

A. INTRODUCTION

This chapter discusses the potential traffic and parking impacts associated with the proposed Melrose Commons Urban Renewal Area (URA) project. Potential impacts to transit and pedestrian facilities are described in Chapter 15, “Transit and Pedestrians.” Analysis results show that the proposed and future actions would result in significant adverse traffic impacts at seven intersections during the AM peak hour, five intersections during the midday peak hour, and eleven intersections during the PM peak hour. There would be no significant parking impacts. Measures that would mitigate the traffic impacts are discussed in Chapter 20, “Mitigation.”

FRAMEWORK FOR ANALYSIS

As discussed in Chapter 2, “Land Use, Zoning and Public Policy,” 458 residential units and 7,000 gross square feet (s.f.) of retail space have already been constructed and occupied within the Melrose Commons URA, and traffic generated by these completed projects is included in the traffic networks developed for the 2005 existing condition. An additional 1,411 residential units and 81,400 s.f. of retail space are either currently under construction or designated for development.¹ Traffic generated by these projects is included in the 2009 “No Build” condition, which also incorporates changes in the roadway network included as part of the Melrose Commons URA, as well as changes required by other projects in the vicinity. The proposed and future actions would include 1,770 new dwelling units, 99,900 s.f. of neighborhood retail space, a 120,000 s.f. campus for Boricua College, and 20,000 s.f. of space to be used for community facilities. Traffic generated by these projects is superimposed onto the 2009 No Build volumes for the determination of potential traffic impacts.

B. METHODOLOGY

The operation of signalized intersections in the study area was analyzed by applying the methodologies presented in the 2000 *Highway Capacity Manual (HCM)* using the latest version of the *Highway Capacity Software (HCS)*. The *HCM* procedure evaluates signalized intersections for average delay per vehicle and level of service (LOS).

LOS for the signalized intersections is based on the average stopped delay per vehicle for the various lane group movements in the intersection. This delay is the basis for an LOS determination for individual lane groups, the approaches, and the overall intersection. The LOS's are defined as follows:

¹ The 1,411 residential units analyzed in the no Build condition for this chapter include 80 units at Villa Hermosa that were completed and occupied while the traffic analysis was underway.

Level of Service Criteria for Signalized Intersections

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

Although the *HCM* methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS as defined in the *HCM*. A high v/c ratio indicates substantial traffic passing through an intersection, but a high v/c ratio combined with low average delay actually represents the most efficient condition in terms of traffic engineering standards, where an approach or the whole intersection processes traffic close to its theoretical maximum with minimal delay. However, very high v/c ratios, especially those approaching or greater than 1.0, are often correlated with a deteriorated LOS. Other important variables affecting delay include cycle length, progression, and green time.

LOS A and B indicate good operating conditions with minimal delay. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition in which congestion levels are more noticeable and individual cycle failures (when motorists may have to wait for more than one green phase to clear the intersection) can occur. Conditions at LOS E and F reflect poor service levels when cycle breakdowns are frequent. The *HCM* methodology also provides for a summary of the total intersection operating conditions. The analysis chooses the two critical movements (the worst case from each roadway) and calculates a summary critical v/c ratio, delay, and LOS. In New York City, the midpoint of LOS D (45 seconds of delay) is generally perceived as the threshold between acceptable and unacceptable operations.

C. EXISTING CONDITIONS

STUDY AREA

To assess the traffic impacts associated with the proposed and future actions, an overall study area was defined that considers the location of the proposed and future actions, primary access routes to and from the site, and key intersections likely to be affected by project-generated trips. The traffic study area, located in the Melrose section of the Bronx, is bounded by East 165th Street to the north, East 149th Street to the south, Prospect Avenue to the east, and the Grand Concourse to the west. As shown in Figure 14-1, the study area consists of a network of 20 intersections, as follows:

- East 165th Street at the Webster/Melrose/Brook/Park Avenue intersection;
- Boston Post Road at Third Avenue;
- East 163rd Street at Melrose Avenue, Washington Avenue, Third Avenue, and Prospect Avenue;

- *Analysis Intersection*



- East 161st Street at the Grand Concourse, Concourse Village West, Concourse Village East, Park Avenue southbound, Park Avenue northbound, Melrose Avenue, and Elton Avenue;
- East 156th Street at Park Avenue/Concourse Village East, Melrose Avenue, Third Avenue, and St. Ann's Avenue; and
- East 149th Street at Morris Avenue, Melrose/Third/Willis Avenues, and St. Ann's Avenue.

STUDY AREA INTERSECTION AND ROADWAY CHARACTERISTICS

The roadway system surrounding the project site is an irregular grid of north-south avenues and east-west cross streets bisected by the Metro-North Railroad, which runs north-south adjacent to Park Avenue and has a station just north of East 161st Street. In addition, the study area includes a number of "superblocks" that form boundaries to housing projects and government building complexes.

The major roadways in the study area are described below:

- *Grand Concourse* is a major two-way, north-south arterial that carries the highest traffic volumes in the study area. South of East 161st, the Concourse provides three travel lanes and one parking lane in each direction, with a center median between northbound and southbound traffic. North of East 161st Street, the roadway has a center main roadway consisting of two travel lanes in each direction with turning pockets at major intersections. Adjacent to the main roadway are northbound and southbound service roads with two travel lanes and a parking lane in each direction.
- *East 161st Street* is a major two-way, east-west roadway that provides two travel lanes and a parking lane in each direction. It carries moderate traffic volumes in the study area.
- *East 156th Street* is a minor east-west roadway with a configuration that varies throughout the study area. West of Concourse Village East, the roadway is two-way with one travel lane in each direction and diagonal parking on both sides. Between Concourse Village East and Third Avenue, it provides one-way eastbound travel with parking on both sides. West of Third Avenue, the street operates as a two-way roadway, with a travel lane and a parking lane in each direction.
- *East 149th Street* is a major two-way, east-west roadway that provides two travel lanes and a parking lane in each direction. Exclusive left-turning lanes are provided at its intersection with Morris Avenue. It carries moderate traffic volumes in the study area. The intersection of East 149th Street with Third, Melrose, and Willis Avenues, also known as "the Hub," is a major commercial area in the Bronx.
- *Concourse Village West* is a north-south street with a roadway configuration that varies throughout the study area. South of East 161st Street, it is one-way northbound and provides one effective moving lane and a parking lane on both sides. Two-way travel is permissible north of East 161st Street with one travel lane and a parking lane in each direction.
- *Concourse Village East/Morris Avenue* is a two-way, north-south street that generally provides one effective moving lane in each direction, not including exclusive turning lanes at its intersection with East 156th Street and Park Avenue. Parking is allowed on both sides.
- *Park Avenue* consists of two one-way roadways bordering the depressed Metro-North tracks. North of East 161st Street, Park Avenue is a one-way southbound roadway on the west side

of the tracks. South of East 161st Street, Park Avenue operates as a one-way northbound roadway on the east side of the tracks. Both roadways provide one travel lane each with parking allowed on both sides.

- *Melrose Avenue* is a minor north-south arterial that provides one or two travel lanes and a parking lane in each direction. It carries moderate traffic volumes in the study area.
- *Third Avenue* is a major north-south arterial that provides two travel lanes and a parking lane in each direction. To the south it provides access to Manhattan via the Third and Willis Avenue bridges.
- *St. Ann's Avenue* is a north-south roadway near the eastern edge of the study area. It provides one travel lane and one parking lane in each direction, as well as northbound and southbound bicycle lanes adjacent to the parking lanes.

All 20 analysis locations are controlled by pre-timed traffic signals with 60- to 120-second cycle lengths.

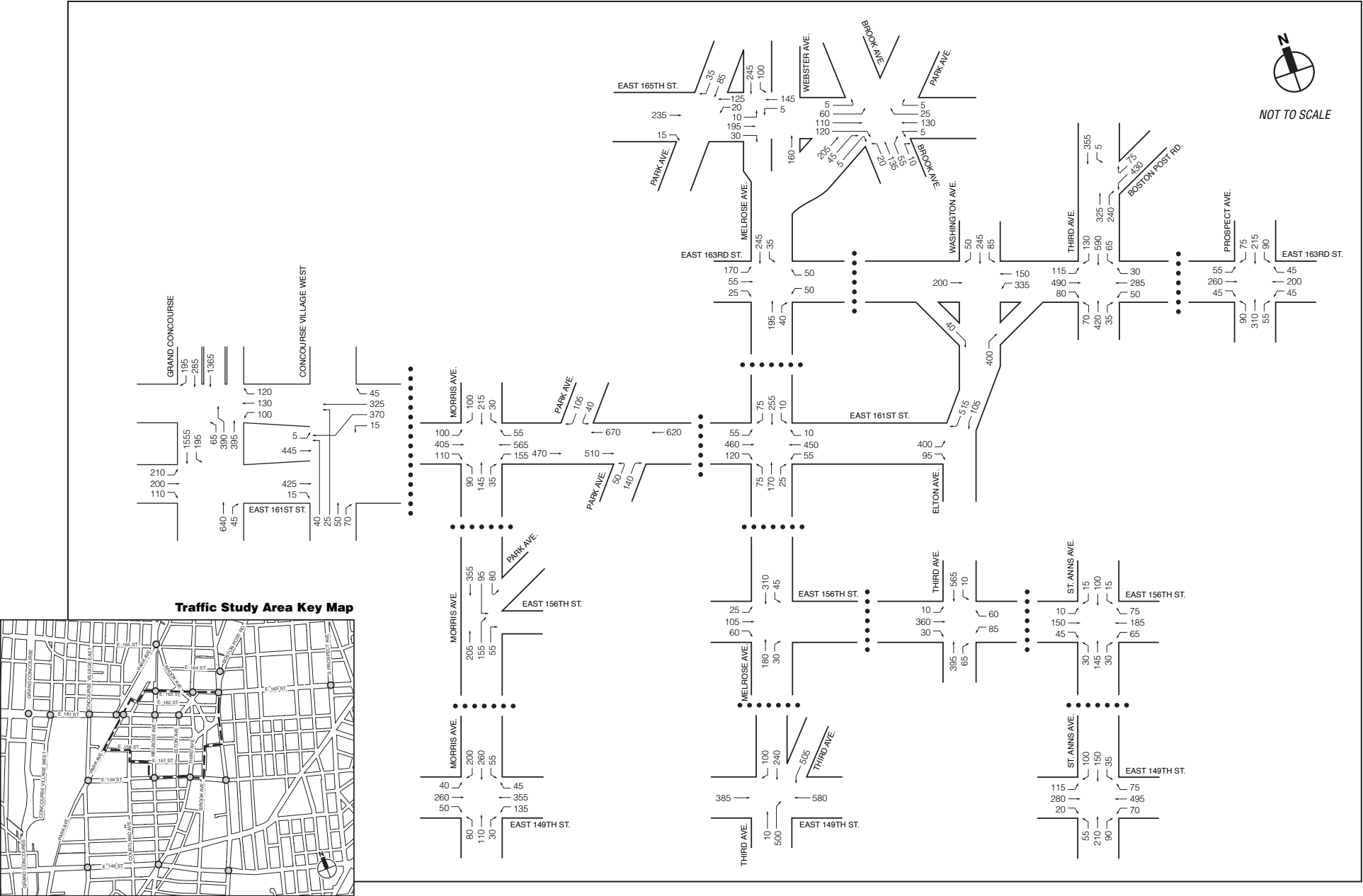
TRAFFIC VOLUMES

Existing traffic volumes were calculated based on traffic data collected in September and October 2005. Automated traffic recorders (ATR's) were placed at key locations for a full week to identify temporal and daily traffic variations. Manual turning movement and vehicle classification counts were conducted at study area intersections during the weekday AM, midday, and PM peak hours. An inventory of the analyzed intersections was performed to determine traffic signal timings, phasing, and cycle lengths, street and curbside signage, pavement markings, and lane dimensions to be used in the calculation of street capacities. Traffic volumes at East 161st Street and the Grand Concourse, presented in the Gateway Center at Bronx Terminal Market FEIS (2005), were used to supplement the above data collection efforts to establish peak hour traffic volumes. Official signal timing data were also collected from the New York City Department of Transportation (NYCDOT) and, on confirmation by field observations, incorporated into the HCS analysis.

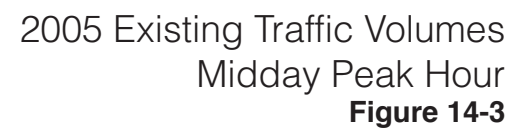
The initial physical inventories showed Concourse Village West as a two-lane roadway both north and south of East 161st Street. Since the collection of traffic volume data, however, the section of Concourse Village West south of East 161st Street has been converted to a one-way northbound roadway. The existing conditions analysis reflects conditions at the time of the data collection, with two-way traffic accommodated on Concourse Village West both north and south of East 161st Street.

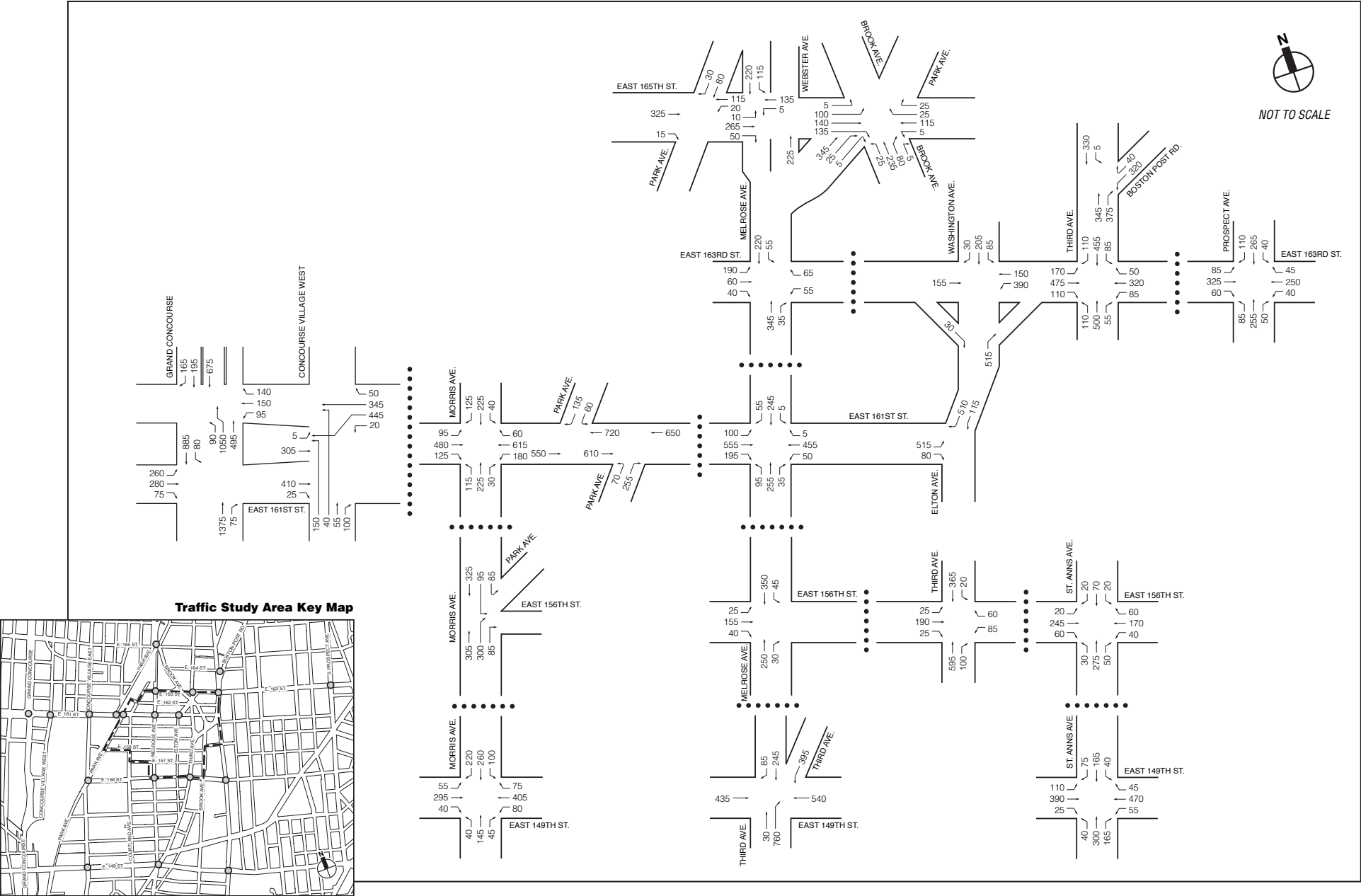
Figures 14-2, 14-3, and 14-4 show the 2005 existing traffic volumes for the weekday AM, midday, and PM peak hours. Based on the data collected, the weekday AM, midday, and PM peak hours of traffic in the study area were determined to take place from 7:45 to 8:45 AM, 12:15 to 1:15 PM, and 4:45 PM to 5:45 PM, respectively. These peak hours of existing traffic correspond closely with the peak hours of project-generated trips, and therefore have been selected as the analysis periods for the proposed and future actions.

Peak hour volumes on the Grand Concourse range from 685 to 1,520 and from 940 to 1,845 vehicles per hour (vph) on the northbound and southbound approaches to East 161st Street, respectively. Two-way volumes range from 440 to 875 vph on Melrose Avenue, from 705 to 1,370 vph on Third Avenue, and from 295 to 750 vph on St. Ann's Avenue. Volumes in both



— Melrose Commons Urban Renewal Area Boundary
○ Analysis Intersection





— Melrose Commons Urban Renewal Area Boundary
○ Analysis Intersection

2005 Existing Traffic Volumes
PM Peak Hour
Figure 14-4

directions range from 685 to 1,695 vph on the East 161st Street/East 163rd Street corridor, from 105 to 585 vph on East 156th Street, and from 805 to 1165 vph on East 149th Street.

LEVEL OF SERVICE

The capacity analysis results for the study area intersections are presented in Table 14-1. Locations with notable service constraints, those operating at mid-LOS D (45.0 seconds per vehicle [spv] of delay) or worse and/or those having v/c ratios of 0.90 or greater, are described below.

