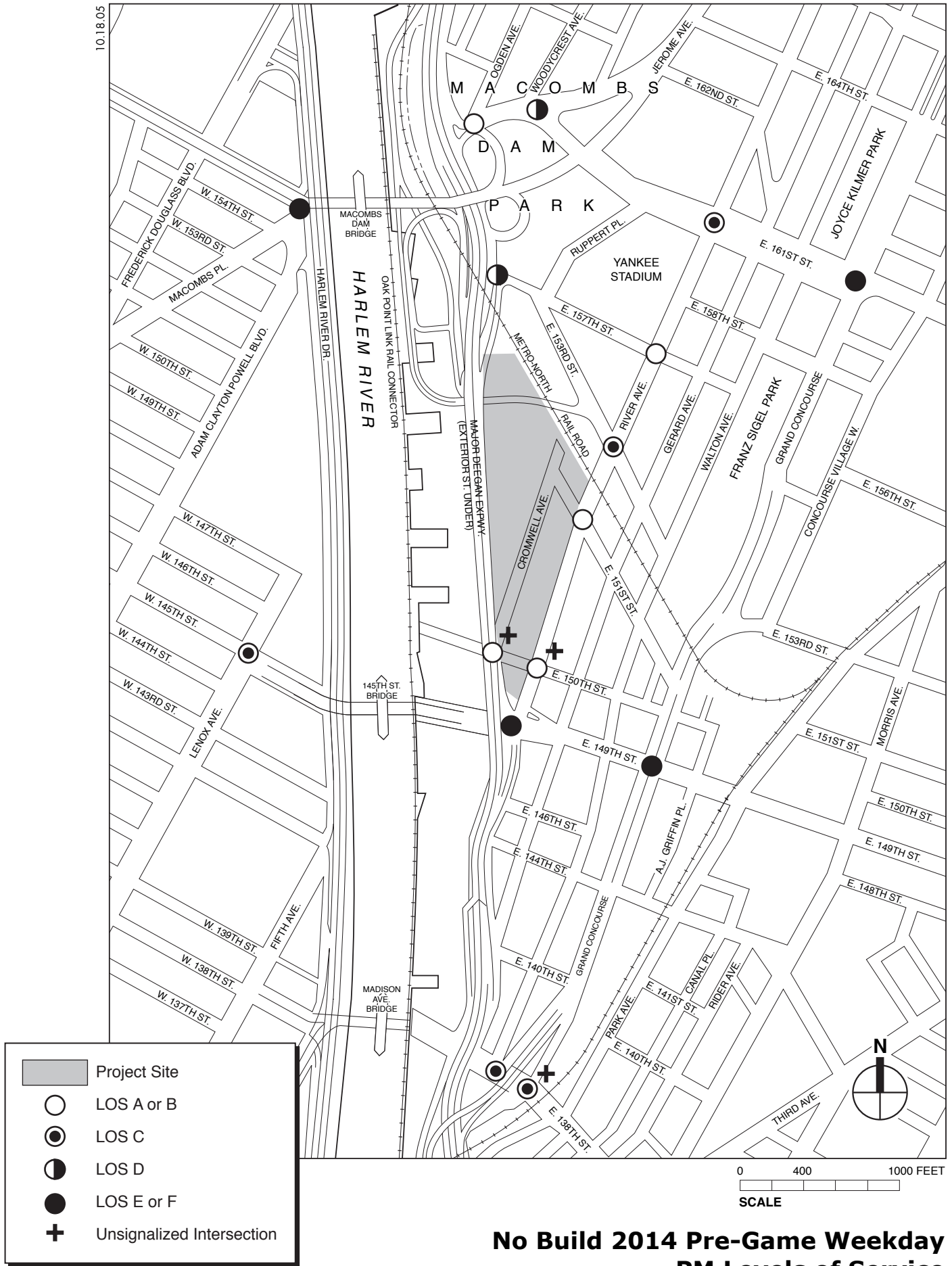


	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection

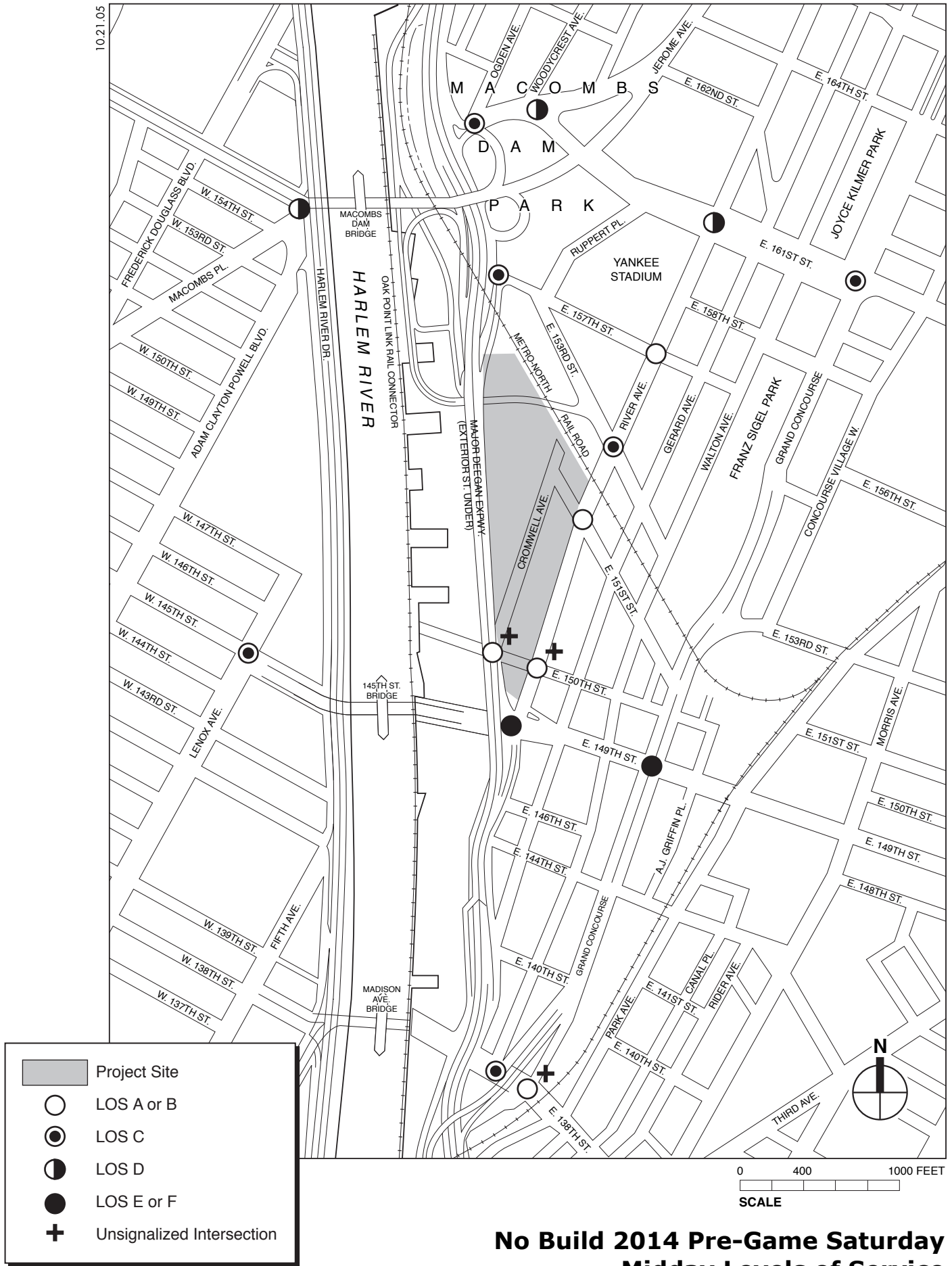
**No Build 2014 Non-Game Weekday
Midday Levels of Service**
Figure 16-16

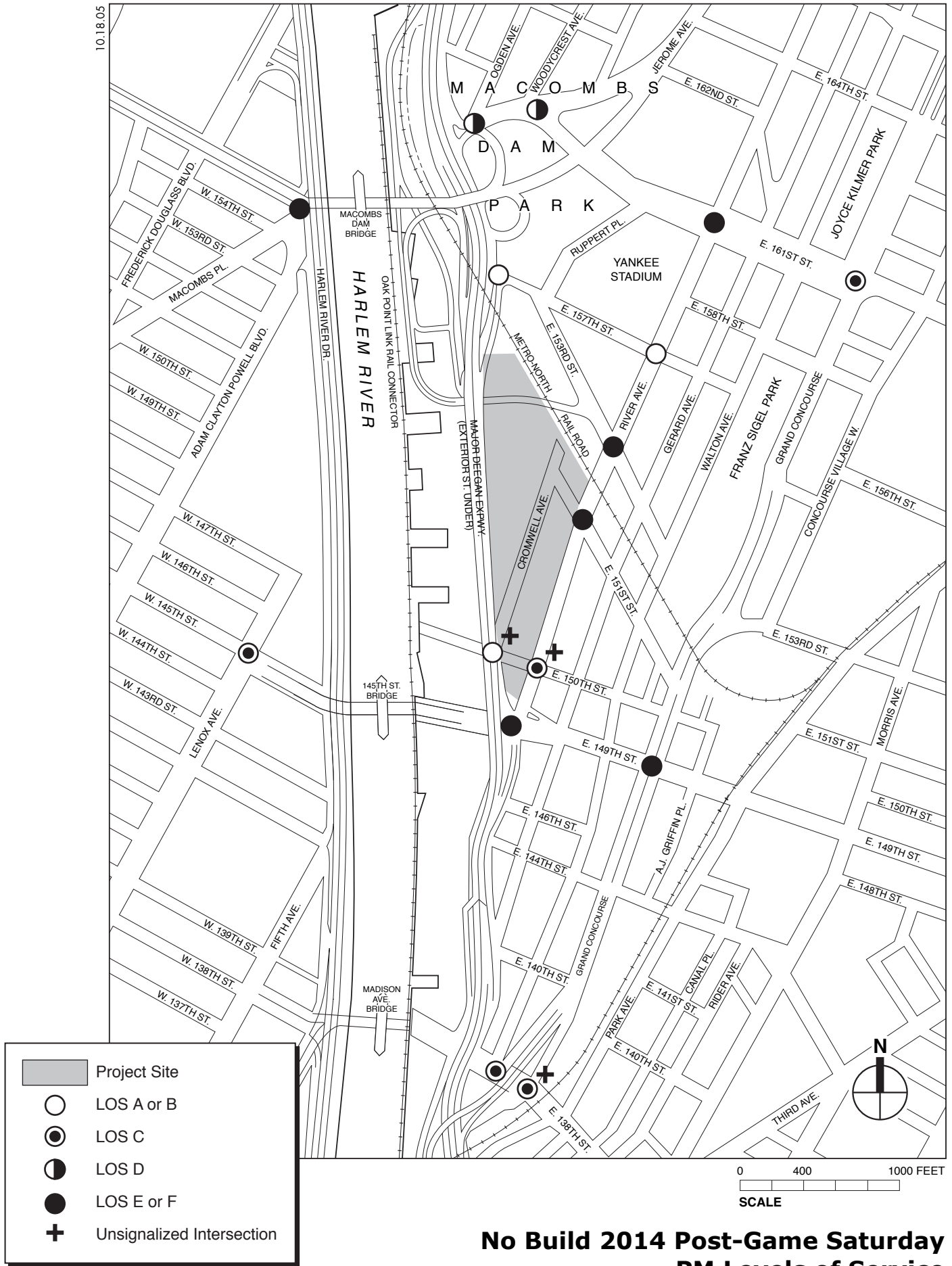


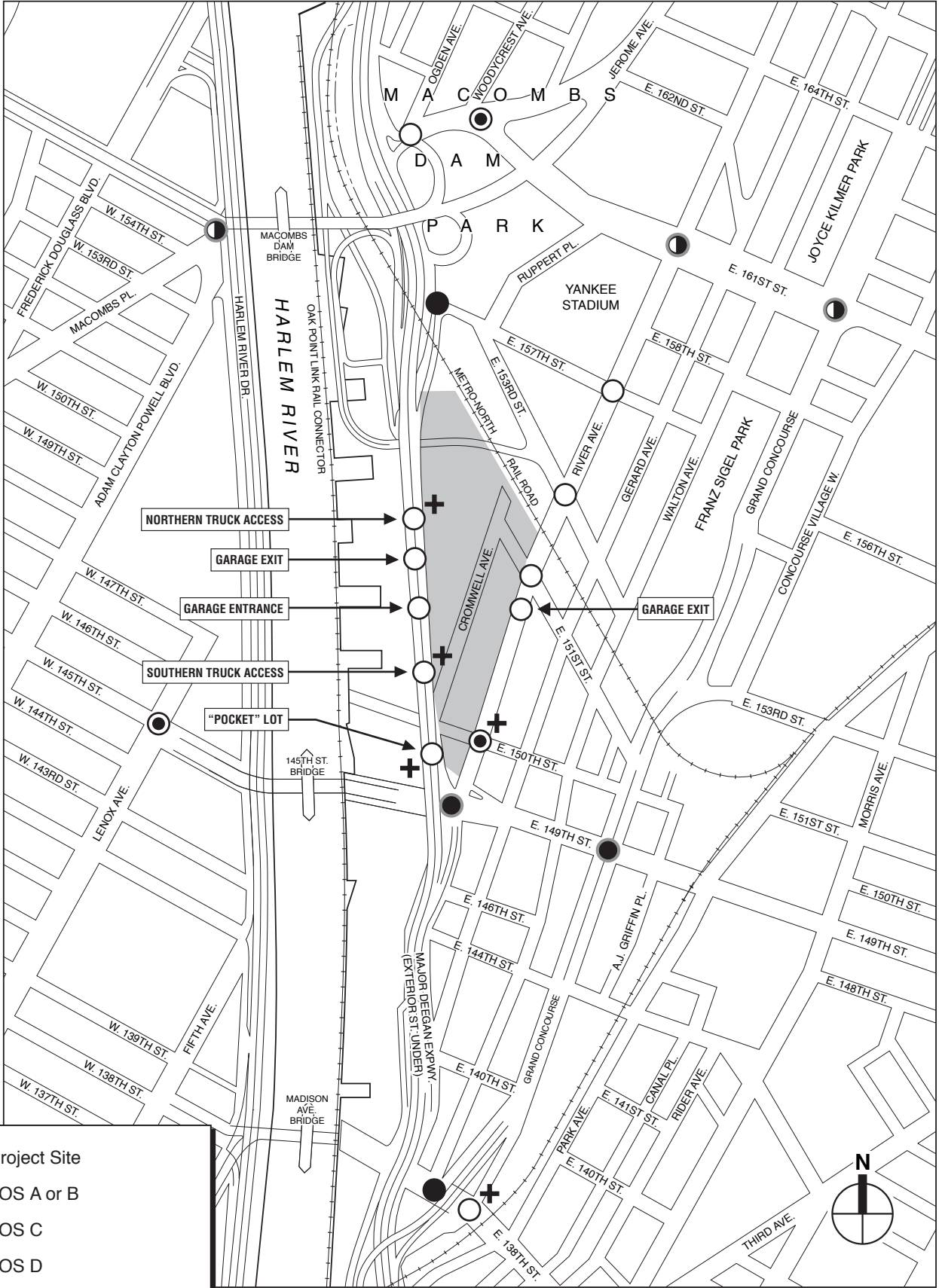




10.21.05



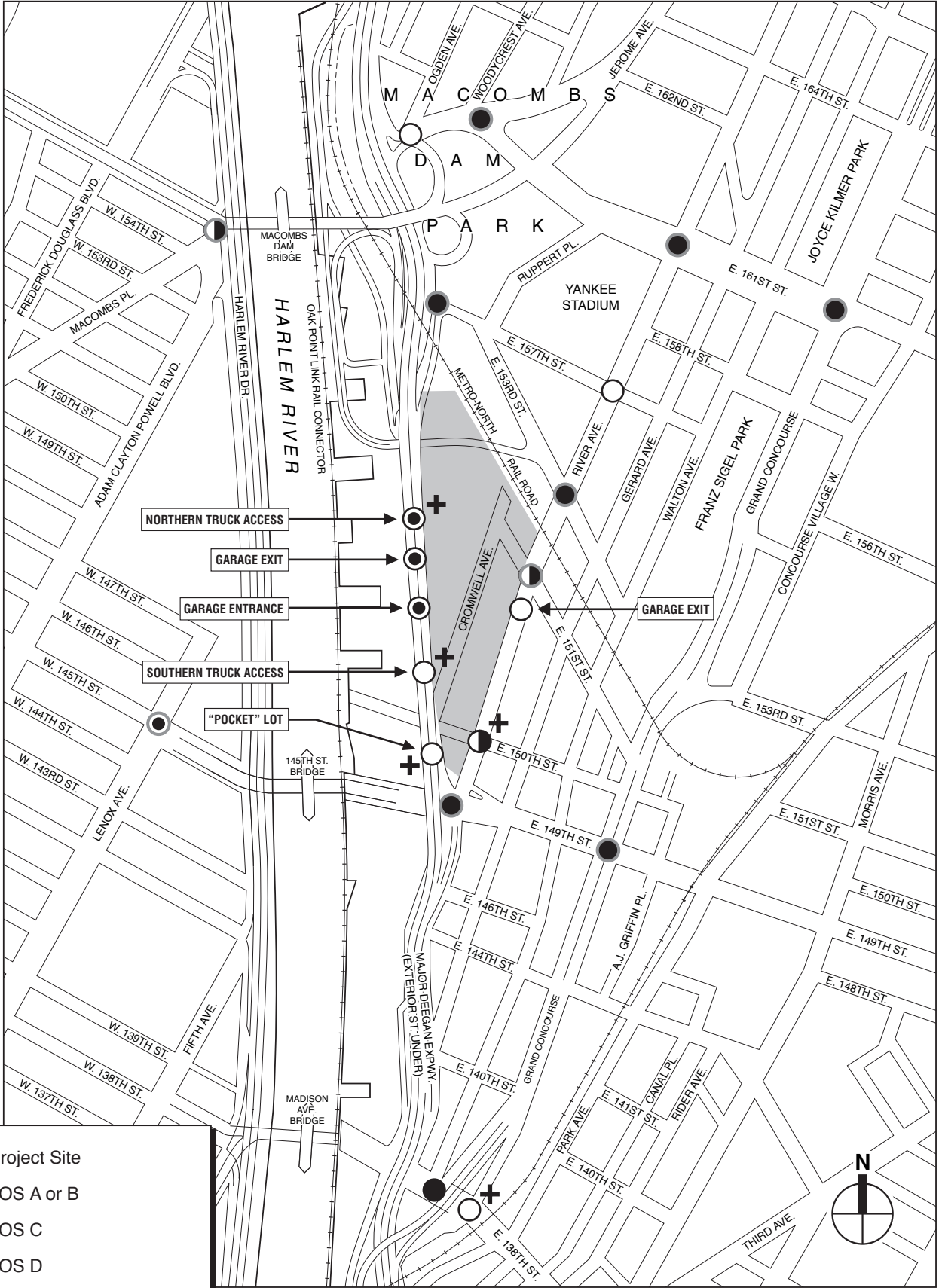




	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2009 Non-Game Weekday
Midday Levels of Service**