AM PEAK HOUR

- *East 165th Street and Park Avenue:* The eastbound approach operates at LOS E with 58.4 spv of delay and a v/c ratio of 0.81. The southbound approach operates at LOS D with 46.1 spv of delay and a v/c ratio of 0.42.
- *East 165th Street and Brook Avenue:* The eastbound shared left-turn and through movement operates at LOS D with 49.5 spv of delay and a v/c ratio of 0.67. The northbound Brook Avenue approach operates at LOS E with 70.7 spv of delay and a v/c ratio of 0.84.
- *East 163rd Street and Prospect Avenue:* The northbound approach operates at LOS F with 88.2 spv of delay and a v/c ratio of 1.05. The southbound approach operates at LOS D with 50.4 spv of delay and a v/c ratio of 0.87.
- *East 156th Street and Third Avenue:* The eastbound approach operates at LOS F with 92.9 spv of delay and a v/c ratio of 1.02. The westbound approach operates at LOS F with 133.2 spv of delay and a v/c ratio of 1.05.
- *East 149th Street and Melrose/Third/Willis Avenues:* The westbound approach operates at LOS D with 51.0 spv of delay and a v/c ratio of 0.82. The southbound Melrose Avenue through movement operates at LOS E with 57.1 spv of delay and a v/c ratio of 0.75. The southbound Melrose Avenue right-turn movement operates at LOS D with 49.1 spv of delay and a v/c ratio of 0.50.
- *East 149th Street and St. Ann's Avenue:* The northbound approach operates at LOS F with 104.1 spv of delay and a v/c ratio of 1.05. The southbound approach operates at LOS E with 72.0 spv of delay and a v/c ratio of 0.90.

MIDDAY PEAK HOUR

- *East 165th Street and Park Avenue:* The eastbound approach operates at LOS F with 98.4 spv of delay and a v/c ratio of 1.05.
- *East 165th Street and Melrose/Webster Avenues:* The eastbound shared through and right-turn movement operates at LOS F with 98.5 spv of delay and a v/c ratio of 1.05.
- *East 165th Street and Brook Avenue:* The eastbound shared left-turn and through movement operates at LOS F with 104.2 spv of delay and a v/c ratio of 1.05. The westbound approach operates at LOS F with 117.6 spv of delay and a v/c ratio of 1.05.

Table 14-1
Signalized Intersections
2005 Existing Conditions Level of Service Analysis

Intersection	Peak Hour											
	AM				MD				PM			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 165th Street & Park Avenue Southbound												
Eastbound	TR	0.81	58.4	E	TR	1.05	98.4	F	TR	0.65	43.9	D
Westbound	L	0.17	35.4	D	L	0.26	40.5	D	L	0.21	38.1	D
	T	0.35	37.0	D	T	0.45	39.2	D	T	0.30	36.1	D
Southbound	TR	0.42	46.1	D	TR	0.34	31.2	C	TR	0.46	47.0	D
	Intersection		49.3	D	Intersection		72.4	E	Intersection		42.8	D
East 165th Street & Melrose/Webster Avenues												
Eastbound	L	0.05	32.3	C	L	0.08	32.8	C	L	0.05	32.4	C
	TR	0.62	44.8	D	TR	1.05	98.5	F	TR	0.63	43.5	D
Westbound	L	0.03	32.1	C	L	0.09	33.9	C	L	0.05	32.6	C
	TR	0.40	38.2	D	TR	0.53	41.6	D	TR	0.35	37.1	D
Northbound	T	0.15	25.2	C	T	0.19	17.9	B	T	0.24	26.3	C
Southbound	L	0.35	44.2	D	L	0.29	30.3	C	L	0.45	46.7	D
	T	0.14	9.8	A	T	0.09	4.7	A	T	0.14	9.8	A
	Intersection		30.5	C	Intersection		47.1	D	Intersection		31.3	C
East 165th Street & Brook Avenue												
Eastbound	LT	0.67	49.5	D	LT	1.05	104.2	F	LT	0.77	54.2	D
	R	0.34	37.0	D	R	0.50	41.0	D	R	0.37	37.6	D
Westbound	LTR	0.39	37.6	D	LTR	1.05	117.6	F	LTR	0.63	47.4	D
Northbound (Melrose)	TR	0.47	30.7	C	TR	0.37	20.4	C	TR	0.69	37.0	D
Northbound (Brook)	LTR	0.90	80.9	F	LTR	0.73	45.3	D	LTR	1.05	109.9	F
	Intersection		47.3	D	Intersection		67.7	E	Intersection		60.1	E
Boston Post Road & 3rd Avenue												
Westbound	L	0.67	33.4	C	L	0.27	18.2	B	L	0.43	20.7	C
	R	0.14	22.2	C	R	0.06	15.6	B	R	0.06	15.6	B
Northbound	TR	0.43	20.1	C	TR	0.55	28.3	C	TR	0.70	32.3	C
Southbound	LT	0.26	17.6	B	LT	0.23	23.0	C	LT	0.30	23.9	C
	Intersection		23.6	C	Intersection		24.7	C	Intersection		27.2	C
East 163rd Street & Melrose Avenue												
Eastbound	LTR	0.38	23.0	C	LTR	0.50	25.4	C	LTR	0.47	24.7	C
Westbound	LR	0.17	19.7	B	LR	0.18	19.8	B	LR	0.21	20.3	C
Northbound	TR	0.33	21.9	C	TR	0.38	22.8	C	TR	0.55	26.4	C
Southbound	LT	0.35	22.2	C	LT	0.37	22.5	C	LT	0.44	24.0	C
	Intersection		22.1	C	Intersection		23.3	C	Intersection		24.6	C
East 163rd Street & Washington Avenue												
Eastbound	T	0.25	20.6	C	T	0.26	20.7	C	T	0.19	19.8	B
Westbound	L	0.62	31.3	C	L	0.55	28.6	C	L	0.62	30.8	C
	LT	0.39	23.2	C	LT	0.34	22.2	C	LT	0.44	24.1	C
Southbound	LTR	0.32	21.3	C	LTR	0.17	19.3	B	LTR	0.26	20.5	C
	Intersection		23.9	C	Intersection		22.8	C	Intersection		24.1	C
East 163rd Street & 3rd Avenue												
Eastbound	LTR	0.78	36.7	D	LTR	0.76	36.2	D	LTR	1.00	67.3	E
Westbound	LTR	0.64	44.8	D	LTR	0.78	52.3	D	LTR	0.99	81.8	F
Northbound	LTR	0.50	21.6	C	LTR	0.46	20.8	C	LTR	0.73	28.5	C
Southbound	LTR	0.60	23.3	C	LTR	0.42	20.0	B	LTR	0.64	24.9	C
	Intersection		30.1	C	Intersection		31.4	C	Intersection		48.8	D

Table 14-1 (continued)
Signalized Intersections
2005 Existing Conditions Level of Service Analysis

Intersection	Peak Hour											
	AM				MD				PM			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 163rd Street & Prospect Avenue												
Eastbound	LTR	0.34	18.8	B	LTR	0.33	14.7	B	LTR	0.43	16.1	B
Westbound	LTR	0.27	17.9	B	LTR	0.23	13.7	B	LTR	0.29	14.3	B
Northbound	LTR	1.05	88.2	F	LTR	0.69	30.1	C	LTR	0.91	51.0	D
Southbound	LTR	0.87	50.4	D	LTR	0.63	26.8	C	LTR	0.71	29.3	C
	Intersection		48.0	D	Intersection		21.4	C	Intersection		27.6	C
East 161st Street & Grand Concourse Northern Intersection												
Westbound	LTR	0.49	36.1	D	LTR	0.43	31.4	C	LTR	0.56	37.6	D
Northbound Main	L	0.30	18.5	B	L	0.14	10.0	A	L	0.27	10.2	B
	T	0.23	7.7	A	T	0.24	9.9	A	T	0.63	11.7	B
Northbound Service	T	0.24	7.8	A	T	0.25	10.0	A	T	0.31	8.3	A
Southbound Main	T	0.68	20.6	C	T	0.30	17.9	B	T	0.34	15.6	B
Southbound Service	T	0.34	16.2	B	T	0.22	17.4	B	T	0.24	14.9	B
	R	0.36	17.0	B	R	0.34	19.7	B	R	0.31	16.2	B
	Intersection		18.4	B	Intersection		17.0	B	Intersection		15.7	B
East 161st Street & Grand Concourse Southern Intersection												
Eastbound	LTR	0.73	42.8	D	LTR	0.58	34.5	C	LTR	0.85	49.7	D
Northbound	TR	0.30	8.0	A	TR	0.34	10.6	B	TR	0.65	11.6	B
Southbound	L	0.81	43.4	D	L	0.29	20.5	C	L	0.96	105.7	F
	T	0.82	24.9	C	T	0.42	19.3	B	T	0.48	17.3	B
	Intersection		25.4	C	Intersection		19.8	B	Intersection		23.5	C
East 161st Street & Concourse Village West												
Eastbound Main	LT	0.32	11.9	B	LT	0.17	10.5	B	LT	0.22	10.9	B
Eastbound Service	TR	0.29	11.6	B	TR	0.23	11.0	B	TR	0.28	11.5	B
Westbound	LTR	0.38	12.4	B	LTR	0.35	12.0	B	LTR	0.43	12.9	B
Northbound	LTR	0.39	24.8	C	LTR	0.29	23.2	C	LTR	0.71	34.2	C
	Intersection		13.3	B	Intersection		12.5	B	Intersection		16.0	B
East 161st Street & Concourse Village East												
Eastbound	LTR	0.66	18.0	B	LTR	0.61	16.8	B	LTR	0.69	18.8	B
Westbound	LTR	0.76	21.0	C	LTR	0.58	15.8	B	LTR	0.83	25.0	C
Northbound	LTR	0.79	42.0	D	LTR	0.86	50.2	D	LTR	1.05	90.6	F
Southbound	LTR	0.73	35.0	C	LTR	0.68	33.2	C	LTR	0.82	41.2	D
	Intersection		25.3	C	Intersection		24.7	C	Intersection		36.4	D
East 161st Street & Park Avenue Southbound												
Eastbound	T	0.29	11.5	B	T	0.27	11.4	B	T	0.34	12.0	B
Westbound	T	0.42	12.9	B	T	0.34	12.1	B	T	0.45	13.3	B
Southbound	LR	0.29	23.0	C	LR	0.23	22.0	C	LR	0.40	24.7	C
	Intersection		13.5	B	Intersection		12.8	B	Intersection		14.3	B
East 161st Street & Park Avenue Northbound												
Eastbound	T	0.32	11.9	B	T	0.30	11.6	B	T	0.39	12.6	B
Westbound	T	0.37	12.3	B	T	0.29	11.5	B	T	0.39	12.5	B
Northbound	LR	0.39	24.5	C	LR	0.40	24.6	C	LR	0.67	32.0	C
	Intersection		13.9	B	Intersection		13.8	B	Intersection		16.6	B

Table 14-1 (continued)
Signalized Intersections
2005 Existing Conditions Level of Service Analysis

Intersection	Peak Hour													
	AM				MD				PM					
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS		
East 161st Street & Melrose Avenue														
Eastbound	LTR	0.55	25.4	C	LTR	0.51	24.5	C	LTR	0.87	39.4	D		
Westbound	LTR	0.49	24.4	C	LTR	0.42	23.1	C	LTR	0.55	25.8	C		
Northbound	LTR	0.21	19.8	B	LTR	0.24	20.2	C	LTR	0.31	21.1	C		
Southbound	LTR	0.45	24.2	C	LTR	0.34	22.0	C	LTR	0.42	23.4	C		
Intersection			24.0	C	Intersection			22.9	C	Intersection			30.2	C
East 161st Street & Elton Street														
Eastbound	TR	0.33	15.0	B	TR	0.28	14.3	B	TR	0.40	15.8	B		
Westbound	L	0.19	27.2	C	L	0.19	27.2	C	L	0.21	27.5	C		
	T	0.60	20.5	C	T	0.47	17.7	B	T	0.60	20.5	C		
Intersection			18.7	B	Intersection			17.2	B	Intersection			18.9	B
East 156th Street & Concourse Village East/Park Avenue														
Northbound	TR	0.27	9.1	A	TR	0.28	9.2	A	TR	0.44	10.5	B		
Southbound	L	0.48	14.0	B	L	0.36	11.8	B	L	0.70	24.9	C		
	T	0.46	11.6	B	T	0.42	11.1	B	T	0.41	11.0	B		
Intersection			10.9	B	Intersection			10.2	B	Intersection			12.8	B
East 156th Street & Melrose Avenue														
Eastbound	LTR	0.60	44.1	D	LTR	0.46	40.5	D	LTR	0.68	47.3	D		
Northbound	TR	0.20	7.4	A	TR	0.19	7.3	A	TR	0.27	8.0	A		
Southbound	LT	0.35	8.8	A	LT	0.34	8.7	A	LT	0.39	9.3	A		
Intersection			17.3	B	Intersection			15.0	B	Intersection			18.2	B
East 156th Street & 3rd Avenue														
Eastbound	LTR	1.02	92.9	F	LTR	0.42	40.1	D	LTR	0.60	45.3	D		
Westbound	LR	1.05	133.2	F	LR	0.36	40.6	D	LR	0.82	73.9	E		
Northbound	TR	0.45	11.2	B	TR	0.41	10.7	B	TR	0.64	14.8	B		
Southbound	LT	0.54	12.8	B	LT	0.27	9.1	A	LT	0.36	10.0	B		
Intersection			43.6	D	Intersection			17.8	B	Intersection			24.4	C
East 156th Street & St Anns Avenue														
Eastbound	LTR	0.41	16.9	B	LTR	0.35	15.9	B	LTR	0.65	22.5	C		
Westbound	LTR	0.55	19.0	B	LTR	0.33	15.3	B	LTR	0.45	17.0	B		
Northbound	LTR	0.26	9.4	A	LTR	0.23	9.1	A	LTR	0.44	11.4	B		
Southbound	LTR	0.19	8.9	A	LTR	0.14	8.5	A	LTR	0.17	8.7	A		
Intersection			14.7	B	Intersection			12.7	B	Intersection			15.9	B
East 149th Street & Morris Avenue														
Eastbound	L	0.13	17.3	B	L	0.31	20.8	C	L	0.22	19.0	B		
	TR	0.26	18.2	B	TR	0.30	18.7	B	TR	0.29	18.6	B		
Westbound	L	0.37	21.6	C	L	0.31	20.4	C	L	0.25	19.2	B		
	TR	0.32	19.0	B	TR	0.34	19.3	B	TR	0.40	20.3	C		
Northbound	LTR	0.74	43.1	D	LTR	0.51	29.5	C	LTR	0.57	31.1	C		
Southbound	L	0.17	22.5	C	L	0.30	25.0	C	L	0.36	26.5	C		
	TR	0.88	49.3	D	TR	0.85	46.2	D	TR	0.98	66.7	E		
Intersection			31.0	C	Intersection			27.7	C	Intersection			34.3	C

Table 14-1 (continued)
Signalized Intersections
2005 Existing Conditions Level of Service Analysis

Intersection	Peak Hour											
	AM				MD				PM			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 149th Street & Melrose Avenue/3rd Avenue/Willis Avenue												
Eastbound	T	0.56	41.0	D	T	0.54	40.4	D	T	0.62	42.3	D
Westbound	T	0.82	51.0	D	T	0.55	40.5	D	T	0.74	46.6	D
Northbound	L	0.03	10.7	B	L	0.03	8.9	A	L	0.08	10.0	B
	T	0.30	9.5	A	T	0.25	9.1	A	T	0.45	11.2	B
Southbound (Melrose)	T	0.75	57.1	E	T	0.49	45.8	D	T	0.73	56.4	E
	R	0.50	49.1	D	R	0.54	50.8	D	R	0.44	47.6	D
Southbound (3rd Avenue)	T	0.73	37.2	D	T	0.42	28.2	C	T	0.55	31.2	C
	Intersection		37.8	D	Intersection		31.8	C	Intersection		33.2	C
East 149th Street & St Anns Avenue												
Eastbound	LTR	0.38	11.2	B	LTR	0.29	10.0	A	LTR	0.47	12.4	B
Westbound	LTR	0.44	11.7	B	LTR	0.29	9.9	A	LTR	0.41	11.3	B
Northbound	LTR	1.05	104.1	F	LTR	0.95	78.9	E	LTR	1.05	97.4	F
Southbound	LTR	0.90	72.0	E	LTR	0.62	46.5	D	LTR	1.05	111.5	F
	Intersection		41.1	D	Intersection		32.2	C	Intersection		49.7	D
Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service.												

- *East 163rd Street and Third Avenue:* The westbound approach operates at LOS D with 52.3 spv of delay and a v/c ratio of 0.78.
- *East 161st Street and Concourse Village East:* The northbound approach operates at LOS D with 50.2 spv of delay and a v/c ratio of 0.86.
- *East 149th Street and Melrose/Third/Willis Avenues:* The southbound Melrose Avenue through movement operates at LOS D with 45.8 spv of delay and a v/c ratio of 0.49. The southbound Melrose Avenue right-turn movement operates at LOS D with 50.8 spv of delay and a v/c ratio of 0.54.
- *East 149th Street and St. Ann's Avenue:* The northbound approach operates at LOS E with 78.9 spv of delay and a v/c ratio of 0.95. The southbound approach operates at LOS D with 46.5 spv of delay and a v/c ratio of 0.62.

PM PEAK HOUR

- *East 165th Street and Park Avenue:* The southbound approach operates at LOS D with 47.0 spv of delay and a v/c ratio of 0.46.
- *East 165th Street and Melrose/Webster Avenues:* The southbound left-turn movement operates at LOS D with 46.7 spv of delay and a v/c ratio of 0.45.
- *East 165th Street and Brook Avenue:* The eastbound shared left-turn and through movement operates at LOS D with 54.2 spv of delay and a v/c ratio of 0.77. The

Melrose Commons

westbound approach operates at LOS D with 47.4 spv of delay and a v/c ratio of 0.63. The northbound Brook Avenue approach operates at LOS F with 109.9 spv of delay and a v/c ratio of 1.05.