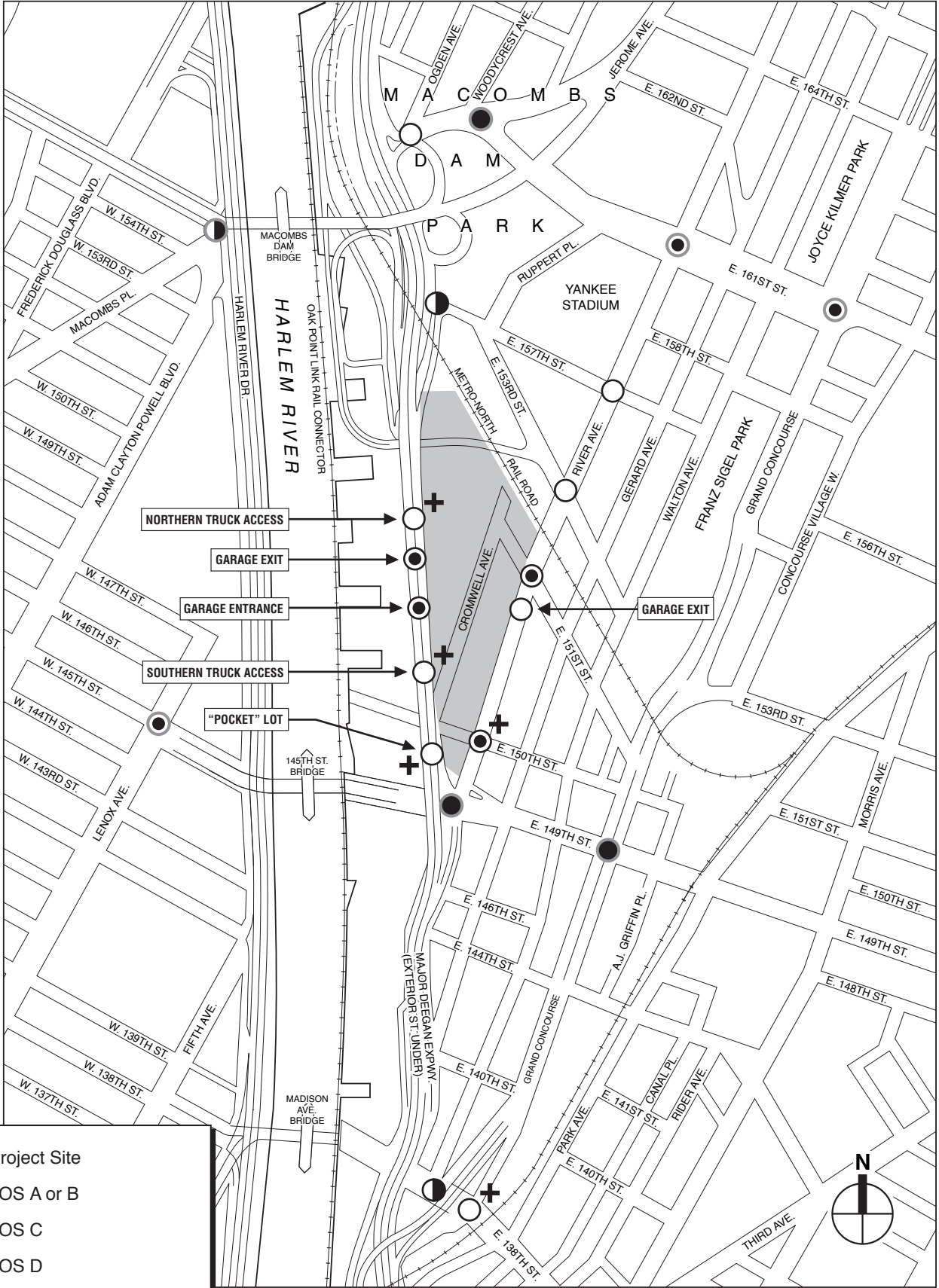


	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2009 Non-Game Weekday
PM Levels of Service**

Figure 16-23

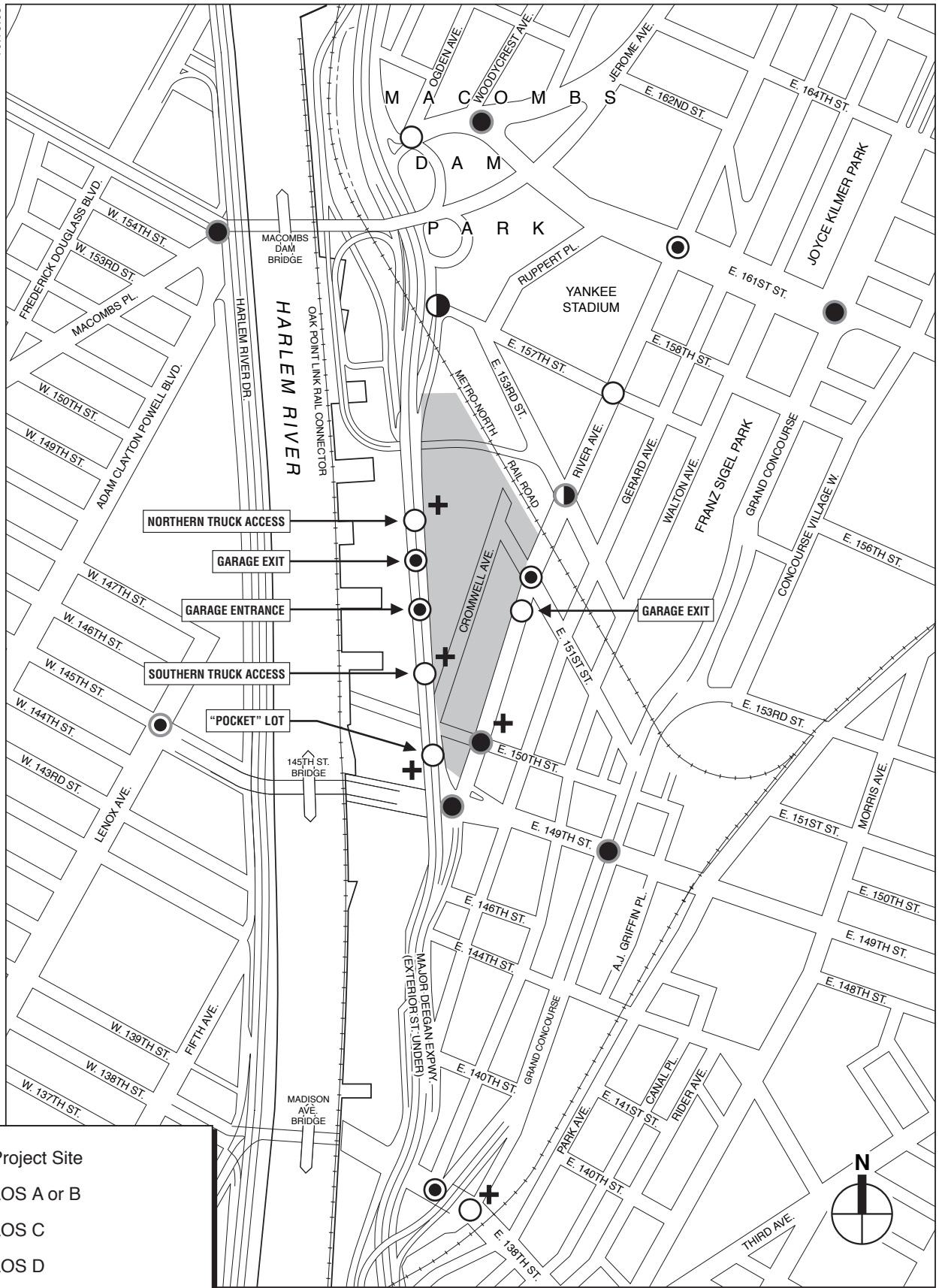


	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2009 Non-Game Saturday
Midday Levels of Service**