- *East 163rd Street and Third Avenue:* The eastbound approach operates at LOS E with 67.3 spv of delay and a v/c ratio of 1.00. The westbound approach operates at LOS F with 81.8 spv of delay and a v/c ratio of 0.99.
- *East 163rd Street and Prospect Avenue:* The northbound approach operates at LOS D with 51.0 spv of delay and a v/c ratio of 0.91.
- *East 161st Street and the Grand Concourse (southern intersection):* The eastbound approach operates at LOS D with 49.7 spv of delay and a v/c ratio of 0.85. The southbound left-turn movement operates at LOS F with 105.7 spv of delay and a v/c ratio of 0.96.
- *East 161st Street and Concourse Village East:* The northbound approach operates at LOS F with 90.6 spv of delay and a v/c ratio of 1.05.
- *East 156th Street and Melrose Avenue:* The eastbound approach operates at LOS D with 47.3 spv of delay and a v/c ratio of 0.68.
- *East 156th Street and Third Avenue:* The eastbound approach operates at LOS D with 45.3 spv of delay and a v/c ratio of 0.60. The westbound approach operates at LOS E with 73.9 spv of delay and a v/c ratio of 0.82.
- *East 149th Street and Melrose/Third/Willis Avenues:* The westbound approach operates at LOS D with 46.6 spv of delay and a v/c ratio of 0.74. The southbound Melrose Avenue through movement operates at LOS E with 56.4 spv of delay and a v/c ratio of 0.73. The southbound Melrose Avenue right-turn movement operates at LOS D with 47.6 spv of delay and a v/c ratio of 0.44.
- *East 149th Street and St Ann's Avenue:* The northbound approach operates at LOS F with 97.4 spv of delay and a v/c ratio of 1.05. The southbound approach operates at LOS F with 111.5 spv of delay and a v/c ratio of 1.05.

PARKING SUPPLY AND UTILIZATION

Off-street public parking facilities within a ¼-mile radius of the URA, shown in Figure 14-5, were surveyed in October 2005 to assess their capacities and approximate utilization rates. The survey results, presented in Table 14-2, indicate that there are four public garages and parking lots in the area with a combined capacity of 1,410 spaces. Currently, these facilities are approximately 24 percent utilized during the overnight period and 54 percent utilized in the midday period, with an estimated 1,076 and 653 available spaces, respectively, during these two periods. Approximately 85 per cent of the available spaces are located in the Central Parking Systems garage on East 161st Street near Concourse Village East.

1 Off-Street Parking Facility

0 1000 FEET

SCALE

Table 14-2
2005 Existing Conditions, Off-Street Parking Utilization

	Company Name	Address	License No.	Capacity	Utilization Rate (%)		Utilized Spaces		Available Spaces	
					Over-night	MD	Over-night	MD	Over-night	MD
1	J&M Parking Lot	283 E. 164th St.	N.A.	80	50	90	40	72	40	8
2	Central Parking Systems	205 E. 161st St.	1101577	1,208	20	50	242	604	966	604
3	St. Ann's Parking Inc.	800 St. Ann's Ave.	1100580	80	60	80	48	64	32	16
4	616 Courtlandt Parking Systems	616 Courtlandt Ave.	1192006	42	10	40	4	17	38	25
Total				1,410	24%	54	334	757	1,076	653
Source: Survey conducted by AKRF, Inc. in October 2005.										

There is plentiful supply of on-street parking, with approximately 3,900 spaces counted on the streets within a quarter mile of the URA. Based on field observations, on-street parking in the area is approximately 61 percent and 74 percent occupied, with approximately 1,500 and 1,000 spaces available during the overnight and midday periods, respectively. Within the URA boundaries, there are approximately 845 spaces, with 370 and 400 available during the overnight and midday periods, respectively. Parking is permitted on most study area streets subject to alternate-side street cleaning schedules, with metered parking along some sections of East 161st Street.

D. THE FUTURE WITHOUT THE PROPOSED AND FUTURE ACTIONS

Traffic and parking conditions in the future without the proposed and future actions were assessed to establish the “No Build” condition, against which to evaluate the potential project impacts. The No Build analysis focuses on conditions in 2009, the year during which the proposed projects are assumed to be completed.

NO BUILD PROJECTS

The No Build projects which are expected to be completed by 2009 and which would add appreciable traffic volumes to the study area roadway network are discussed in Chapter 2 “Land Use, Zoning, and Public Policy.” Because Yankee Stadium traffic, which already exists, would only be generated when home games are played and during time periods that have limited overlap with typical peak periods, trips and changes in travel patterns near the stadium associated with this project were not included in this analysis.

ROADWAY IMPROVEMENTS

In addition to the No Build projects, several changes in the study area’s roadway network are planned to be in place by 2009. The capital and signal timing improvements that would affect study area traffic operations in the No Build and Build conditions are described below:

- *Grand Concourse north of East 161st Street:* In the future the roadway alignment at this intersection will be modified. NYCDOT plans to add one southbound lane to the main road of the Concourse while reducing the southbound local road by an equivalent lane. All local road traffic would be required to turn right onto East 161st Street, instead of the through-right configuration on the existing lanes. Southbound traffic on the local

road would be able to shift to the main roadway north of the intersection. The northbound local road would begin at East 162nd Street. The northbound lane configuration would consist of two through lanes and one shared through-right lane at the southern intersection and one left turn only lane and two through lanes at the northern intersection.

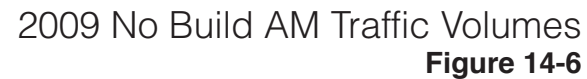
- *East 153rd Street Bridge:* This project would connect two discontinuous sections of East 153rd Street above the depressed Metro-North tracks. Although it would not generate any additional traffic, construction of the bridge would affect study area traffic patterns. Re-routed traffic associated with this improvement has been included in the No Build analysis, as well as mitigation measures, including signal timing modifications during the AM peak hour, at East 161st Street and Concourse Village East.
- *Concourse Village West:* As mentioned in Section C, “Existing Conditions,” the section of this roadway south of East 161st Street was converted from two-way to one-way northbound operation after the traffic data collection was completed. This change is reflected in the No Build condition analysis and network traffic was redistributed to account for the revised traffic patterns in the area.
- *Intersection Modification:* Signal timing adjustments and geometric changes were made along East 161st Street at the Grand Concourse, Concourse Village West, and Concourse Village East as proposed in the Bronx County Courthouse and Bronx Terminal Market EIS documents
- *East 163rd Street between Brook and Washington Avenues:* Improvements include the striping of safety zones and channelization for the southbound and westbound right turn movements at Brook Avenue and a two lane eastbound approach at Washington Avenue. The No Build condition analysis reflects the geometric changes at the latter intersection.

Trips associated with these roadway modifications have been included in the No Build analysis.

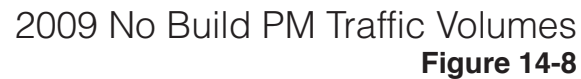
TRAFFIC VOLUMES

Future 2009 No Build peak hour traffic levels were estimated by first applying a background growth of 0.50 percent per year (as recommended by the *CEQR Technical Manual*), for a total of 2.0 percent by 2009. Traffic from small projects in the area, which are expected to generate minimal peak hour volumes, is assumed to be included in this general background traffic growth. Trip generation information for the Bronx County Courthouse and the Bronx Terminal Market were taken from the respectively approved environmental review documents, as were traffic assignments, where available. Trips generated by the remaining No Build projects were developed based on information provided in approved studies and standard references, such as the *CEQR Technical Manual*, Pushkarev and Zupan’s *Urban Space for Pedestrians*, and the U.S. Census database. Existing traffic patterns were revised, where necessary, based on the roadway network changes described above, and the estimated No Build vehicle trips were then assigned to the study area analysis locations.

Figures 14-6, 14-7, and 14-8 present the future 2009 No Build traffic volumes for the weekday AM, midday, and PM peak analysis hours.







LEVEL OF SERVICE

Table 14-3 presents a comparison of the existing and No Build service conditions for the study area intersections. The following are the notable deteriorations in LOS at those intersections operating with capacity constraints under existing and/or No Build conditions.

AM PEAK HOUR

- *East 165th Street and Melrose/Webster Avenues:* The eastbound shared through and right-turn movement would deteriorate from LOS D with 44.8 spv of delay and a v/c ratio of 0.62 to LOS D with an average delay of 47.2 spv and a v/c ratio of 0.68. The southbound left-turn movement would deteriorate from LOS D with 44.2 spv of delay and a v/c ratio of 0.35 to LOS D with an average delay of 45.3 spv and a v/c ratio of 0.40.
- *East 165th Street and Brook Avenue:* The eastbound shared left-turn and through movement would deteriorate from LOS D with 49.5 spv of delay and a v/c ratio of 0.67 to LOS E with an average delay of 57.2 spv and a v/c ratio of 0.78. The northbound Brook Avenue approach would deteriorate from LOS E with 70.7 spv of delay and a v/c ratio of 0.84 to LOS F with 84.5 spv of delay and a v/c ratio of 0.93.
- *East 163rd Street and Third Avenue:* The westbound approach would deteriorate from LOS D with an average delay of 44.8 spv and a v/c ratio of 0.64 to LOS D with an average delay of 53.6 spv and a v/c ratio of 0.79.
- *East 161st Street and Grand Concourse (northern intersection):* The northbound left-turn movement would deteriorate from LOS B with an average delay of 18.5 spv and a v/c ratio of 0.30 to LOS F with an average delay of 82.9 spv and a v/c ratio of 0.97.
- *East 161st Street and Grand Concourse (southern intersection):* The southbound left-turn movement would deteriorate from LOS D with an average delay of 43.4 spv and a v/c ratio of 0.81 to LOS F with an average delay of 218.9 spv and a v/c ratio of 1.38.
- *East 161st Street and Concourse Village East:* The eastbound approach would deteriorate from LOS B with an average delay of 18.0 spv and a v/c ratio of 0.66 to a left-turn movement operating at LOS D with an average delay of 53.2 spv and a v/c ratio of 0.98 and a through-right movement operating at LOS B with an average delay of 19.9 spv and a v/c ratio of 0.47. The westbound approach would deteriorate from LOS C with an average delay of 21.0 spv and a v/c ratio of 0.76 to a left-turn movement operating at LOS C with an average delay of 39.7 spv and a v/c ratio of 0.68 and a through-right movement operating at LOS F with an average delay of 205.7 spv and a v/c ratio of 1.35. The southbound approach would deteriorate from LOS C with an average delay of 35.0 spv and a v/c ratio of 0.73 to a left-turn movement operating at LOS C with an average delay of 28.1 spv and a v/c ratio of 0.16 and a through-right movement operating at LOS D with an average delay of 48.8 spv and a v/c ratio of 0.81.
- *East 156th Street and Melrose Avenue:* The eastbound approach would deteriorate from LOS D with an average delay of 44.1 spv and a v/c ratio of 0.60 to LOS E with an average delay of 66.6 spv and a v/c ratio of 0.88.
- *East 149th Street and St. Ann's Avenue:* The southbound approach would deteriorate from LOS E with an average delay of 72.0 spv and a v/c ratio of 0.90 to LOS F with an average delay of 174.9 spv and a v/c ratio of 1.24.

MIDDAY PEAK HOUR

- *East 163rd Street and Third Avenue:* The eastbound approach would deteriorate from LOS D with an average delay of 36.2 spv and a v/c ratio of 0.76 to LOS D with an average delay of 51.8 spv and a v/c ratio of 0.93. The westbound approach would deteriorate from LOS D with an average delay of 52.3 spv and a v/c ratio of 0.78 to LOS E with an average delay of 77.0 spv and a v/c ratio of 0.96.
- *East 165th Street and Brook Avenue:* The northbound Brook Avenue approach would deteriorate from LOS D with 42.7 spv of delay and a v/c ratio of 0.70 to LOS D with 47.1 spv of delay and a v/c ratio of 0.76.
- *East 156th Street and Melrose Avenue:* The eastbound approach would deteriorate within LOS D from an average delay of 40.5 spv and a v/c ratio of 0.46 to an average delay of 45.6 spv and a v/c ratio of 0.64.
- *East 156th Street and Third Avenue:* The eastbound approach would deteriorate within LOS D from an average delay of 40.1 spv and a v/c ratio of 0.42 to an average delay of 45.1 spv and a v/c ratio of 0.59. The westbound approach would deteriorate from LOS D with an average delay of 40.6 spv and a v/c ratio of 0.36 to LOS E with an average delay of 69.4 spv and a v/c ratio of 0.78.
- *East 149th Street and St. Ann's Avenue:* The northbound approach would deteriorate from LOS E with an average delay of 78.9 spv and a v/c ratio of 0.95 to LOS F with an average delay of 84.6 spv and a v/c ratio of 0.98. The southbound approach would deteriorate from LOS D with an average delay of 46.5 spv and a v/c ratio of 0.62 to LOS E with an average delay of 71.4 spv and a v/c ratio of 0.88.

PM PEAK HOUR

- *East 165th Street and Park Avenue:* The eastbound approach would deteriorate from LOS D with 43.9 spv of delay and a v/c ratio of 0.65 to LOS D with an average delay of 49.1 spv and a v/c ratio of 0.77.
- *East 165th Street and Melrose/Webster Avenues:* The eastbound shared through and right-turn movement would deteriorate from LOS D with 43.5 spv of delay and a v/c ratio of 0.63 to LOS D with an average delay of 49.6 spv and a v/c ratio of 0.77.
- *East 165th Street and Brook Avenue:* The eastbound shared left-turn and through movement would deteriorate from LOS D with 54.2 spv of delay and a v/c ratio of 0.77 to LOS E with an average delay of 77.6 spv and a v/c ratio of 0.95.
- *East 163rd Street and Third Avenue:* The eastbound approach would deteriorate from LOS E with an average delay of 67.3 spv and a v/c ratio of 1.00 to LOS F with an average delay of 154.6 spv and a v/c ratio of 1.24. The northbound approach would deteriorate from LOS C with an average delay of 28.5 spv and a v/c ratio of 0.73 to LOS E with an average delay of 62.7 spv and a v/c ratio of 1.01.
- *East 163rd Street and Prospect Avenue:* The northbound approach would deteriorate from LOS D with an average delay of 51.0 spv and a v/c ratio of 0.91 to LOS E with an average delay of 62.3 spv and a v/c ratio of 0.97.

Table 14-3
Signalized Intersections
2005 Existing and 2009 No Build Conditions Level of Service Analyses

Intersection	Peak Hour																							
	AM								MD								PM							
	2005 Existing				2009 No Build				2005 Existing				2009 No Build				2005 Existing				2009 No Build			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 165th Street & Park Avenue Southbound																								
Eastbound	TR	0.81	58.4	E	TR	0.86	63.3	E	TR	1.05	98.4	F	TR	1.17	138.8	F	TR	0.65	43.9	D	TR	0.77	49.1	D
Westbound	L	0.17	35.4	D	L	0.12	34.4	C	L	0.26	40.5	D	L	0.13	35.1	D	L	0.21	38.1	D	L	0.15	37.0	D
	T	0.35	37.0	D	T	0.39	37.9	D	T	0.45	39.2	D	T	0.55	42.1	D	T	0.30	36.1	D	T	0.36	37.3	D
Southbound	TR	0.42	46.1	D	TR	0.56	50.2	D	TR	0.34	31.2	C	TR	0.45	33.4	C	TR	0.46	47.0	D	TR	0.59	51.4	D
Intersection		49.3		D	Intersection		52.7	D	Intersection		72.4	E	Intersection		94.9	F	Intersection		42.8	D	Intersection		47.1	D
East 165th Street & Melrose/Webster Avenues																								
Eastbound	L	0.05	32.3	C	L	0.05	32.4	C	L	0.08	32.8	C	L	0.08	32.8	C	L	0.05	32.4	C	L	0.05	32.5	C
	TR	0.62	44.8	D	TR	0.68	47.2	D	TR	1.05	98.5	F	TR	1.18	145.1	F	TR	0.63	43.5	D	TR	0.77	49.6	D
Westbound	L	0.03	32.1	C	L	0.03	32.2	C	L	0.09	33.9	C	L	0.09	33.9	C	L	0.05	32.6	C	L	0.07	33.9	C
	TR	0.40	38.2	D	TR	0.43	38.8	D	TR	0.53	41.6	D	TR	0.58	43.5	D	TR	0.35	37.1	D	TR	0.39	37.8	D
Northbound	T	0.15	25.2	C	T	0.18	25.4	C	T	0.19	17.9	B	T	0.22	18.2	B	T	0.24	26.3	C	T	0.29	27.0	C
Southbound	L	0.35	44.2	D	L	0.40	45.3	D	L	0.29	30.3	C	L	0.34	31.1	C	L	0.45	46.7	D	L	0.52	48.7	D
	T	0.14	9.8	A	T	0.15	9.8	A	T	0.09	4.7	A	T	0.09	4.7	A	T	0.14	9.8	A	T	0.15	9.8	A
Intersection		30.5		C	Intersection		31.6	C	Intersection		47.1	D	Intersection		64.1	E	Intersection		31.3	C	Intersection		34.3	C
East 165th Street & Brook Avenue																								
Eastbound	LT	0.67	49.5	D	LT	0.78	57.2	E	LT	1.05	104.2	F	LT	1.26	178.6	F	LT	0.77	54.2	D	LT	0.95	77.6	E
	R	0.34	37.0	D	R	0.35	37.2	D	R	0.50	41.0	D	R	0.52	41.7	D	R	0.37	37.6	D	R	0.38	37.9	D
Westbound	LTR	0.39	37.6	D	LTR	0.42	38.1	D	LTR	1.05	117.6	F	LTR	1.10	132.1	F	LTR	0.63	47.4	D	LTR	0.68	49.8	D
Northbound (Melrose)	TR	0.47	30.7	C	TR	0.49	31.2	C	TR	0.37	20.4	C	TR	0.40	20.9	C	TR	0.69	37.0	D	TR	0.73	39.0	D
Northbound (Brook)	LTR	0.90	80.9	F	LTR	0.96	91.6	F	LTR	0.73	45.3	D	LTR	0.80	50.6	D	LTR	1.05	109.9	F	LTR	1.14	137.9	F
Intersection		47.3		D	Intersection		51.7	D	Intersection		67.7	E	Intersection		94.4	F	Intersection		60.1	E	Intersection		73.1	E
Boston Post Road & 3rd Avenue																								
Westbound	L	0.67	33.4	C	L	0.69	34.4	C	L	0.27	18.2	B	L	0.30	18.6	B	L	0.43	20.7	C	L	0.45	21.2	C
	R	0.14	22.2	C	R	0.14	22.3	C	R	0.06	15.6	B	R	0.06	15.6	B	R	0.06	15.6	B	R	0.06	15.7	B
Northbound	TR	0.43	20.1	C	TR	0.48	20.9	C	TR	0.55	28.3	C	TR	0.63	30.4	C	TR	0.70	32.3	C	TR	0.82	37.3	D
Southbound	LT	0.26	17.6	B	LT	0.31	18.2	B	LT	0.23	23.0	C	LT	0.28	23.7	C	LT	0.30	23.9	C	LT	0.36	24.8	C
Intersection		23.6		C	Intersection		24.0	C	Intersection		24.7	C	Intersection		26.1	C	Intersection		27.2	C	Intersection		30.3	C
East 163rd Street & Melrose Avenue																								
Eastbound	LTR	0.38	23.0	C	LTR	0.39	23.1	C	LTR	0.50	25.4	C	LTR	0.51	25.6	C	LTR	0.47	24.7	C	LTR	0.48	24.9	C
Westbound	LR	0.17	19.7	B	LR	0.17	19.7	B	LR	0.18	19.8	B	LR	0.18	19.9	B	LR	0.21	20.3	C	LR	0.22	20.4	C
Northbound	TR	0.33	21.9	C	TR	0.37	22.6	C	TR	0.38	22.8	C	TR	0.46	24.3	C	TR	0.55	26.4	C	TR	0.64	29.2	C
Southbound	LT	0.35	22.2	C	LT	0.37	22.5	C	LT	0.37	22.5	C	LT	0.39	23.1	C	LT	0.44	24.0	C	LT	0.48	25.2	C
Intersection		22.1		C	Intersection		22.4	C	Intersection		23.3	C	Intersection		24.0	C	Intersection		24.6	C	Intersection		26.1	C
East 163rd Street & Washington Avenue																								
Eastbound	T	0.25	20.6	C	T	0.25	20.6	C	T	0.26	20.7	C	T	0.27	20.8	C	T	0.19	19.8	B	T	0.20	19.8	B
Westbound	L	0.62	31.3	C	L	0.57	29.3	C	L	0.55	28.6	C	L	0.56	28.9	C	L	0.62	30.8	C	L	0.68	33.6	C
	LT	0.39	23.2	C	LT	0.47	24.8	C	LT	0.34	22.2	C	LT	0.41	23.5	C	LT	0.44	24.1	C	LT	0.49	25.3	C
Southbound	LTR	0.32	21.3	C	LTR	0.31	21.2	C	LTR	0.17	19.3	B	LTR	0.20	19.8	B	LTR	0.26	20.5	C	LTR	0.27	20.6	C
Intersection		23.9		C	Intersection		23.7	C	Intersection		22.8	C	Intersection		23.2	C	Intersection		24.1	C	Intersection		25.3	C

Table 14-3 (cont'd)
Signalized Intersections
2005 Existing and 2009 No Build Conditions Level of Service Analyses

Intersection	Peak Hour																							
	AM								MD								PM							
	2005 Existing				2009 No Build				2005 Existing				2009 No Build				2005 Existing				2009 No Build			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 163rd Street & 3rd Avenue																								
Eastbound	LTR	0.78	36.7	D	LTR	0.87	43.2	D	LTR	0.76	36.2	D	LTR	0.93	51.8	D	LTR	1.00	67.3	E	LTR	1.24	154.6	F
Westbound	LTR	0.64	44.8	D	LTR	0.79	53.6	D	LTR	0.78	52.3	D	LTR	0.96	77.0	E	LTR	0.99	81.8	F	LTR	1.34	214.2	F
Northbound	LTR	0.50	21.6	C	LTR	0.67	26.2	C	LTR	0.46	20.8	C	LTR	0.66	25.7	C	LTR	0.73	28.5	C	LTR	1.01	62.7	E
Southbound	LTR	0.60	23.3	C	LTR	0.70	26.1	C	LTR	0.42	20.0	B	LTR	0.52	21.9	C	LTR	0.64	24.9	C	LTR	0.81	32.1	C
Intersection		30.1	C		Intersection		35.1	D	Intersection		31.4	C	Intersection		42.2	D	Intersection		48.8	D	Intersection		109.5	F
East 163rd Street & Prospect Avenue																								
Eastbound	LTR	0.34	18.8	B	LTR	0.40	19.7	B	LTR	0.33	14.7	B	LTR	0.42	15.8	B	LTR	0.43	16.1	B	LTR	0.57	18.4	B
Westbound	LTR	0.27	17.9	B	LTR	0.31	18.4	B	LTR	0.23	13.7	B	LTR	0.29	14.2	B	LTR	0.29	14.3	B	LTR	0.38	15.4	B
Northbound	LTR	1.05	88.2	F	LTR	1.11	108.9	F	LTR	0.69	30.1	C	LTR	0.73	31.8	C	LTR	0.91	51.0	D	LTR	0.97	62.3	E
Southbound	LTR	0.87	50.4	D	LTR	0.89	53.3	D	LTR	0.63	26.8	C	LTR	0.63	26.7	C	LTR	0.71	29.3	C	LTR	0.69	28.4	C
Intersection		48.0	D		Intersection		53.8	D	Intersection		21.4	C	Intersection		21.5	C	Intersection		27.6	C	Intersection		29.5	C
East 161st Street & Grand Concourse Northern Intersection																								
Westbound	LTR	0.49	36.1	D	L	0.36	33.0	C	LTR	0.43	31.4	C	L	0.30	25.6	C	LTR	0.56	37.6	D	L	0.69	42.3	D
	-	-	-	-	TR	0.41	34.5	C	-	-	-	-	TR	0.51	30.7	C	-	-	-	-	TR	0.81	51.7	D
Northbound Main	L	0.30	18.5	B	L	0.97	82.9	F	L	0.14	10.0	A	L	0.43	19.6	B	L	0.27	10.2	B	L	1.01	72.7	E
	T	0.23	7.7	A	T	0.24	7.0	A	T	0.24	9.9	A	T	0.24	12.2	B	T	0.63	11.7	B	T	0.62	10.7	B
Northbound Service	T	0.24	7.8	A	T	0.25	7.1	A	T	0.25	10.0	A	T	0.26	12.4	B	T	0.31	8.3	A	T	0.32	7.5	A
Southbound Main	T	0.68	20.6	C	T	0.67	18.1	B	T	0.30	17.9	B	T	0.32	20.9	C	T	0.34	15.6	B	T	0.35	14.0	B
Southbound Service	T	0.34	16.2	B	-	-	-	-	T	0.22	17.4	B	-	-	-	-	T	0.24	14.9	B	-	-	-	-
	R	0.36	17.0	B	R	0.30	14.4	B	R	0.34	19.7	B	R	0.36	23.2	C	R	0.31	16.2	B	R	0.29	14.3	B
Intersection		18.4	B		Intersection		20.3	C	Intersection		17.0	B	Intersection		19.6	B	Intersection		15.7	B	Intersection		23.1	C
East 161st Street & Grand Concourse Southern Intersection																								
Eastbound	LTR	0.73	42.8	D	L	0.47	36.2	D	LTR	0.58	34.5	C	L	0.33	26.5	C	LTR	0.85	49.7	D	L	0.62	41.2	D
	-	-	-	-	TR	0.58	37.3	D	-	-	-	-	TR	0.33	25.8	C	-	-	-	-	TR	0.44	33.8	C
Northbound	TR	0.30	8.0	A	TR	0.50	15.9	B	TR	0.34	10.6	B	TR	0.54	24.4	C	TR	0.65	11.6	B	TR	0.93	30.0	C
Southbound	L	0.81	43.4	D	L	1.38	218.9	F	L	0.29	20.5	C	L	0.38	21.8	C	L	0.96	105.7	F	L	0.83	58.6	E
	T	0.82	24.9	C	T	0.70	11.5	B	T	0.42	19.3	B	T	0.40	13.7	B	T	0.48	17.3	B	T	0.51	9.0	A
Intersection		25.4	C		Intersection		40.4	D	Intersection		19.8	B	Intersection		20.7	C	Intersection		23.5	C	Intersection		25.6	C
East 161st Street & Concourse Village West																								
Eastbound Main	LT	0.32	11.9	B	T	0.27	11.4	B	LT	0.17	10.5	B	T	0.16	10.4	B	LT	0.22	10.9	B	T	0.23	8.2	A
Eastbound Service	TR	0.29	11.6	B	T	0.50	14.0	B	TR	0.23	11.0	B	T	0.32	11.8	B	TR	0.28	11.5	B	T	0.29	8.7	A
Westbound	LTR	0.38	12.4	B	TR	0.34	11.9	B	LTR	0.35	12.0	B	TR	0.35	12.0	B	LTR	0.43	12.9	B	TR	0.42	9.7	A
Northbound	LTR	0.39	24.8	C	LTR	0.43	25.4	C	LTR	0.29	23.2	C	LTR	0.31	23.5	C	LTR	0.71	34.2	C	LTR	0.96	69.0	E
Intersection		13.3	B		Intersection		13.9	B	Intersection		12.5	B	Intersection		12.7	B	Intersection		16.0	B	Intersection		18.5	B

Table 14-3 (cont'd)
Signalized Intersections
2005 Existing and 2009 No Build Conditions Level of Service Analyses

Intersection	Peak Hour																							
	AM								MD								PM							
	2005 Existing				2009 No Build				2005 Existing				2009 No Build				2005 Existing				2009 No Build			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 161st Street & Concourse Village East																								
Eastbound	LTR	0.66	18.0	B	L	0.99	54.7	D	LTR	0.61	16.8	B	L	0.75	23.9	C	LTR	0.69	18.8	B	L	0.81	35.1	D
	-	-	-	-	TR	0.43	17.6	B	-	-	-	-	TR	0.46	18.7	B	-	-	-	-	TR	0.61	22.5	C
Westbound	LTR	0.76	21.0	C	L	0.62	33.2	C	LTR	0.58	15.8	B	L	0.58	34.9	C	LTR	0.83	25.0	C	L	0.87	65.0	E
	-	-	-	-	TR	1.12	110.8	F	-	-	-	-	TR	0.66	33.0	C	-	-	-	-	TR	0.87	44.2	D
Northbound	LTR	0.79	42.0	D	L	0.62	55.5	E	LTR	0.86	50.2	D	L	0.58	40.0	D	LTR	1.05	90.6	F	L	0.82	61.9	E
	-	-	-	-	TR	0.49	31.6	C	-	-	-	-	TR	0.40	25.2	C	-	-	-	-	TR	0.47	25.0	C
Southbound	LTR	0.73	35.0	C	L	0.19	31.1	C	LTR	0.68	33.2	C	L	0.21	27.6	C	LTR	0.82	41.2	D	L	0.28	28.9	C
	-	-	-	-	TR	0.95	72.9	E	-	-	-	-	TR	0.70	39.6	D	-	-	-	-	TR	1.02	81.7	F
	Intersection	25.3	C		Intersection	59.4	E		Intersection	24.7	C		Intersection	28.2	C		Intersection	36.4	D		Intersection	42.6	D	
East 161st Street & Park Avenue Southbound																								
Eastbound	T	0.29	11.5	B	T	0.33	11.9	B	T	0.27	11.4	B	T	0.37	12.3	B	T	0.34	12.0	B	T	0.49	13.8	B
Westbound	T	0.42	12.9	B	T	0.42	13.0	B	T	0.34	12.1	B	T	0.34	12.0	B	T	0.45	13.3	B	T	0.44	13.1	B
Southbound	LR	0.29	23.0	C	LR	0.35	24.0	C	LR	0.23	22.0	C	LR	0.27	22.7	C	LR	0.40	24.7	C	LR	0.44	25.6	C
	Intersection	13.5	B		Intersection	13.9	B		Intersection	12.8	B		Intersection	13.3	B		Intersection	14.3	B		Intersection	15.0	B	
East 161st Street & Park Avenue Northbound																								
Eastbound	T	0.32	11.9	B	T	0.37	12.4	B	T	0.30	11.6	B	T	0.40	12.7	B	T	0.39	12.6	B	T	0.56	14.8	B
Westbound	T	0.37	12.3	B	T	0.37	12.3	B	T	0.29	11.5	B	T	0.29	11.5	B	T	0.39	12.5	B	T	0.38	12.4	B
Northbound	LR	0.39	24.5	C	LR	0.42	25.2	C	LR	0.40	24.6	C	LR	0.43	25.4	C	LR	0.67	32.0	C	LR	0.71	33.9	C
	Intersection	13.9	B		Intersection	14.2	B		Intersection	13.8	B		Intersection	14.3	B		Intersection	16.6	B		Intersection	17.5	B	
East 161st Street & Melrose Avenue																								
Eastbound	LTR	0.55	25.4	C	LTR	0.66	28.1	C	LTR	0.51	24.5	C	LTR	0.75	31.5	C	LTR	0.87	39.4	D	LTR	1.22	139.3	F
Westbound	LTR	0.49	24.4	C	LTR	0.51	24.9	C	LTR	0.42	23.1	C	LTR	0.50	25.0	C	LTR	0.55	25.8	C	LTR	0.70	31.5	C
Northbound	LTR	0.21	19.8	B	LTR	0.27	20.7	C	LTR	0.24	20.2	C	LTR	0.25	20.4	C	LTR	0.31	21.1	C	LTR	0.33	21.5	C
Southbound	LTR	0.45	24.2	C	LTR	0.47	24.5	C	LTR	0.34	22.0	C	LTR	0.34	22.0	C	LTR	0.42	23.4	C	LTR	0.43	23.6	C
	Intersection	24.0	C		Intersection	25.3	C		Intersection	22.9	C		Intersection	26.6	C		Intersection	30.2	C		Intersection	80.9	F	
East 161st Street & Elton Street																								
Eastbound	TR	0.33	15.0	B	TR	0.38	15.6	B	TR	0.28	14.3	B	TR	0.36	15.3	B	TR	0.40	15.8	B	TR	0.51	17.6	B
Westbound	L	0.19	27.2	C	L	0.20	27.4	C	L	0.19	27.2	C	L	0.20	27.4	C	L	0.21	27.5	C	L	0.23	27.8	C
	T	0.60	20.5	C	T	0.55	19.4	B	T	0.47	17.7	B	T	0.47	17.7	B	T	0.60	20.5	C	T	0.58	20.1	C
	Intersection	18.7	B		Intersection	18.3	B		Intersection	17.2	B		Intersection	17.5	B		Intersection	18.9	B		Intersection	19.4	B	
East 156th Street & Concourse Village East/Park Avenue																								
Northbound	TR	0.27	9.1	A	TR	0.33	9.5	A	TR	0.28	9.2	A	TR	0.34	9.6	A	TR	0.44	10.5	B	TR	0.51	11.2	B
Southbound	L	0.48	14.0	B	L	0.54	16.0	B	L	0.36	11.8	B	L	0.40	12.8	B	L	0.70	24.9	C	L	0.84	42.0	D
	T	0.46	11.6	B	T	0.32	10.0	A	T	0.42	11.1	B	T	0.34	10.1	B	T	0.41	11.0	B	T	0.36	10.3	B
	Intersection	10.9	B		Intersection	10.9	B		Intersection	10.2	B		Intersection	10.2	B		Intersection	12.8	B		Intersection	15.5	B	
East 156th Street & Melrose Avenue																								
Eastbound	LTR	0.60	44.1	D	LTR	0.88	66.6	E	LTR	0.46	40.5	D	LTR	0.64	45.6	D	LTR	0.68	47.3	D	LTR	0.92	73.7	E
Northbound	TR	0.20	7.4	A	TR	0.21	7.4	A	TR	0.19	7.3	A	TR	0.19	7.3	A	TR	0.27	8.0	A	TR	0.29	8.1	A
Southbound	LT	0.35	8.8	A	LT	0.44	10.0	A	LT	0.34	8.7	A	LT	0.43	9.7	A	LT	0.39	9.3	A	LT	0.50	10.9	B
	Intersection	17.3	B		Intersection	26.2	C		Intersection	15.0	B		Intersection	18.1	B		Intersection	18.2	B		Intersection	27.3	C	

Melrose Commons

Table 14-3 (cont'd)
Signalized Intersections
2005 Existing and 2009 No Build Conditions Level of Service Analyses