Figure 16-24

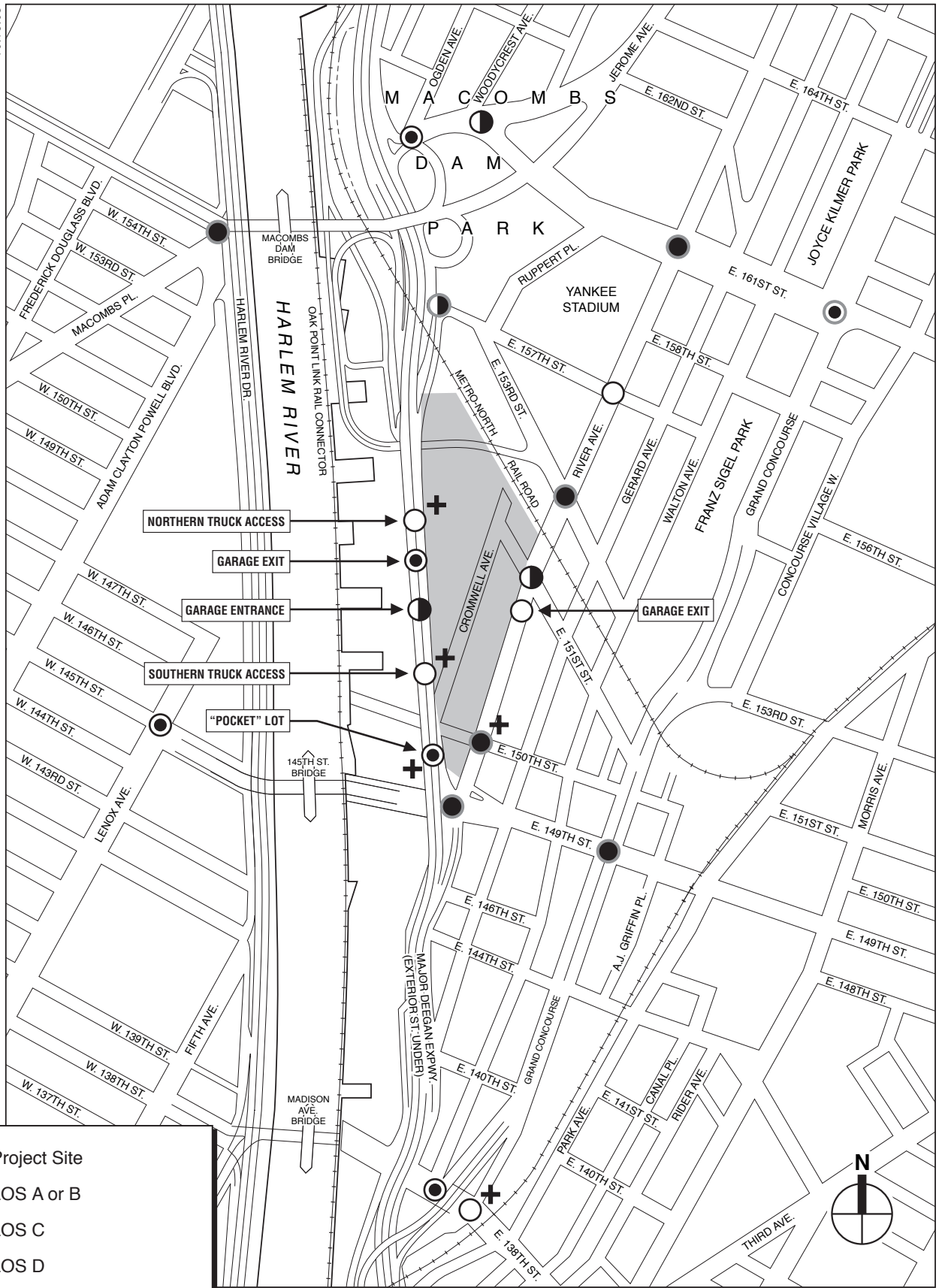


	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2009 Pre-Game Weekday
PM Levels of Service**

Figure 16-25

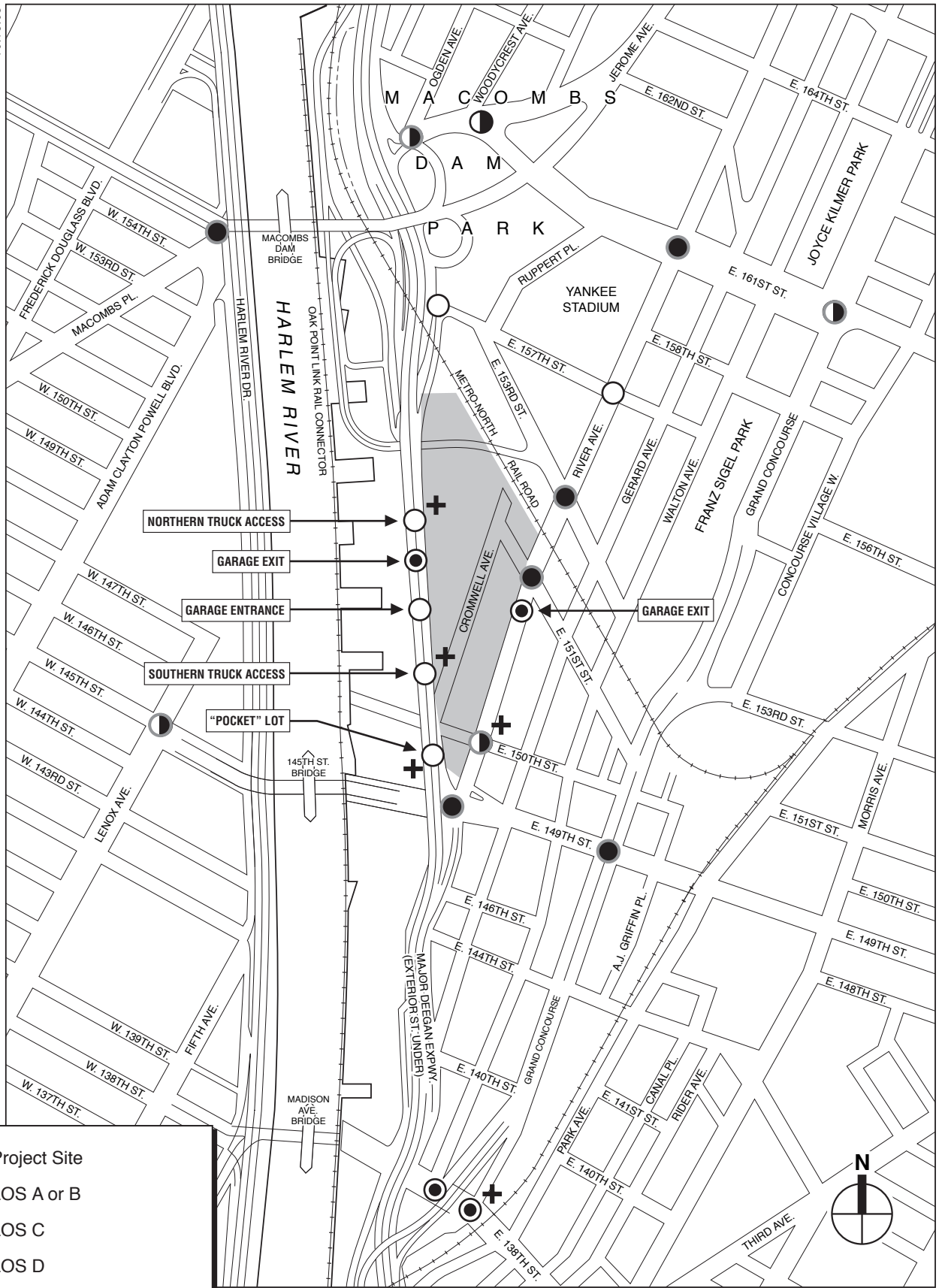


	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2009 Pre-Game Saturday
Midday Levels of Service**

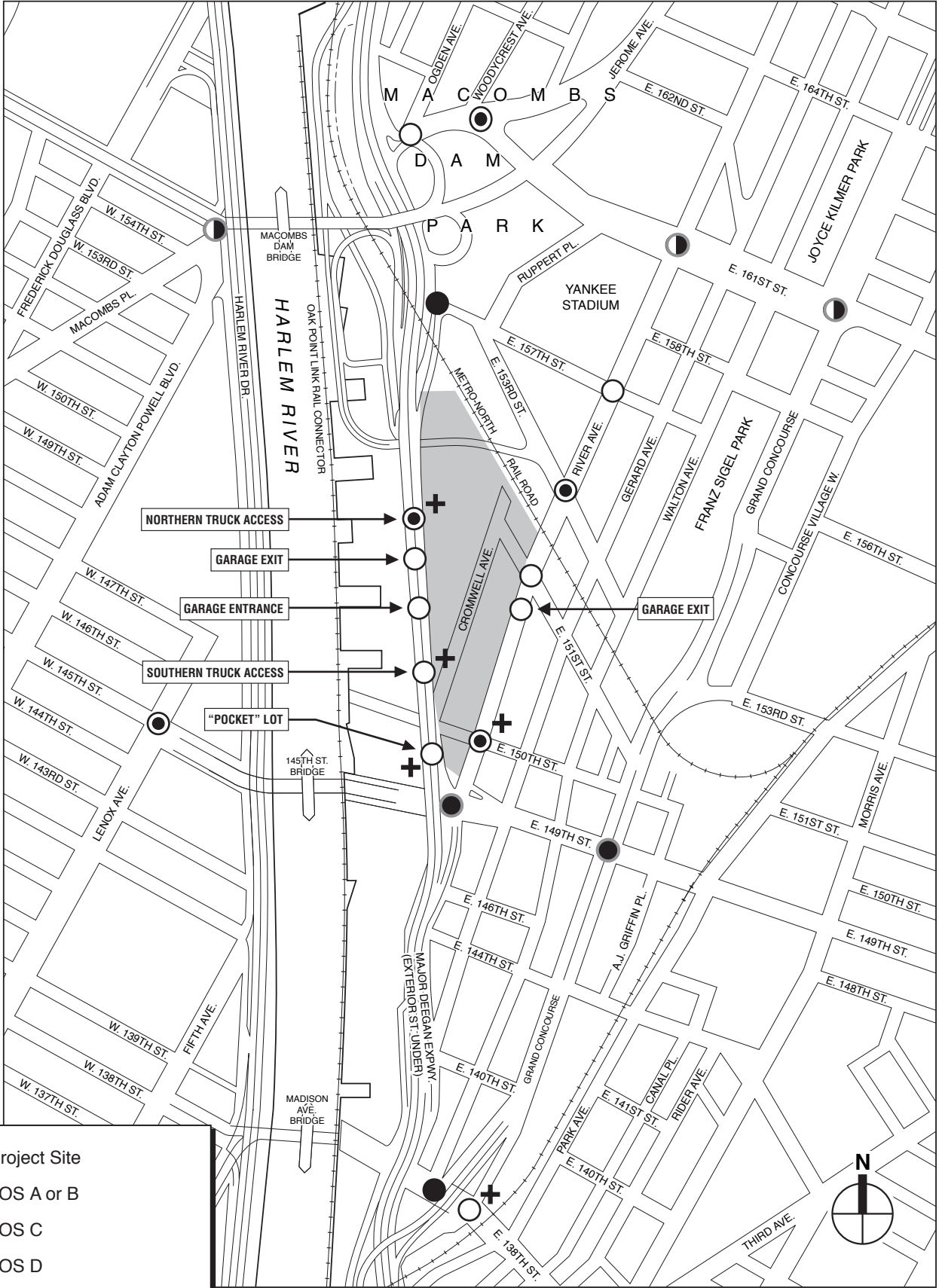
Figure 16-26



	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2009 Post-Game Saturday
PM Levels of Service**
Figure 16-27