Intersection	Peak Hour																							
	AM								MD								PM							
	2005 Existing				2009 No Build				2005 Existing				2009 No Build				2005 Existing				2009 No Build			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 156th Street & 3rd Avenue																								
Eastbound	LTR	1.02	92.9	F	LTR	1.28	186.9	F	LTR	0.42	40.1	D	LTR	0.59	45.1	D	LTR	0.60	45.3	D	LTR	0.81	57.1	E
Westbound	LR	1.05	133.2	F	LR	1.35	240.7	F	LR	0.36	40.6	D	LR	0.78	69.4	E	LR	0.82	73.9	E	LR	1.45	284.0	F
Northbound	TR	0.45	11.2	B	TR	0.50	12.1	B	TR	0.41	10.7	B	TR	0.52	12.4	B	TR	0.64	14.8	B	TR	0.81	21.7	C
Southbound	LT	0.54	12.8	B	LT	0.62	14.4	B	LT	0.27	9.1	A	LT	0.33	9.7	A	LT	0.36	10.0	B	LT	0.42	10.9	B
Intersection		43.6		D	Intersection		83.5	F	Intersection		17.8	B	Intersection		23.6	C	Intersection		24.4	C	Intersection		53.3	D
East 156th Street & St Anns Avenue																								
Eastbound	LTR	0.41	16.9	B	LTR	0.71	25.3	C	LTR	0.35	15.9	B	LTR	0.60	21.2	C	LTR	0.65	22.5	C	LTR	1.00	61.6	E
Westbound	LTR	0.55	19.0	B	LTR	0.63	20.8	C	LTR	0.33	15.3	B	LTR	0.40	16.2	B	LTR	0.45	17.0	B	LTR	0.53	18.5	B
Northbound	LTR	0.26	9.4	A	LTR	0.29	9.7	A	LTR	0.23	9.1	A	LTR	0.26	9.4	A	LTR	0.44	11.4	B	LTR	0.49	12.1	B
Southbound	LTR	0.19	8.9	A	LTR	0.30	9.9	A	LTR	0.14	8.5	A	LTR	0.25	9.4	A	LTR	0.17	8.7	A	LTR	0.31	10.2	B
Intersection		14.7		B	Intersection		18.0	B	Intersection		12.7	B	Intersection		14.9	B	Intersection		15.9	B	Intersection		30.2	C
East 149th Street & Morris Avenue																								
Eastbound	L	0.13	17.3	B	L	0.04	16.0	B	L	0.31	20.8	C	L	0.24	19.2	B	L	0.22	19.0	B	L	0.17	18.1	B
	TR	0.26	18.2	B	TR	0.27	18.4	B	TR	0.30	18.7	B	TR	0.33	19.3	B	TR	0.29	18.6	B	TR	0.35	19.4	B
Westbound	L	0.37	21.6	C	L	0.39	22.1	C	L	0.31	20.4	C	L	0.34	21.4	C	L	0.25	19.2	B	L	0.28	20.1	C
	TR	0.32	19.0	B	TR	0.28	18.4	B	TR	0.34	19.3	B	TR	0.31	18.9	B	TR	0.40	20.3	C	TR	0.39	20.0	C
Northbound	LTR	0.74	43.1	D	LTR	0.61	33.7	C	LTR	0.51	29.5	C	LTR	0.47	28.0	C	LTR	0.57	31.1	C	LTR	0.43	26.5	C
Southbound	L	0.17	22.5	C	L	0.19	22.8	C	L	0.30	25.0	C	L	0.32	25.5	C	L	0.36	26.5	C	L	0.38	27.2	C
	TR	0.88	49.3	D	TR	0.82	42.5	D	TR	0.85	46.2	D	TR	0.79	40.9	D	TR	0.98	66.7	E	TR	0.86	46.8	D
Intersection		31.0		C	Intersection		27.9	C	Intersection		27.7	C	Intersection		26.0	C	Intersection		34.3	C	Intersection		27.7	C
East 149th Street & Melrose Avenue/3rd Avenue/Willis Avenue																								
Eastbound	T	0.56	41.0	D	T	0.59	41.6	D	T	0.54	40.4	D	T	0.60	41.8	D	T	0.62	42.3	D	T	0.72	45.7	D
Westbound	T	0.82	51.0	D	T	0.77	47.7	D	T	0.55	40.5	D	T	0.52	39.9	D	T	0.74	46.6	D	T	0.74	46.6	D
Northbound	L	0.03	10.7	B	L	0.03	11.2	B	L	0.03	8.9	A	L	0.04	9.3	A	L	0.08	10.0	B	L	0.09	10.9	B
	T	0.30	9.5	A	T	0.35	10.0	A	T	0.25	9.1	A	T	0.30	9.6	A	T	0.45	11.2	B	T	0.54	12.5	B
Southbound (Melrose)	T	0.75	57.1	E	T	0.87	69.8	E	T	0.49	45.8	D	T	0.63	50.4	D	T	0.73	56.4	E	T	0.93	79.4	E
	R	0.50	49.1	D	R	0.47	48.0	D	R	0.54	50.8	D	R	0.50	49.5	D	R	0.44	47.6	D	R	0.38	45.5	D
Southbound (3rd Avenue)	T	0.73	37.2	D	T	0.81	41.6	D	T	0.42	28.2	C	T	0.50	29.9	C	T	0.55	31.2	C	T	0.67	34.7	C
Intersection		37.8		D	Intersection		38.9	D	Intersection		31.8	C	Intersection		32.0	C	Intersection		33.2	C	Intersection		36.7	D
East 149th Street & St Anns Avenue																								
Eastbound	LTR	0.38	11.2	B	LTR	0.40	11.4	B	LTR	0.29	10.0	A	LTR	0.32	10.3	B	LTR	0.47	12.4	B	LTR	0.55	13.7	B
Westbound	LTR	0.44	11.7	B	LTR	0.43	11.6	B	LTR	0.29	9.9	A	LTR	0.30	10.0	B	LTR	0.41	11.3	B	LTR	0.44	11.7	B
Northbound	LTR	1.05	104.1	F	LTR	1.13	131.5	F	LTR	0.95	78.9	E	LTR	0.98	84.6	F	LTR	1.05	97.4	F	LTR	1.09	107.8	F
Southbound	LTR	0.90	72.0	E	LTR	1.24	174.9	F	LTR	0.62	46.5	D	LTR	0.88	71.4	E	LTR	1.05	111.5	F	LTR	1.66	359.0	F
Intersection		41.1		D	Intersection		69.8	E	Intersection		32.2	C	Intersection		37.9	D	Intersection		49.7	D	Intersection		96.3	F

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service.

- *East 161st Street and Grand Concourse (northern intersection):* The westbound approach would deteriorate from LOS D with an average delay of 37.6 spv and a v/c ratio of 0.56 to a left-turn movement operating at LOS D with an average delay of 42.3 spv and a v/c ratio of 0.69 and a through-right movement operating at LOS D with an average delay of 51.7 spv and a v/c ratio of 0.81. The northbound main roadway left-turn movement would deteriorate from LOS B with an average delay of 10.2 spv and a v/c ratio of 0.27 to LOS E with an average delay of 72.7 spv and a v/c ratio of 1.01.
- *East 161st Street and Concourse Village West:* The northbound approach would deteriorate from LOS C with an average delay of 34.2 spv and a v/c ratio of 0.71 to LOS E with an average delay of 69.0 spv and a v/c ratio of 0.96.
- *East 161st Street and Concourse Village East:* The westbound approach would deteriorate from LOS C with an average delay of 25.0 spv and a v/c ratio of 0.83 to a left-turn movement operating at LOS E with an average delay of 65.0 spv and a v/c ratio of 0.87 and a through-right movement operating at LOS D with an average delay of 44.2 spv and a v/c ratio of 0.87. The southbound approach would deteriorate from LOS D with an average delay of 41.2 spv and a v/c ratio of 0.82 to a left-turn movement operating at LOS C with an average delay of 28.9 spv and a v/c ratio of 0.28 and a through-right movement operating at LOS F with an average delay of 81.7 spv and a v/c ratio of 1.02.
- *East 161st Street and Melrose Avenue:* The eastbound approach would deteriorate from LOS D with an average delay of 39.4 spv and a v/c ratio of 0.87 to LOS F with an average delay of 139.3 spv and a v/c ratio of 1.22.
- *East 156th Street and Melrose Avenue:* The eastbound approach would deteriorate from LOS D with an average delay of 47.3 spv and a v/c ratio of 0.68 to LOS E with an average delay of 73.7 spv and a v/c ratio of 0.92.
- *East 156th Street and Third Avenue:* The eastbound approach would deteriorate from LOS D with an average delay of 45.3 spv and a v/c ratio of 0.60 to LOS E with an average delay of 57.1 spv and a v/c ratio of 0.81. The westbound approach would deteriorate from LOS E with an average delay of 73.9 spv and a v/c ratio of 0.82 to LOS F with an average delay of 284.0 spv and a v/c ratio of 1.45.
- *East 156th Street and St. Ann's Avenue:* The eastbound approach would deteriorate from LOS C with an average delay of 22.5 spv and a v/c ratio of 0.65 to LOS E with an average delay of 61.6 spv and a v/c ratio of 1.00.
- *East 149th Street and Melrose/Third/Willis Avenues:* The eastbound approach would deteriorate within LOS D from an average delay of 42.3 spv and a v/c ratio of 0.62 to an average delay of 45.7 spv and a v/c ratio of 0.72.

PARKING SUPPLY AND UTILIZATION

The utilization of both off-street and on-street parking facilities in the study area would increase due to the area's background growth in traffic (2.0 percent over existing volumes by 2009) and additional demand generated by nearby developments. In addition to an increase in parking demand within the URA itself, large projects planned for the East 161st Street corridor and the southeast section of the study area would affect on-street parking availability in those areas.

Based on U.S. census data for the census tracts within the URA boundaries, and information on designated parking provided by HPD, the residential No Build projects in the URA, with an auto ownership rate of 19 percent, are expected to add 268 cars to the immediate area and provide

130 off-street parking spaces. Most retail proposed for the URA would be local in nature and would not generate appreciable parking demand. The supermarket proposed for Washington Plaza and the destination retail space at East 161st Street and northbound Park Avenue, would provide a total of 223 off-street spaces, which would be adequate in accommodating the peak parking demands expected at these locations.

Two large developments, the Brewery and Bronxchester URA Site 12, are planned in the study area east of Third Avenue and south of East 161st Street. The Bronxchester URA Site 12 project would provide 273 off-street spaces, which would be adequate in accommodating its projected peak weekday demand. While parking supply for the Brewery site has not yet been determined, a similar level of off-street parking for its residential units has been assumed.

The proposed Bronx Criminal Court Complex on East 161st Street was projected, in the Bronx Criminal Court Complex FEIS, to generate a peak demand of 570 spaces during the mid-morning period, while providing 240 off-street parking spaces. Of the remaining midday demand of 330 spaces for courthouse patrons, it was assumed that half would park in the 1,200-space garage on East 161st Street and the other half would use restricted on-street parking north of East 161st Street. Approximately half of the resulting on-street demand is expected to be accommodated by on-street spaces located within the project study area.

As shown in Table 14-4, the overall utilization rates of the off-street parking facilities in the study area would increase to approximately 34 and 67 percent, with 926 and 471 available spaces during the overnight and midday periods, respectively. Utilization rates for on-street parking in the overall study area would increase from approximately 61 to 67 percent during the overnight period and from 74 to 80 percent during the midday period, with availability during these times declining to approximately 1,300 and 760 spaces respectively. On-street availability within the URA boundaries would decrease from approximately 370 and 400 spaces under existing conditions to approximately 225 and 380 spaces under No Build conditions during the overnight and midday periods, respectively.

Table 14-4
2009 No Build Condition, Off-Street Parking Utilization

Company Name	Address	License No.	Capacity	Utilization Rate (%)		Utilized Spaces		Available Spaces	
				Over-night	MD	Over-night	MD	Over-night	MD
1 J&M Parking Lot	283 E. 164th St.	N.A.	80	52	92	42	74	38	6
2 Central Parking Systems	205 E. 161st St.	1101577	1,208	32	65	387	781	821	427
3 St. Ann's Parking Inc.	800 St. Ann's Ave.	1100580	80	62	82	50	66	30	14
4 616 Courtlandt Parking Systems	616 Courtlandt Ave.	1192006	42	12	42	5	18	37	24
Total			1,410	34	67	484	939	926	471
Source: Survey conducted by AKRF, Inc. in October 2005.									

E. THE FUTURE WITH THE PROPOSED AND FUTURE ACTIONS

The assessment of potential adverse impacts associated with the proposed and future actions begins with and builds on the future No Build conditions, described in the preceding section. As with the future No Build evaluation, 2009 is used as the analysis year for assessing project impacts, reflecting the time when all project elements are assumed to be completed.

As summarized in Table 14-5 the proposed and future actions would result in the construction of two mixed-use projects (Boricua Village and Courtlandt Corners) and the development of seven

Table 14-5

Expected Additional Development with Proposed URA Amendments

	URA Site(s)	Res. Units	Retail Floor Area	Community Facility Floor Area
Proposed Projects				
Courtlandt Corners	45, 46, 56, 57	474	28,000	—
Boricua Village	48, 49, 59, 60	754	50,000	120,000
Total Proposed Development		1,228	78,000	120,000
Other				
	15	20	4,600	—
	52	26	—	—
	53	66	14,000	—
	54	—	3,300	—
	62	163	—	—
	64	271	—	—
	51	—	—	20,000
Total Other Development		546	21,900	20,000
Total Proposed and Other Future Development		1,774	99,900	140,000
Sources: Atlantic Development Group, Phipps Houses, and HPD.				

other sites in the Melrose Commons URA area. (See Chapter 1, “Project Description,” for more details.) Trip generation characteristics for the project’s development program are discussed below. In addition, the proposed actions would allow for the creation of a new curb cut on the west side of Brook Avenue between Third Avenue and East 158th Street. This curb cut would be used as the driveway to an 80-space accessory parking garage within the approximately 161-unit residential building planned for URA site 17 and would not be located within 50 feet of any intersection. This building and its accessory parking would be constructed as part of the future without the proposed and future actions and the related traffic has been incorporated into the No Build analysis. Although this proposed driveway would incur up to approximately 25 total (in and out) vehicle trips during peak hours, these trips would have already been circulating along Brook Avenue and the adjacent streets. Hence, this proposed project element is not expected to have an effect on the future condition with the proposed and future actions, and therefore, was not further examined in the analysis presented in this chapter.

ROADWAY CONFIGURATION CHANGES

The following changes to the local roadway network would be made under the Build condition:

- *Melrose Crescent:* East 163rd Street would no longer be continuous between Melrose and Brook Avenues, but would turn south and intersect East 161st Street at Elton Avenue. The new roadway would be named Melrose Crescent and, for analysis purposes was assumed to be a single-lane eastbound/southbound only roadway with parking on both sides of the street. The addition of a southbound approach at the East 161st Street/Elton Avenue/Melrose Crescent intersection would necessitate signal timing and phasing changes during the Build condition. Two-phase timing would remain, but the 70-second eastbound-westbound phase would include the westbound left turn movement and the 50-second southbound approach would utilize the other phase. The left hand westbound lane would change from an exclusive left turn to a left-through lane.

Melrose Commons

- Brook Avenue: As part of the Boricua Village development, Brook Avenue, which serves minimal traffic volumes, would be closed between East 161st Street and Elton Avenue to create a pedestrian plaza adjacent to Boricua Village. The section of Brook Avenue between East 163rd Street and Elton Avenue would also be closed, with southbound Brook Avenue traffic diverted to the Washington Avenue intersection.
- East 161st Street: The portion of this roadway connecting Brook and Third Avenues would be closed to provide pedestrian circulation and a visual corridor.
- East 162nd Street: This roadway would be closed between the proposed Melrose Crescent and Third Avenues. The western portion of the street would be included in Site 61, while the portion of this roadway connecting Brook and Third Avenues would be closed to provide pedestrian circulation and a visual corridor within Boricua Village.

The buildout of these streets would occur as mapped in 1994 as part of the approved Melrose Commons URP. No changes are proposed to this aspect of the URP.

East 163rd Street, Washington Avenue, and Elton Avenue

Additionally, in order to provide access to the proposed Boricua Village parking garage, a 100-foot-long southbound left turn lane would be configured on Washington Avenue between East 163rd Street and Elton Avenue. The existing traffic island would be enlarged and Elton Avenue northbound would shift approximately 30 feet southeast. The roadway would be striped with two northbound lanes and stop-controlled at East 163rd Street, as in the existing condition. In addition, the southernmost westbound lane of East 163rd Street would be striped as an exclusive left turn lane approaching Washington Avenue.

The proposed driveway would be 25 feet wide and provide access and egress to the proposed garage. The garage exit would be stop-controlled and signed to permit right turns only. An additional traffic island would be constructed south of the proposed driveway along Elton Avenue at Washington Avenue to discourage exiting garage traffic from making a left turn onto Elton Avenue.

Although these intersections were not classified as high pedestrian accident locations, high visibility crosswalks would be provided as an added safety measure across the northbound Elton Avenue approach to East 163rd Street and at the East 163rd Street/Washington Avenue/Elton Avenue intersection.

TRIP GENERATION

The projection of future trips was developed based on travel characteristics of the anticipated land uses. In addition to information presented in standard references and approved studies, data on travel rates and characteristics at Boricua College were developed based on temporal data obtained for Mercy College, located in the east Bronx, and travel mode projections from the Boricua College administration. Trips generated for the remaining uses were developed based on information provided in approved studies, including the *Retail and Industrial Zoning Text Amendments FGEIS* (1996), *Harlem Park Development EAS* (2004), *506 East 76th Street Rezoning FEIS* (1999), and the *Downtown Brooklyn FEIS* (2004), and such standard references as the *CEQR Technical Manual*, Pushkarev and Zupan's *Urban Space for Pedestrians*, the *Characteristics of Urban Transportation Demand*, and the 2000 U.S. Census database. Brief descriptions of these uses and their corresponding trip generation characteristics for the project components are provided below.

BORICUA VILLAGE

Boricua Village would be located on a block bounded by Elton Avenue on the west, Third Avenue on the east, the East 161st Street corridor on the south and East 163rd Street on the north. As noted above, previously demapped portions of East 162nd Street, East 161st Street, and Brook Avenue within this area would be closed to traffic and used as visual corridors or pedestrian areas. A parking garage accommodating 174 cars would be located beneath the pedestrian area and accessed via a curb cut on Elton Avenue. Trip generation characteristics for each component are discussed in detail below:

- *Residential:* The CEQR daily trip rate of 8.1 trips per dwelling unit¹ was used to project residential trips, with peak period modal splits estimated at 23.1 percent auto; 2.2 percent taxi; 63.6 percent subway, bus, and commuter rail; and 11.1 percent walking trips during all peak hours.
- *Local Retail:* The *Retail and Industrial Zoning Text Amendments GEIS* daily trip rate of 82.56 trips per 1,000 s.f. was used to project trips associated with local retail activities, with peak period modal splits estimated at 3.0 percent auto, 2.0 percent taxi, 15 percent subway and bus, and 80 percent walking trips during all peak hours.
- *Academic:* The CEQR daily trip rate of 26.6 trips per 1,000 s.f. was used to project trips associated with the proposed Boricua College, with peak period AM and PM modal splits estimated at 20 percent auto, 1 percent taxi, 71 percent subway and bus, and 8 percent walking trips during all peak periods.

The combined components of Boricua Village are expected to generate 1,194, 1,340, and 1,879 person trips during the AM, midday, and PM peak hours, respectively, and 225, 161, and 319 vehicle trips, including deliveries, during each of these respective periods. (Between the DEIS and FEIS, an alternative circulation plan prohibiting exiting left turns may be examined for the Boricua Village parking garage; it is possible that the change in circulation would result in some changes to the traffic impacts and mitigation identified in this analysis.)

COURTLANDT CORNERS

Courtlandt Corners would be located on assorted sites within the blocks bounded by Courtlandt Avenue, Melrose Avenue, East 160th Street, and East 162nd Street. Trip generation assumptions for each of the project's components are the same as those used for similar land uses at Boricua Village. The combined components of Courtlandt Corners are expected to generate 420, 619, and 633 person trips during the AM, midday, and PM peak hours, respectively, and 80, 58, and 97 vehicle trips, including deliveries, during each of these respective periods.

OTHER SITES

Site 15

This site is located on the northeast corner of Courtlandt Avenue and East 157th Street. Trip generation assumptions for its components are the same as those used for similar land uses at Boricua Village. The combined components of Site 15 are expected to generate 27, 80, and 53

¹ As described in Chapter 1, "Project Description." Boricua Village would include up to 750 dwelling units. The trip generation for Boricua Village in this analysis is conservatively based on 754 units.

Melrose Commons

person trips during the AM, midday, and PM peak hours, respectively, and 2, 8, and 5 vehicle trips, including deliveries, during each of these respective periods.

Site 51

This site, located on the north side of East 161st Street at Elton Avenue, would be used as a community facility. For trip generation purposes, Site 51 was assumed to be divided equally between medical offices and neighborhood office space. Trip generation characteristics are discussed below:

- *Medical Offices–Staff:* A daily trip rate of 10 trips per 1,000 s.f. was used to project medical staff trips, with peak period AM and PM modal splits estimated at 65.2 percent auto; 0.9 percent taxi; 26 percent subway, bus, and commuter rail; and 7.9 percent walking trips. During the midday peak hours, the auto, taxi, and transit splits were reduced to 2, 1, and 14 percent, respectively, and walk trips estimated at 83 percent.
- *Medical Offices–Visitors:* A daily trip rate of 33.6 trips per 1,000 s.f. was used to project medical visitor trips, with peak period modal splits estimated at 25.0 percent auto, 15.0 percent taxi, 40 percent transit, and 20 percent walk trips during all peak hours.
- *Neighborhood Offices:* The CEQR daily trip rate of 18 trips per 1,000 s.f. of office space was used to project neighborhood office trips, with modal splits assumed to be the same as those used for medical office staff.

The combined components of Site 51 are expected to generate 66, 75, and 66 person trips during the AM, midday, and PM peak hours, respectively, and 39, 12, and 41 vehicle trips during each of these respective periods.

Sites 52, 53, and 54

These sites are located on the block bounded by East 161st Street, East 162nd Street, Melrose Avenue, and the re-routed western portion of East 163rd Street, to be renamed Melrose Crescent. Trip generation assumptions for its components are the same as those used for similar land uses at Boricua Village. The combined components of Sites 52, 53, and 54 are expected to generate 112, 308, and 217 person trips during the AM, midday, and PM peak hours, respectively, and 16, 22, and 23 vehicle trips, including deliveries, during each of these respective periods.

Sites 62 and 64

These sites are located on the blocks bounded by Melrose Avenue, East 162nd Street, and Melrose Crescent. Trip generation assumptions are the same as those used for residential portions of Boricua Village. The combined components of Sites 62 and 64 are expected to generate 320, 166, and 375 person trips during the AM, midday, and PM peak hours, respectively, and 65, 38, and 73 vehicle trips during each of these respective periods.

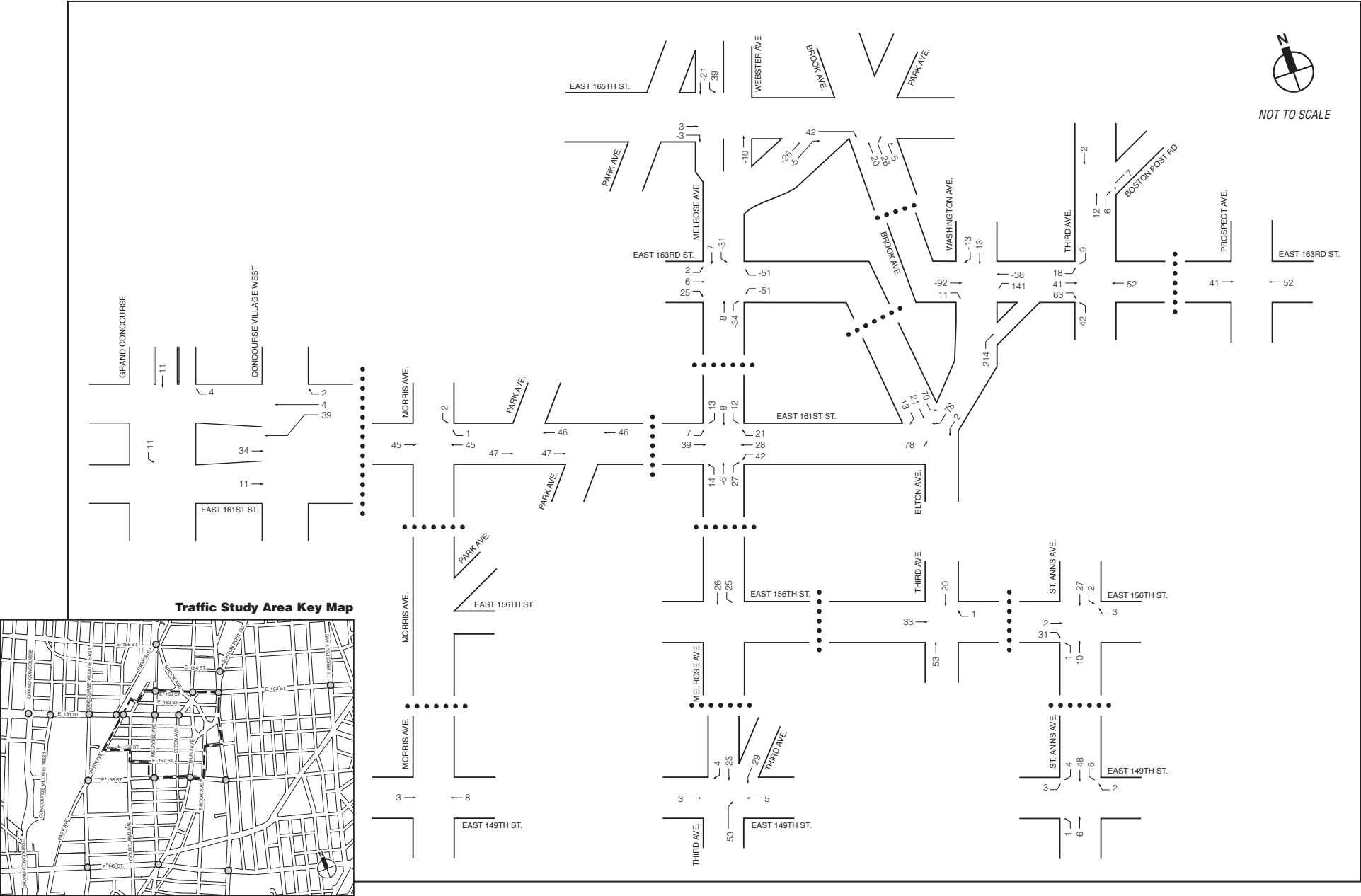
Table 14-6 summarizes the travel demand assumptions and projected person and vehicle trips discussed above for the potential future developments in the Melrose Commons URA, while Table 14-7 shows the total number of project-generated person and vehicle trips by travel mode during the peak hours analyzed. In total, the Melrose Commons URA is expected to generate 2,126, 2,510, and 3,184 person trips during the AM, midday, and PM peak hours, respectively, and 427, 293, and 556 vehicle trips during each of these respective periods.

TRIP DISTRIBUTION AND ASSIGNMENT

Origin and destination patterns for project-generated vehicular trips were developed based on local traffic patterns and the location of major employment centers. Based on this information, project-generated trips were distributed as follows:

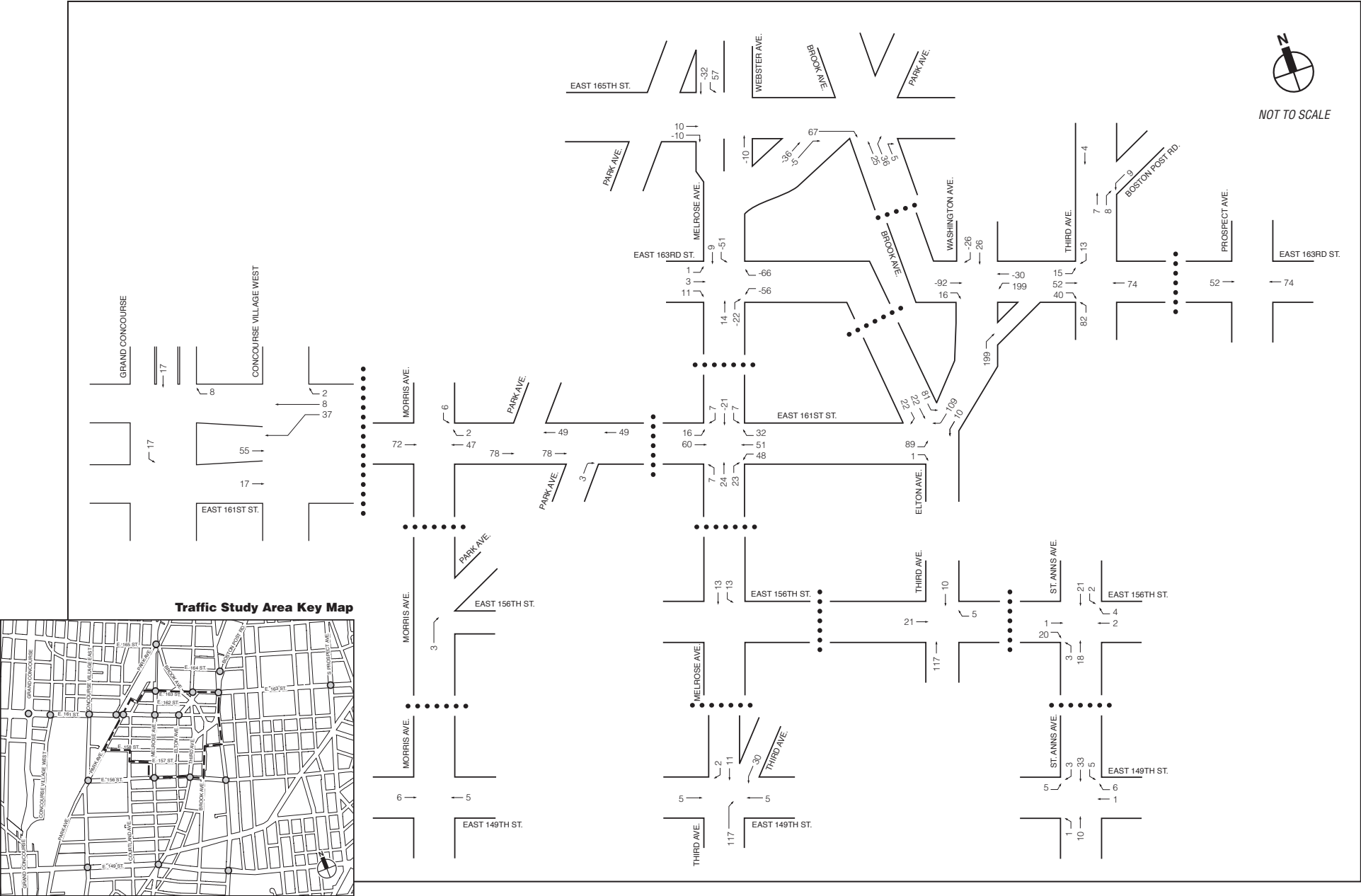
- Approximately 23 percent were distributed to the south along Third, Melrose, and St. Ann's Avenues, where access is available to Manhattan and/or Queens via the Triborough, Willis Avenue, and Third Avenue, and East 138th Street Bridges.
- Approximately 24 percent were distributed to the north on the Grand Concourse, Concourse Village East, Webster Avenue, Third Avenue, and Boston Post Road.
- Approximately 18 percent were distributed to the west on East 149th and East 161st Streets to access the Major Deegan Expressway or Manhattan via the 145th and Macombs Dam Bridges.
- The remaining 35 percent were distributed to the east, where they could access most northern and eastern Bronx neighborhoods and the Throggs Neck and Whitestone Bridges via the Bronx River Parkway and Bruckner Expressway.

Using the trip distribution results, auto trips were assigned to the study area intersections based on logical routes of travel. The trip distribution assigned in the DEIS assumed both left and right turns for vehicles exiting the Boricua Village garage. After discussions with NYCDOT, this distribution was revised in the FEIS analysis to permit right turns only for exiting vehicles. Vehicles will still enter the garage making either left or right turns from Elton Avenue. Figures 14-9, 14-10, and 14-11 show project-generated traffic volumes during the AM, midday and PM peak hours respectively.



Project Increment AM Peak Hour
Figure 14-9





— Melrose Commons Urban Renewal Area Boundary
○ Analysis Intersection

Table 14-6
Travel Demand Assumptions for Melrose Commons URA

Community Facility																		
Daily Trip Rates	Residential (1,2)		Academic (4,5)		Local Retail (8,2)		Neighborhood Office (4,2)		HC: Doctors & Staff (11)		HC: Patients & Visitors (11,2)		All rates are per 1,000 gsf, except for residential (per dwelling unit)					
Person Trips	8.1		26.6		82.56		18.0		10.0		33.6							
Truck Trips	.003		0.03		0.45		0.20		0.00		0.45							
Community Facility																		
Modal Split	Residential (3)		Academic (6)		Local Retail (8)		Neighborhood Office (3,10)		HC: Doctors & Staff (3,10)		HC: Patients & Visitors (11)							
	AM/PM	MD	AM/PM	MD	AM/PM	MD	AM/PM	MD	AM/PM	MD	AM/PM	MD						
Auto	23.1%	23.1%	20.0%	20.0%	3.0%	3.0%	65.2%	2.0%	65.2%	2.0%	25.0%	25.0%						
Taxi	2.2%	2.2%	1.0%	1.0%	2.0%	2.0%	0.9%	1.0%	0.9%	1.0%	15.0%	15.0%						
Subway	37.8%	37.8%	24.0%	24.0%	5.0%	5.0%	8.8%	7.0%	8.8%	7.0%	21.0%	21.0%						
Bus	23.1%	23.1%	47.0%	47.0%	10.0%	10.0%	16.8%	7.0%	16.8%	7.0%	19.0%	19.0%						
Commuter Rail	2.7%	2.7%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	0.0%	0.0%	0.0%						
Walk Only	11.1%	11.1%	8.0%	8.0%	80.0%	80.0%	7.9%	83.0%	7.9%	83.0%	20.0%	20.0%						
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%						
Community Facility																		
Vehicle Occupancy	Residential (3)		Academic (7)		Local Retail (8)		Neighborhood Office (3,8)		HC: Doctors & Staff (11)		HC: Patients & Visitors (11)		All vehicle occupancy figures are persons per vehicle					
Auto	1.40		1.10		1.60		1.10		1.00		1.65							
Taxi/Black Car	1.40		1.10		1.20		1.40		1.40		1.20							
Community Facility																		
Temporal Distribution	Residential (1)			Academic (4,7)			Local Retail (8,9)			Neighborhood Office (1,4)			HC: Doctors & Staff (11)			HC: Patients & Visitors (11)		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
AM Peak Hour	9.1%	15.0%	85.0%	16.1%	100.0%	0.0%	3.1%	50.5%	49.5%	11.8%	94.0%	6.0%	24.0%	100.0%	0.0%	6.0%	92.5%	7.5%
MD Peak Hour	4.7%	50.0%	50.0%	8.4%	52.0%	48.0%	19.0%	50.5%	49.5%	15.0%	40.0%	60.0%	17.0%	50.0%	50.0%	9.0%	50.0%	50.0%
PM Peak Hour	10.7%	70.0%	30.0%	26.0%	66.0%	34.0%	9.6%	53.1%	46.9%	13.7%	4.0%	96.0%	24.0%	0.0%	100.0%	5.0%	31.4%	68.6%
Community Facility																		
Delivery Trip Distribution (In/Out)	Residential (2)		Academic (5)		Local Retail (2)		Neighborhood Office (2)		HC: Doctors & Staff		HC: Patients & Visitors (2)							
AM Peak Hour	9.7%		9.7%		9.7%		10.0%		--		9.7%							
Midday Peak Hour	7.8%		7.8%		7.8%		11.0%		--		7.8%							
PM Peak Hour	5.1%		7.8%		5.1%		2.0%		--		5.1%							
Sources:																		
1. Urban Space for Pedestrians (1975), Pushkarev & Zupan																		
2. Characteristics of Urban Transportation Demand																		
3. 2000 Census of Population and Housing, US Department of Commerce, Bureau of Census																		
4. New York City CEQR Technical Manual (2001)																		
5. Motor Trucks in the Metropolis (1969), Wilbur Smith Associates																		
6. Boricua College																		
7. Mercy College																		
8. Retail and Industrial Zoning Text Amendments FGEIS (October 1996)																		
9. Harlem Park Development EAS (May 2004)																		
10. Downtown Brooklyn FEIS (2004)																		
11. 506 East 76th Street Rezoning FEIS (October 1999)																		

Table 14-7
Trip Generation Summary

Peak Hour Person Trips															
Analysis Time Period	Auto		Taxi		Subway		Bus		Commuter Rail		Walk Only		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In+Out
AM peak hour	179	268	14	26	204	432	297	282	4	31	174	228	872	1,267	2,139
MD peak hour	133	131	24	25	205	202	224	220	8	8	678	667	1,304	1,284	2,588
PM peak hour	375	208	36	22	561	267	549	284	29	12	484	365	2,050	1,173	3,223
Peak Hour Vehicle Trips															
Analysis Time Period	Auto		Taxi		Deliveries		Total								
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In+Out
AM peak hour	154	193	32	32	8	8	194	233	427						
Midday peak hour	100	99	43	43	7	7	150	149	299						
PM peak hour	289	167	47	47	4	4	340	218	558						

TRAFFIC VOLUMES AND LEVEL OF SERVICE

Within the study area, peak hour traffic volumes would increase along the primary access and egress routes to the project site. The 2009 Build condition AM, midday, and PM peak hour traffic volumes are shown in Figures 14-12, 14-13, and 14-14, respectively.