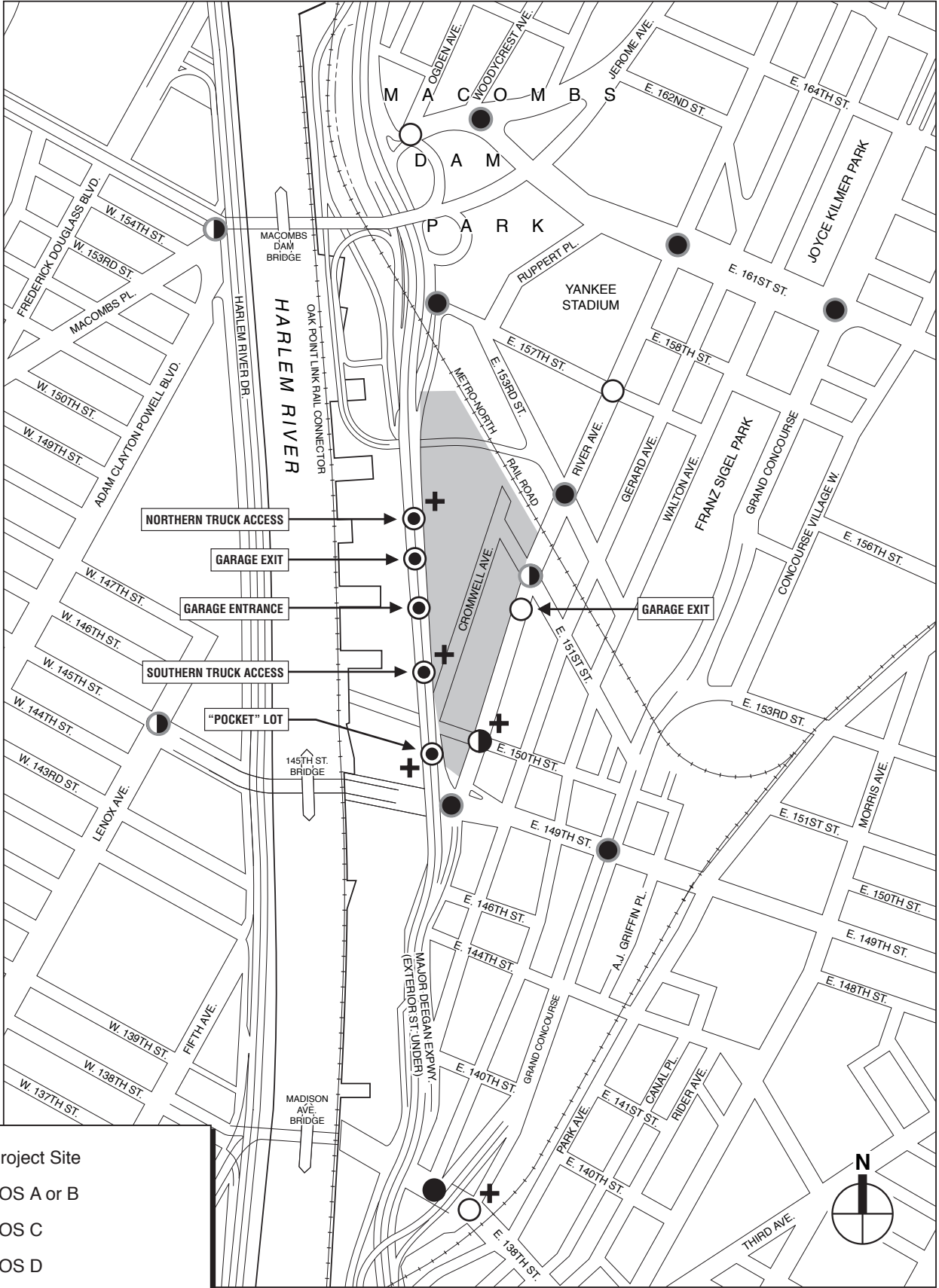


	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



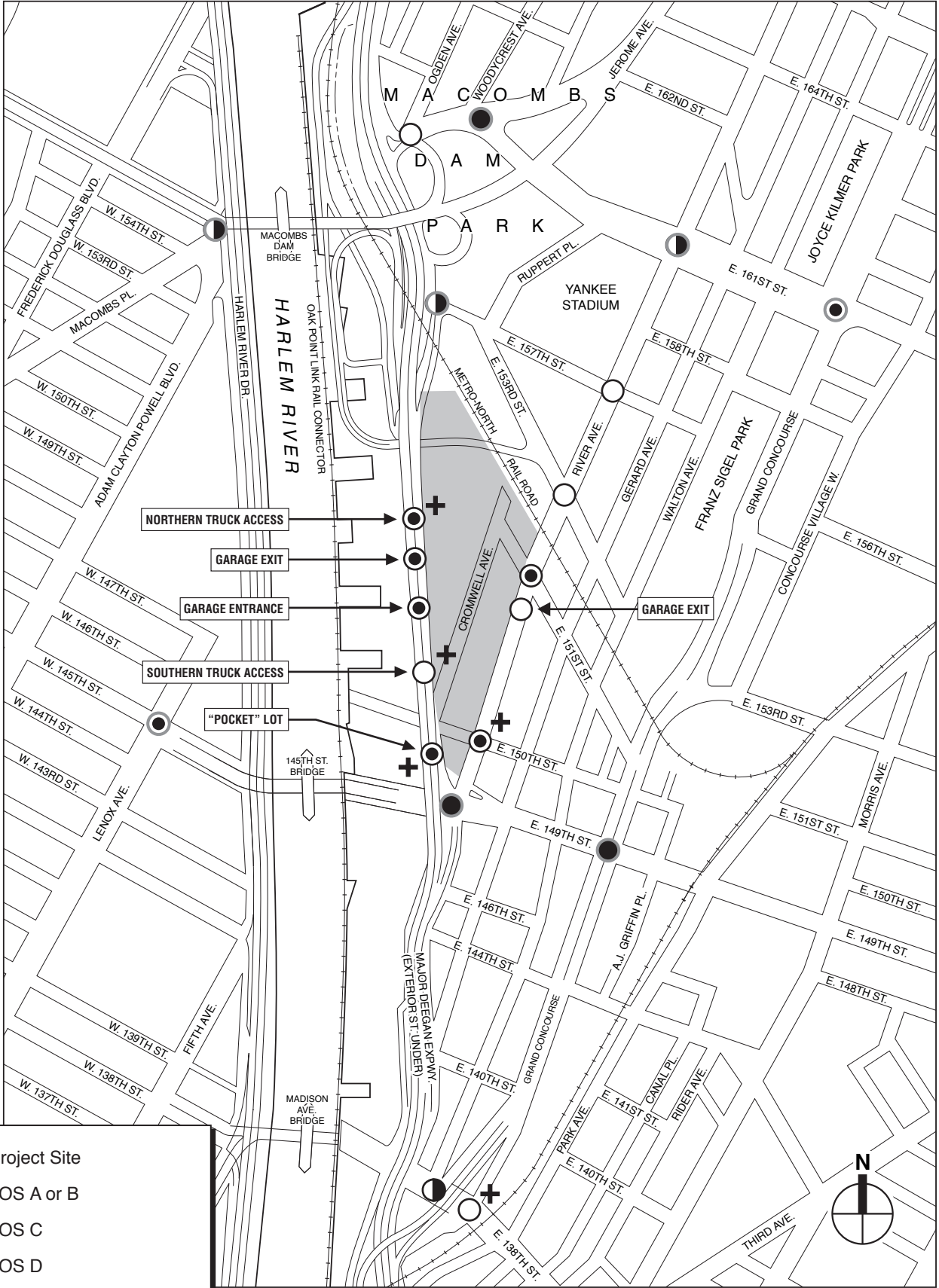
**Build 2014 Non-Game Weekday
Midday Levels of Service**

Figure 16-28



	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact

**Build 2014 Non-Game Weekday
PM Levels of Service**
Figure 16-29

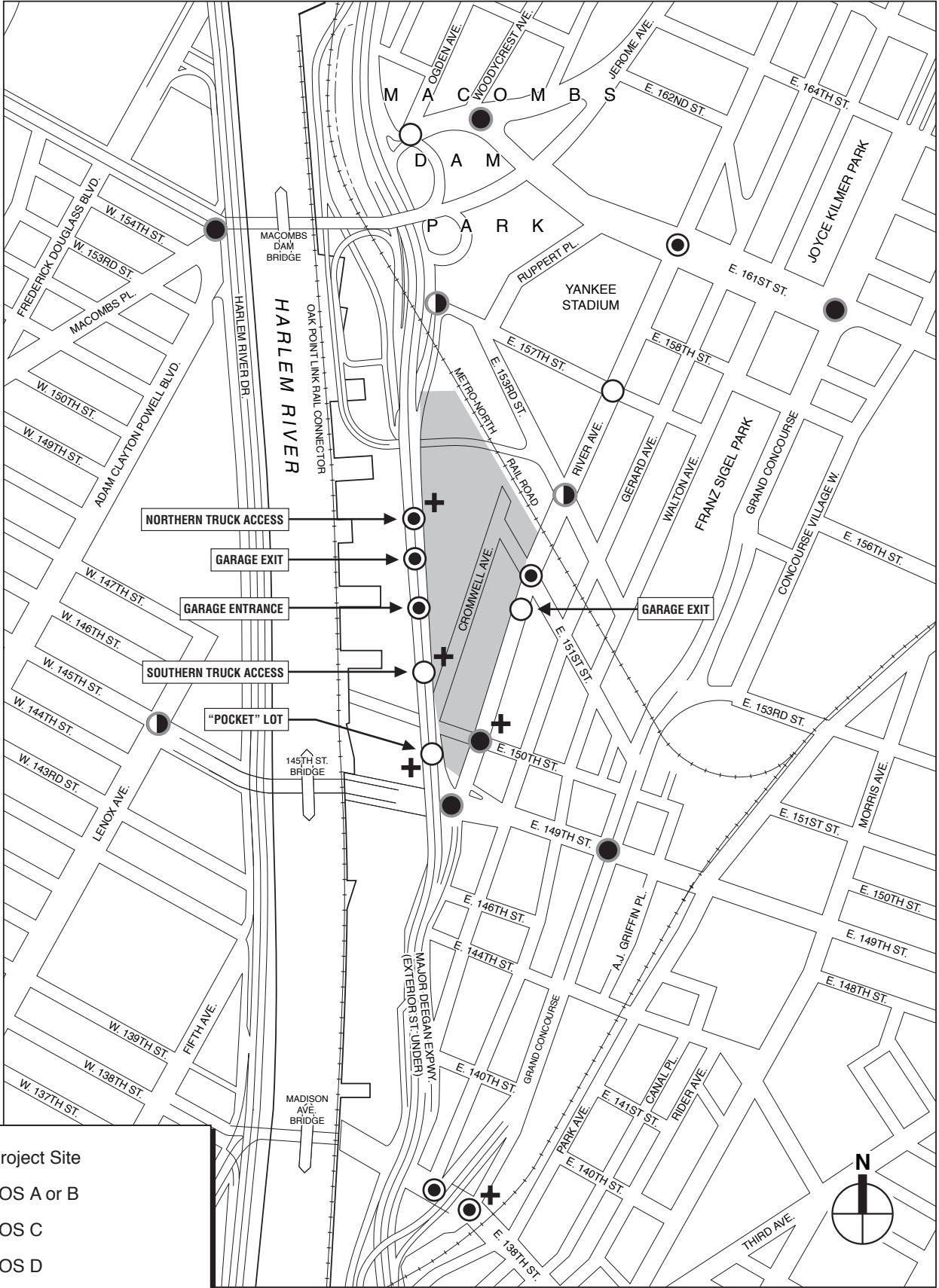


	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2014 Non-Game Saturday
Midday Levels of Service**