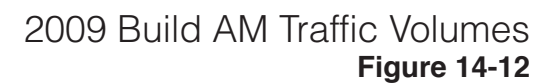
Capacity and level of service analyses were performed for the study area intersections using the future Build condition peak hour traffic volumes. Table 14-8 compares the No Build and Build service levels for these intersections.

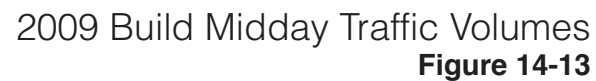
IMPACT CRITERIA

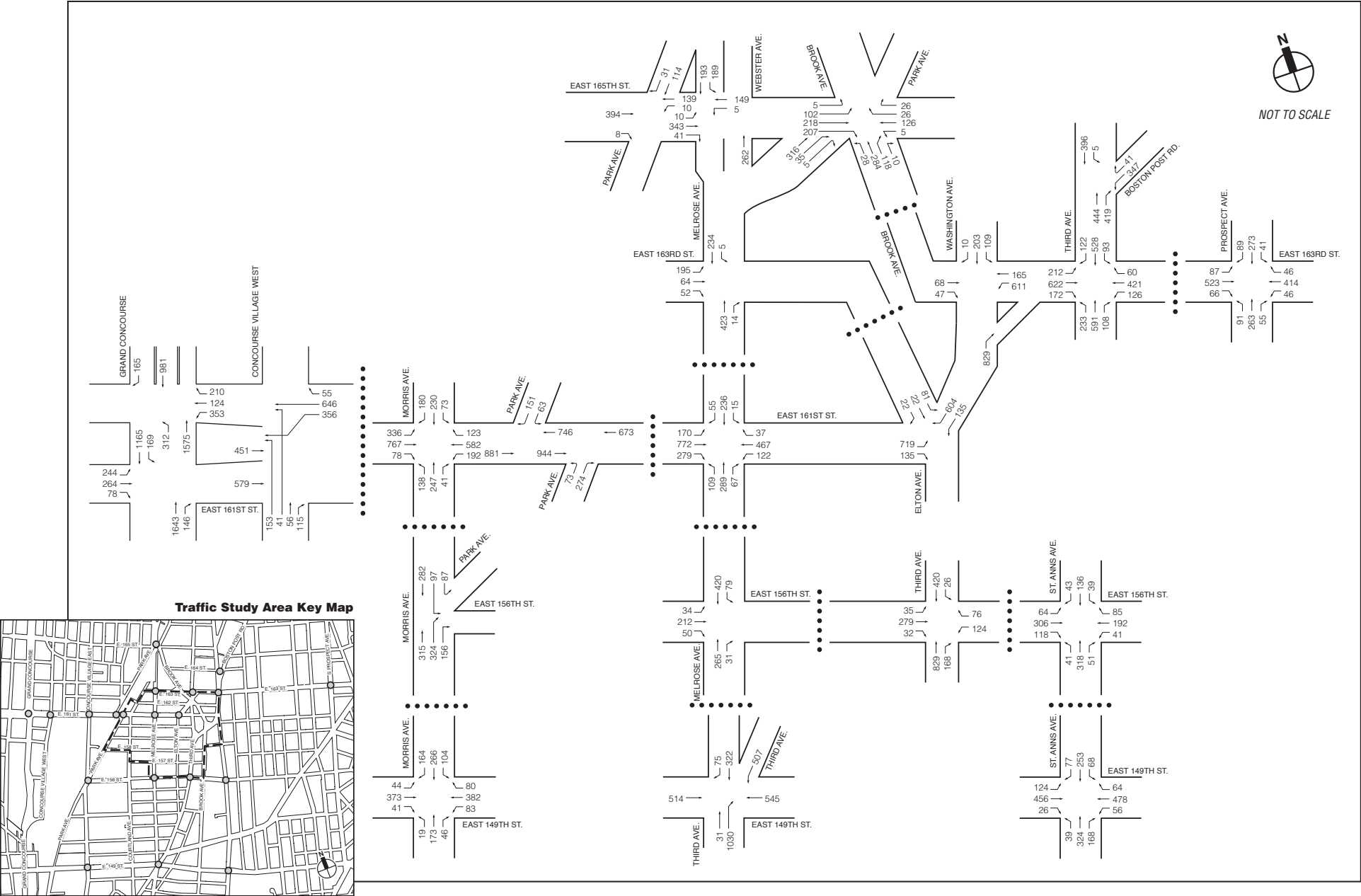
According to the criteria presented in the *CEQR Technical Manual*, impacts are considered significant and require mitigation if they result in an increase of 5 or more seconds of delay in a lane group over No Build levels beyond mid-LOS D. For No Build LOS E, a 4-second increase in delay is considered significant. For No Build LOS F, a 3-second increase in delay is considered significant. Also, if the No Build LOS F condition already corresponds with a delay in excess of 120 seconds, an increase of 1.0 or more seconds of delay is considered significant, unless a proposed action generates fewer than five vehicle trips through that intersection in the peak hour. In addition, impacts are considered significant if the LOS for a movement deteriorates from acceptable LOS A, B, or C in the No Build condition to marginally unacceptable LOS D (a delay in excess of 45 seconds, the midpoint of the LOS D range of delay), or unacceptable LOS E or F in the future Build condition.

SIGNIFICANT IMPACTS

Based on the above CEQR criteria, significantly impacted locations were identified and summarized by peak analysis period, as follows. During the AM peak hour, the proposed and future actions would result in nine significantly impacted lane groups at seven intersections. In the midday, eight lane groups at five intersections would experience significant adverse impacts. During the PM peak hour, there would be seventeen significantly impacted lane groups at ten intersections. Increases in delay are shown in parentheses.







Melrose Commons

Table 14-8
Signalized Intersections
2000 No Build and Build Conditions Level of Service Analyses

Intersection	Peak Hour																							
	AM								MD								PM							
	2009 No Build				2009 Build				2009 No Build				2009 Build				2009 No Build				2009 Build			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 165th Street & Park Avenue Southbound																								
Eastbound	TR	0.86	63.3	E	TR	0.86	63.3	E	TR	1.17	138.8	F	TR	1.17	138.8	F	TR	0.77	49.1	D	TR	0.77	49.1	D
Westbound	L	0.12	34.4	C	L	0.12	34.4	C	L	0.13	35.1	D	L	0.13	35.1	D	L	0.15	37.0	D	L	0.15	37.0	D
	T	0.39	37.9	D	T	0.39	37.9	D	T	0.55	42.1	D	T	0.55	42.1	D	T	0.36	37.3	D	T	0.36	37.3	D
Southbound	TR	0.56	50.2	D	TR	0.56	50.2	D	TR	0.45	33.4	C	TR	0.45	33.4	C	TR	0.59	51.4	D	TR	0.59	51.4	D
	Intersection		52.7	D	Intersection		52.7	D	Intersection		94.9	F	Intersection		94.9	F	Intersection		47.1	D	Intersection		47.1	D
East 165th Street & Melrose/Webster Avenues																								
Eastbound	L	0.05	32.4	C	L	0.05	32.4	C	L	0.08	32.8	C	L	0.08	32.8	C	L	0.05	32.5	C	L	0.05	32.5	C
	TR	0.68	47.2	D	TR	0.68	47.2	D	TR	1.18	145.1	F	TR	1.18	142.4	F	TR	0.77	49.6	D	TR	0.77	49.4	D
Westbound	L	0.03	32.2	C	L	0.03	32.2	C	L	0.09	33.9	C	L	0.09	33.9	C	L	0.07	33.9	C	L	0.07	33.9	C
	TR	0.43	38.8	D	TR	0.43	38.8	D	TR	0.58	43.5	D	TR	0.58	43.5	D	TR	0.39	37.8	D	TR	0.39	37.8	D
Northbound	T	0.18	25.4	C	T	0.17	25.3	C	T	0.22	18.2	B	T	0.21	18.1	B	T	0.29	27.0	C	T	0.28	26.8	C
Southbound	L	0.40	45.3	D	L	0.53	49.0	D	L	0.34	31.1	C	L	0.46	33.5	C	L	0.52	48.7	D	L	0.75	59.5	E+
	T	0.15	9.8	A	T	0.13	9.7	A	T	0.09	4.7	A	T	0.07	4.7	A	T	0.15	9.8	A	T	0.13	9.7	A
	Intersection		31.6	C	Intersection		33.2	C	Intersection		64.1	E	Intersection		64.5	E	Intersection		34.3	C	Intersection		37.5	D
East 165th Street & Brook Avenue																								
Eastbound	LT	0.78	57.2	E	LT	0.78	57.2	E	LT	1.26	178.6	F	LT	1.26	178.6	F	LT	0.95	77.6	E	LT	0.95	77.6	E
	R	0.35	37.2	D	R	0.47	40.0	D	R	0.52	41.7	D	R	0.75	54.5	D+	R	0.38	37.9	D	R	0.57	42.9	D
Westbound	LTR	0.42	38.1	D	LTR	0.42	38.1	D	LTR	1.10	132.1	F	LTR	1.10	132.1	F	LTR	0.68	49.8	D	LTR	0.68	49.8	D
Northbound (Melrose)	TR	0.49	31.2	C	TR	0.43	30.0	C	TR	0.40	20.9	C	TR	0.37	20.4	C	TR	0.73	39.0	D	TR	0.65	35.9	D
Northbound (Brook)	LTR	0.93	84.5	F	LTR	1.10	129.9	F+	LTR	0.76	47.1	D	LTR	0.90	62.9	E+	LTR	1.14	139.1	F	LTR	1.34	220.6	F+
	Intersection		50.9	D	Intersection		64.9	E	Intersection		90.1	F	Intersection		93.4	F	Intersection		75.5	E	Intersection		101.3	F
Boston Post Road & 3rd Avenue																								
Westbound	L	0.69	34.4	C	L	0.70	34.8	C	L	0.30	18.6	B	L	0.31	18.7	B	L	0.45	21.2	C	L	0.47	21.4	C
	R	0.14	22.3	C	R	0.14	22.3	C	R	0.06	15.6	B	R	0.06	15.6	B	R	0.06	15.7	B	R	0.06	15.7	B
Northbound	TR	0.48	20.9	C	TR	0.49	21.1	C	TR	0.63	30.4	C	TR	0.64	30.5	C	TR	0.82	37.3	D	TR	0.83	38.2	D
Southbound	LT	0.31	18.2	B	LT	0.31	18.3	B	LT	0.28	23.7	C	LT	0.28	23.7	C	LT	0.36	24.8	C	LT	0.36	24.8	C
	Intersection		24.0	C	Intersection		24.3	C	Intersection		26.1	C	Intersection		26.2	C	Intersection		30.3	C	Intersection		30.9	C
East 163rd Street & Melrose Avenue																								
Eastbound	LTR	0.39	23.1	C	LTR	0.44	24.2	C	LTR	0.51	25.6	C	LTR	0.53	26.2	C	LTR	0.48	24.9	C	LTR	0.50	25.5	C
Westbound	LR	0.17	19.7	B	-	-	-	-	LR	0.18	19.9	B	-	-	-	-	LR	0.22	20.4	C	-	-	-	-
Northbound	TR	0.37	22.6	C	TR	0.33	21.8	C	TR	0.46	24.3	C	TR	0.46	24.2	C	TR	0.64	29.2	C	TR	0.63	28.6	C
Southbound	LT	0.37	22.5	C	LT	0.32	21.5	C	LT	0.39	23.1	C	LT	0.26	20.8	C	LT	0.48	25.2	C	LT	0.30	21.2	C
	Intersection		22.4	C	Intersection		22.6	C	Intersection		24.0	C	Intersection		24.1	C	Intersection		26.1	C	Intersection		25.8	C
East 163rd Street & Washington Avenue																								
Eastbound	T	0.14	19.0	B	TR	0.12	18.8	B	T	0.15	19.1	B	TR	0.17	19.3	B	T	0.11	18.7	B	TR	0.09	18.4	B
Westbound	L	0.52	27.3	C	L	0.68	33.5	C	L	0.51	26.9	C	L	0.66	32.6	C	L	0.65	32.0	C	L	0.85	45.5	D+
	LT	0.44	24.0	C	LT	0.51	25.8	C	LT	0.39	23.1	C	LT	0.46	24.7	C	LT	0.47	24.6	C	LT	0.61	28.4	C
Southbound	LTR	0.31	21.2	C	LTR	0.31	21.2	C	LTR	0.20	19.8	B	LTR	0.20	19.8	B	LTR	0.27	20.6	C	LTR	0.27	20.5	C
	Intersection		22.8	C	Intersection		25.3	C	Intersection		22.2	C	Intersection		24.5	C	Intersection		24.5	C	Intersection		31.0	C

Chapter 14: Traffic and Parking

Table 14-8(cont'd)
Signalized Intersections
2000 No Build and Build Conditions Level of Service Analyses

Intersection	Peak Hour																							
	AM								MD								PM							
	2009 No Build				2009 Build				2009 No Build				2009 Build				2009 No Build				2009 Build			
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	
East 163rd Street & 3rd Avenue																								
Eastbound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	DefL	0.95	72.4	E+
	LTR	0.87	43.2	D	LTR	1.05	80.3	F+	LTR	0.93	51.8	D	LTR	1.04	77.6	E+	LTR	1.24	154.6	F	TR	1.47	253.3	F+
Westbound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	LTR	0.79	53.6	D	LTR	0.93	69.6	E+	LTR	0.96	77.0	E	LTR	1.06	101.2	F+	LTR	1.34	214.2	F	LTR	1.35	213.7	F
Northbound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	DefL	1.16	138.8	F+
	LTR	0.67	26.2	C	LTR	0.79	32.2	C	LTR	0.66	25.7	C	LTR	0.72	27.8	C	LTR	1.01	62.7	E	TR	1.02	68.0	E+
Southbound	LTR	0.70	26.1	C	LTR	0.72	26.9	C	LTR	0.52	21.9	C	LTR	0.53	22.2	C	LTR	0.81	32.1	C	LTR	0.74	28.3	C
	Intersection		35.1	D	Intersection		51.0	D	Intersection		42.2	D	Intersection		56.1	E	Intersection		109.5	F	Intersection		136.0	F
East 163rd Street & Prospect Avenue																								
Eastbound	LTR	0.40	19.7	B	LTR	0.44	20.3	C	LTR	0.42	15.8	B	LTR	0.45	16.2	B	LTR	0.57	18.4	B	LTR	0.62	19.5	B
Westbound	LTR	0.31	18.4	B	LTR	0.35	19.0	B	LTR	0.29	14.2	B	LTR	0.32	14.5	B	LTR	0.38	15.4	B	LTR	0.44	16.2	B
Northbound	LTR	1.11	108.9	F	LTR	1.11	108.9	F	LTR	0.73	31.8	C	LTR	0.73	31.8	C	LTR	0.97	62.3	E	LTR	0.97	62.3	E
Southbound	LTR	0.89	53.3	D	LTR	0.89	53.3	D	LTR	0.63	26.7	C	LTR	0.63	26.7	C	LTR	0.69	28.4	C	LTR	0.69	28.4	C
	Intersection		53.8	D	Intersection		52.2	D	Intersection		21.5	C	Intersection		21.4	C	Intersection		29.5	C	Intersection		29.3	C
East 161st Street & Grand Concourse Northern Intersection																								
Westbound	L	0.36	33.0	C	L	0.36	33.0	C	L	0.30	25.6	C	L	0.30	25.6	C	L	0.69	42.3	D	L	0.69	42.3	D
	TR	0.41	34.5	C	TR	0.42	34.8	C	TR	0.51	30.7	C	TR	0.52	30.9	C	TR	0.81	51.7	D	TR	0.83	53.9	D
Northbound Main	L	0.97	82.9	F	L	0.97	83.0	F	L	0.43	19.6	B	L	0.43	19.7	B	L	1.01	72.7	E	L	1.03	77.3	E+
	T	0.47	8.8	A	T	0.47	8.8	A	T	0.49	14.9	B	T	0.49	14.9	B	T	0.92	21.7	C	T	0.92	21.7	C
Southbound Main	T	0.67	18.1	B	T	0.67	18.2	B	T	0.32	20.9	C	T	0.32	21.0	C	T	0.35	14.0	B	T	0.36	14.0	B
Southbound Service	R	0.31	14.5	B	R	0.31	14.5	B	R	0.37	23.4	C	R	0.37	23.4	C	R	0.29	14.4	B	R	0.29	14.4	B
	Intersection		20.8	C	Intersection		20.8	C	Intersection		20.5	C	Intersection		20.6	C	Intersection		28.3	C	Intersection		28.9	C
East 161st Street & Grand Concourse Southern Intersection																								
Eastbound	L	0.47	36.2	D	L	0.47	36.2	D	L	0.33	26.5	C	L	0.33	26.5	C	L	0.62	41.2	D	L	0.62	41.2	D
	TR	0.58	37.3	D	TR	0.58	37.3	D	TR	0.33	25.8	C	TR	0.33	25.8	C	TR	0.44	33.8	C	TR	0.44	33.8	C
Northbound	TR	0.50	15.9	B	TR	0.50	15.9	B	TR	0.54	24.4	C	TR	0.54	24.4	C	TR	0.93	30.0	C	TR	0.93	30.0	C
Southbound	L	1.38	218.9	F	L	1.41	236.5	F+	L	0.38	21.8	C	L	0.41	22.7	C	L	0.83	58.6	E	L	0.93	74.5	E+
	T	0.70	11.5	B	T	0.70	11.5	B	T	0.40	13.7	B	T	0.40	13.7	B	T	0.51	9.0	A	T	0.51	9.0	A
	Intersection		40.4	D	Intersection		43.0	D	Intersection		20.7	C	Intersection		20.8	C	Intersection		25.6	C	Intersection		26.5	C
East 161st Street & Concourse Village West																								
Eastbound Main	T	0.27	11.4	B	T	0.29	11.6	B	T	0.18	10.6	B	T	0.18	10.6	B	T	0.23	8.2	A	T	0.26	8.5	A
Eastbound Service	T	0.50	14.0	B	T	0.51	14.1	B	T	0.32	11.8	B	T	0.32	11.8	B	T	0.29	8.7	A	T	0.30	8.8	A
Westbound	TR	0.34	11.9	B	TR	0.36	12.1	B	TR	0.36	12.1	B	TR	0.36	12.1	B	TR	0.42	9.7	A	TR	0.44	9.8	A
Northbound	LTR	0.43	25.4	C	LTR	0.43	25.4	C	LTR	0.31	23.5	C	LTR	0.31	23.5	C	LTR	0.96	69.0	E	LTR	0.96	69.0	E
	Intersection		13.9	B	Intersection		13.9	B	Intersection		12.7	B	Intersection		12.7	B	Intersection		18.5	B	Intersection		18.1	B