Figure 16-30



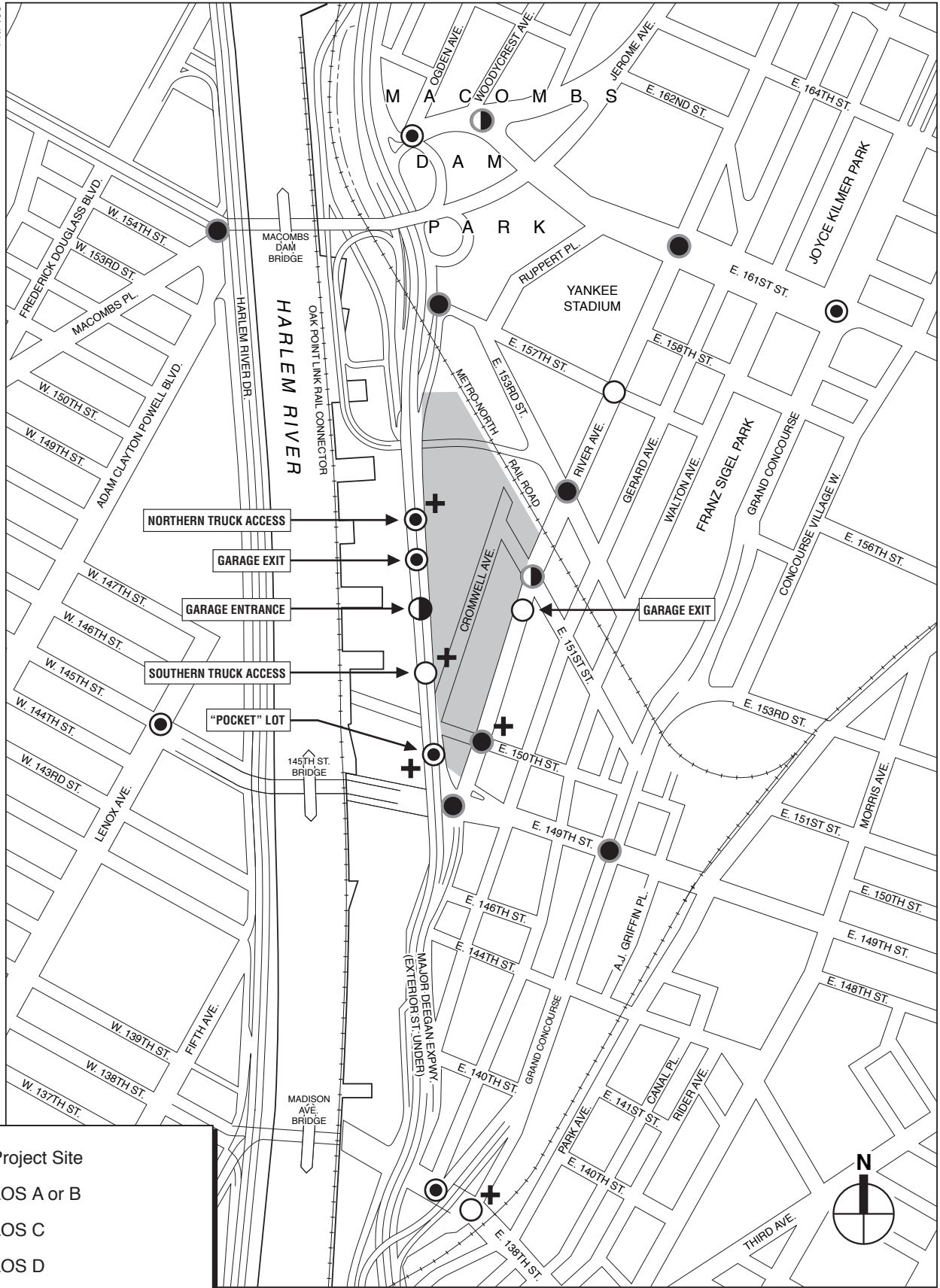
	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact










**Build 2014 Pre-Game Weekday
PM Levels of Service**

Figure 16-31

11.7.05

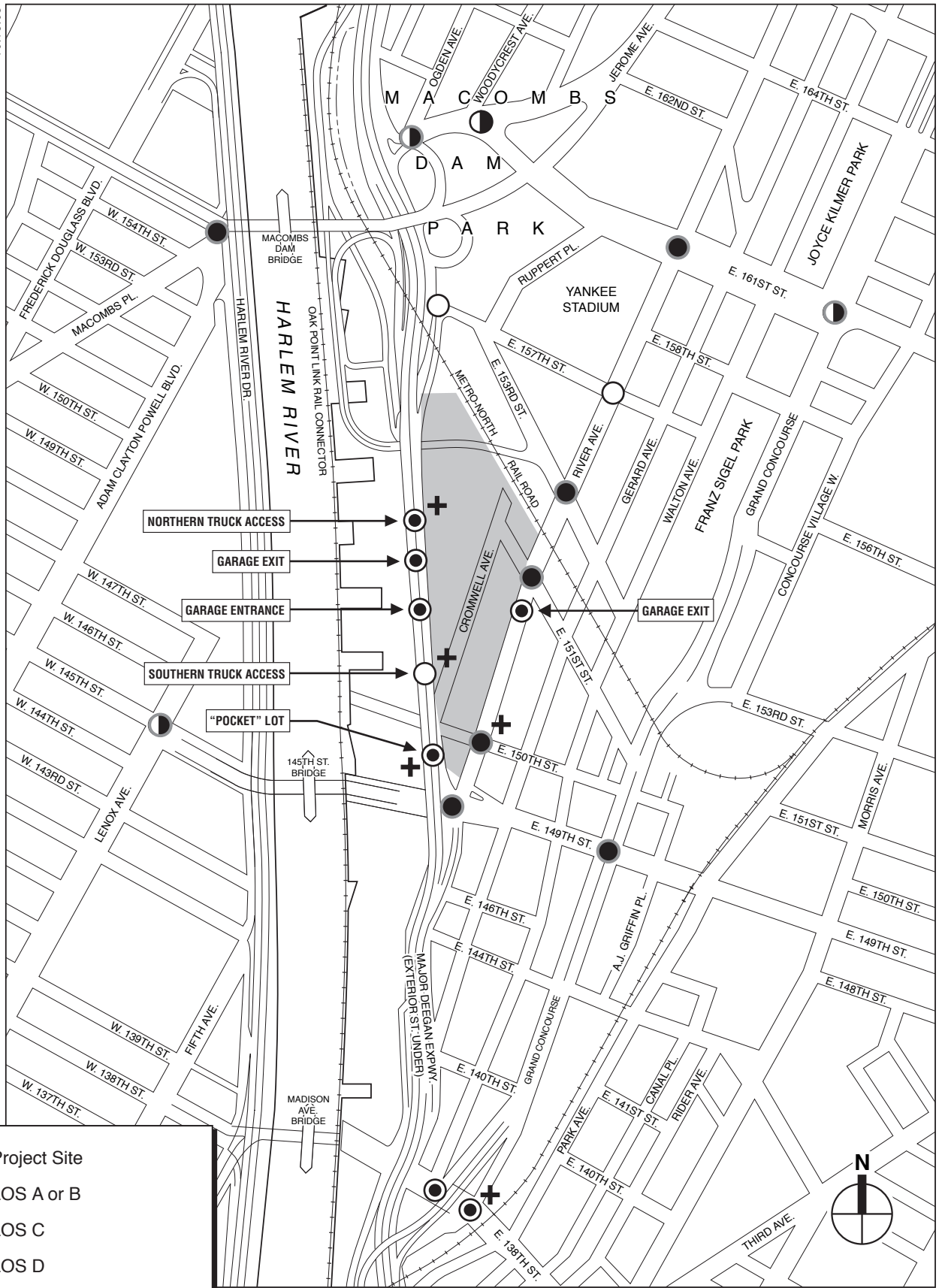


	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2014 Pre-Game Saturday
Midday Levels of Service**

Figure 16-32



	Project Site
	LOS A or B
	LOS C
	LOS D
	LOS E or F
	Unsignalized Intersection
	Significant Impact



**Build 2014 Post-Game Saturday
PM Levels of Service**

Figure 16-33