Melrose Commons

Table 14-8(cont'd)
Signalized Intersections
2000 No Build and Build Conditions Level of Service Analyses

Intersection	Peak Hour																							
	AM								MD								PM							
	2009 No Build				2009 Build				2009 No Build				2009 Build				2009 No Build				2009 Build			
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	
East 161st Street & Concourse Village East																								
Eastbound	L	0.98	53.2	D	L	0.98	52.4	D	L	0.75	23.9	C	L	0.76	24.8	C	L	0.81	35.1	D	L	0.80	36.0	D
	TR	0.47	19.9	B	TR	0.50	20.5	C	TR	0.46	18.7	B	TR	0.49	19.1	B	TR	0.61	22.5	C	TR	0.67	23.7	C
Westbound	L	0.68	39.7	D	L	0.69	40.1	D	L	0.58	34.9	C	L	0.59	35.5	D	L	0.87	65.0	E	L	0.90	72.3	E+
	TR	1.35	205.7	F	TR	1.44	245.3	F+	TR	0.66	33.0	C	TR	0.70	34.2	C	TR	0.87	44.2	D	TR	0.93	51.6	D+
Northbound	L	0.48	41.0	D	L	0.48	41.0	D	L	0.58	40.0	D	L	0.58	40.0	D	L	0.82	61.9	E	L	0.82	61.9	E
	TR	0.43	28.0	C	TR	0.43	28.0	C	TR	0.40	25.2	C	TR	0.40	25.2	C	TR	0.47	25.0	C	TR	0.47	25.0	C
Southbound	L	0.16	28.1	C	L	0.17	28.3	C	L	0.21	27.6	C	L	0.22	27.7	C	L	0.28	28.9	C	L	0.30	29.4	C
	TR	0.81	48.8	D	TR	0.81	48.8	D	TR	0.70	39.6	D	TR	0.70	39.6	D	TR	1.02	81.7	F	TR	1.02	81.7	F
	Intersection		80.4	F	Intersection		91.9	F	Intersection		28.2	C	Intersection		28.7	C	Intersection		42.6	D	Intersection		44.8	D
East 161st Street & Park Avenue Southbound																								
Eastbound	T	0.33	11.9	B	T	0.36	12.2	B	T	0.37	12.3	B	T	0.39	12.6	B	T	0.49	13.8	B	T	0.54	14.5	B
Westbound	T	0.42	13.0	B	T	0.45	13.3	B	T	0.34	12.0	B	T	0.36	12.3	B	T	0.44	13.1	B	T	0.47	13.5	B
Southbound	LR	0.35	24.0	C	LR	0.35	24.0	C	LR	0.27	22.7	C	LR	0.27	22.7	C	LR	0.44	25.6	C	LR	0.44	25.6	C
	Intersection		13.9	B	Intersection		14.1	B	Intersection		13.3	B	Intersection		13.4	B	Intersection		15.0	B	Intersection		15.4	B
East 161st Street & Park Avenue Northbound																								
Eastbound	T	0.37	12.4	B	T	0.40	12.7	B	T	0.40	12.7	B	T	0.42	13.0	B	T	0.56	14.8	B	T	0.61	15.6	B
Westbound	T	0.37	12.3	B	T	0.40	12.6	B	T	0.29	11.5	B	T	0.31	11.7	B	T	0.38	12.4	B	T	0.41	12.7	B
Northbound	LR	0.42	25.2	C	LR	0.42	25.2	C	LR	0.43	25.4	C	LR	0.43	25.4	C	LR	0.71	33.9	C	LR	0.72	34.2	C
	Intersection		14.2	B	Intersection		14.4	B	Intersection		14.3	B	Intersection		14.4	B	Intersection		17.5	B	Intersection		17.9	B
East 161st Street & Melrose Avenue																								
Eastbound	LTR	0.66	28.1	C	LTR	0.75	31.5	C	LTR	0.75	31.5	C	LTR	0.77	32.5	C	LTR	1.22	139.3	F	LTR	1.29	169.4	F+
Westbound	-	-	-	-	-	-	-	-	-	-	-	-	Defl	0.73	48.9	D+	-	-	-	-	Defl	2.13	592.1	F+
	LTR	0.51	24.9	C	LTR	0.73	32.3	C	LTR	0.50	25.0	C	TR	0.59	27.9	C	LTR	0.70	31.5	C	TR	0.83	39.9	D
Northbound	LTR	0.27	20.7	C	Defl	0.35	23.7	C	LTR	0.25	20.4	C	LTR	0.28	20.7	C	LTR	0.33	21.5	C	LTR	0.38	22.1	C
	-	-	-	-	TR	0.32	21.6	C																
Southbound	LTR	0.47	24.5	C	LTR	0.52	25.8	C	LTR	0.34	22.0	C	LTR	0.34	22.1	C	LTR	0.43	23.6	C	LTR	0.43	23.7	C
	Intersection		25.3	C	Intersection		29.0	C	Intersection		26.6	C	Intersection		29.2	C	Intersection		80.9	F	Intersection		121.0	F
East 161st Street & Elton Street																								
Eastbound	TR	0.38	15.6	B	TR	0.45	17.6	B	TR	0.36	15.3	B	TR	0.40	16.9	B	TR	0.51	17.6	B	TR	0.59	20.2	C
Westbound	L	0.20	27.4	C	-	-	-	-	L	0.20	27.4	C	-	-	-	-	L	0.23	27.8	C	-	-	-	-
	T	0.55	19.4	B	-	-	-	-	T	0.47	17.7	B	-	-	-	-	T	0.58	20.1	C	-	-	-	-
	-	-	-	-	LT	0.63	21.8	C	-	-	-	-	LT	0.56	20.1	C	-	-	-	-	LT	0.78	28.2	C
Southbound	-	-	-	-	LTR	0.21	26.3	C	-	-	-	-	LTR	0.13	25.2	C	-	-	-	-	LTR	0.25	27.0	C
	Intersection		18.3	B	Intersection		20.2	C	Intersection		17.5	B	Intersection		18.9	B	Intersection		19.4	B	Intersection		24.1	C
East 156th Street & Concourse Village East/Park Avenue																								
Northbound	TR	0.33	9.5	A	TR	0.33	9.5	A	TR	0.34	9.6	A	TR	0.34	9.6	A	TR	0.51	11.2	B	TR	0.52	11.3	B
Southbound	L	0.54	16.0	B	L	0.54	16.0	B	L	0.40	12.8	B	L	0.40	12.8	B	L	0.84	42.0	D	L	0.85	42.6	D
	T	0.32	10.0	A	T	0.32	10.0	A	T	0.34	10.1	B	T	0.34	10.1	B	T	0.36	10.3	B	T	0.36	10.3	B
	Intersection		10.9	B	Intersection		10.9	B	Intersection		10.2	B	Intersection		10.2	B	Intersection		15.5	B	Intersection		15.6	B
East 156th Street & Melrose Avenue																								
Eastbound	LTR	0.88	66.6	E	LTR	0.88	66.6	E	LTR	0.64	45.6	D	LTR	0.64	45.6	D	LTR	0.92	73.7	E	LTR	0.92	73.7	E
Northbound	TR	0.21	7.4	A	TR	0.21	7.4	A	TR	0.19	7.3	A	TR	0.19	7.3	A	TR	0.29	8.1	A	TR	0.29	8.1	A
Southbound	LT	0.44	10.0	A	LT	0.51	11.0	B	LT	0.43	9.7	A	LT	0.45	10.1	B	LT	0.50	10.9	B	LT	0.54	11.5	B
	Intersection		26.2	C	Intersection		25.9	C	Intersection		18.1	B	Intersection		18.0	B	Intersection		27.3	C	Intersection		27.2	C

Chapter 14: Traffic and Parking

Table 14-8(cont'd)
Signalized Intersections
2000 No Build and Build Conditions Level of Service Analyses

Intersection	Peak Hour																							
	AM								MD								PM							
	2009 No Build				2009 Build				2009 No Build				2009 Build				2009 No Build				2009 Build			
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Intersection	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS
East 156th Street & 3rd Avenue																								
Eastbound	LTR	1.28	186.9	F	LTR	1.36	222.4	F+	LTR	0.59	45.1	D	LTR	0.62	46.3	D	LTR	0.81	57.1	E	LTR	0.86	62.3	E+
Westbound	LR	1.35	240.7	F	LR	1.35	239.6	F	LR	0.78	69.4	E	LR	0.81	74.7	E+	LR	1.45	284.0	F	LR	1.58	337.6	F+
Northbound	TR	0.50	12.1	B	TR	0.55	13.0	B	TR	0.52	12.4	B	TR	0.56	13.2	B	TR	0.81	21.7	C	TR	0.92	30.9	C
Southbound	LT	0.62	14.4	B	LT	0.64	14.9	B	LT	0.33	9.7	A	LT	0.33	9.8	A	LT	0.42	10.9	B	LT	0.43	11.1	B
Intersection			83.5	F	Intersection		92.7	F	Intersection		23.6	C	Intersection		24.5	C	Intersection		53.3	D	Intersection		62.9	E
East 156th Street & St Anns Avenue																								
Eastbound	LTR	0.71	25.3	C	LTR	0.79	29.7	C	LTR	0.60	21.2	C	LTR	0.63	22.1	C	LTR	1.00	61.6	E	LTR	1.06	76.0	E+
Westbound	LTR	0.63	20.8	C	LTR	0.64	21.3	C	LTR	0.40	16.2	B	LTR	0.40	16.2	B	LTR	0.53	18.5	B	LTR	0.54	18.8	B
Northbound	LTR	0.29	9.7	A	LTR	0.30	9.8	A	LTR	0.26	9.4	A	LTR	0.28	9.6	A	LTR	0.49	12.1	B	LTR	0.52	12.5	B
Southbound	LTR	0.30	9.9	A	LTR	0.34	10.4	B	LTR	0.25	9.4	A	LTR	0.27	9.6	A	LTR	0.31	10.2	B	LTR	0.35	10.6	B
Intersection			18.0	B	Intersection		19.5	B	Intersection		14.9	B	Intersection		15.2	B	Intersection		30.2	C	Intersection		35.2	D
East 149th Street & Morris Avenue																								
Eastbound	L	0.04	16.0	B	L	0.04	16.0	B	L	0.24	19.2	B	L	0.24	19.3	B	L	0.17	18.1	B	L	0.17	18.1	B
	TR	0.27	18.4	B	TR	0.27	18.4	B	TR	0.33	19.3	B	TR	0.34	19.3	B	TR	0.35	19.4	B	TR	0.35	19.5	B
Westbound	L	0.39	22.1	C	L	0.39	22.2	C	L	0.34	21.4	C	L	0.35	21.4	C	L	0.28	20.1	C	L	0.28	20.2	C
	TR	0.28	18.4	B	TR	0.28	18.5	B	TR	0.31	18.9	B	TR	0.31	18.9	B	TR	0.39	20.0	C	TR	0.39	20.1	C
Northbound	LTR	0.54	30.3	C	LTR	0.54	30.3	C	LTR	0.43	26.9	C	LTR	0.43	26.9	C	LTR	0.44	26.7	C	LTR	0.44	26.7	C
Southbound	LTR	0.51	27.2	C	LTR	0.51	27.2	C	LTR	0.55	28.3	C	LTR	0.55	28.3	C	LTR	0.62	29.9	C	LTR	0.62	29.9	C
Intersection			23.3	C	Intersection		23.3	C	Intersection		23.0	C	Intersection		23.0	C	Intersection		23.7	C	Intersection		23.7	C
East 149th Street & Melrose Avenue/3rd Avenue/Willis Avenue																								
Eastbound	T	0.59	41.6	D	T	0.59	41.7	D	T	0.60	41.8	D	T	0.60	41.9	D	T	0.72	45.7	D	T	0.73	46.1	D
Westbound	T	0.77	47.7	D	T	0.78	48.1	D	T	0.52	39.9	D	T	0.52	40.0	D	T	0.74	46.6	D	T	0.75	46.9	D
Northbound	L	0.03	11.2	B	L	0.03	11.5	B	L	0.04	9.3	A	L	0.04	9.5	A	L	0.09	10.9	B	L	0.09	11.2	B
	T	0.35	10.0	A	T	0.38	10.3	B	T	0.30	9.6	A	T	0.33	9.9	A	T	0.54	12.5	B	T	0.61	13.8	B
Southbound (Melrose)	T	0.87	69.8	E	T	0.95	82.2	F+	T	0.63	50.4	D	T	0.65	51.7	D	T	0.93	79.4	E	T	0.97	86.4	F+
	R	0.47	48.0	D	R	0.49	48.8	D	R	0.50	49.5	D	R	0.51	49.6	D	R	0.38	45.5	D	R	0.40	46.0	D
Southbound (3rd Avenue)	T	0.81	41.6	D	T	0.85	44.9	D	T	0.50	29.9	C	T	0.52	30.5	C	T	0.67	34.7	C	T	0.71	36.3	D
Intersection			38.9	D	Intersection		41.0	D	Intersection		32.0	C	Intersection		32.0	C	Intersection		36.7	D	Intersection		37.5	D
East 149th Street & St Anns Avenue																								
Eastbound	LTR	0.40	11.4	B	LTR	0.41	11.5	B	LTR	0.32	10.3	B	LTR	0.32	10.3	B	LTR	0.55	13.7	B	LTR	0.56	13.9	B
Westbound	LTR	0.43	11.6	B	LTR	0.44	11.6	B	LTR	0.30	10.0	B	LTR	0.30	10.0	B	LTR	0.44	11.7	B	LTR	0.44	11.7	B
Northbound	LTR	1.13	131.5	F	LTR	1.22	165.7	F+	LTR	0.98	84.6	F	LTR	1.02	96.5	F+	LTR	1.09	107.8	F	LTR	1.11	115.7	F+
Southbound	LTR	1.24	174.9	F	LTR	1.44	259.8	F+	LTR	0.88	71.4	E	LTR	0.99	92.4	F+	LTR	1.66	359.0	F	LTR	1.90	466.3	F+
Intersection			69.8	E	Intersection		99.6	F	Intersection		37.9	D	Intersection		45.4	D	Intersection		96.3	F	Intersection		123.2	F
Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service. + Significant traffic impact.																								

AM PEAK HOUR

- *East 165th Street and Brook Avenue:* The northbound approach of Brook Avenue would deteriorate within LOS F and increase in average delay from 84.5 to 129.9 (45.4) spv.
- *East 163rd Street and Third Avenue:* The eastbound approach would deteriorate from LOS D to LOS F and increase in average delay from 43.2 spv to 80.3 (37.1) spv. The westbound approach would deteriorate from LOS D to LOS E and increase in average delay from 53.6 spv to 69.6 (16.0) spv.
- *East 161st Street and Grand Concourse (southern intersection):* The southbound left-turn movement would deteriorate within LOS F and increase in average delay from 218.9 to 236.5 (17.6) spv.
- *East 161st Street and Concourse Village East:* The westbound through-right movement would deteriorate within LOS F and increase in average delay from 205.7 to 245.3 (39.6) spv.
- *East 156th Street and Third Avenue:* The eastbound approach would deteriorate within LOS F and increase in average delay from 186.9 to 222.4 (35.5) spv.
- *East 149th Street and Melrose/Third/Willis Avenues:* The southbound through movement would deteriorate from LOS E to LOS F and increase in average delay from 69.8 to 82.2 (12.4) spv.
- *East 149th Street and St. Ann's Avenue:* The northbound approach would deteriorate within LOS F and increase in average delay from 131.5 to 165.7 (34.2) spv. The southbound approach would deteriorate within LOS F and increase in average delay from 174.9 to 259.8 (84.9) spv.

MIDDAY PEAK HOUR

- *East 165th Street and Brook Avenue:* The eastbound right-turn movement would deteriorate within LOS D and increase in average delay from 41.7 to 54.5 (12.8) spv. The northbound approach of Brook Avenue would deteriorate from LOS D to LOS E and increase in average delay from 47.1 to 62.9 (15.8) spv.
- *East 163rd Street and Third Avenue:* The eastbound approach would deteriorate from LOS D to LOS E and increase in average delay from 51.8 to 77.6 (25.8) spv. The westbound approach would deteriorate from LOS E to LOS F and increase in average delay from 77.0 to 101.2 (24.2) spv.
- *East 161st Street and Melrose Avenue:* The westbound approach would deteriorate from LOS C with an average delay of 25.0 spv to a de-facto left-turn movement operating at LOS D with an average delay of 48.9 spv and a shared through and right-turn movement operating at LOS C with an average delay of 27.9 spv.
- *East 156th Street and Third Avenue:* The westbound approach would deteriorate within LOS E and increase in average delay from 69.4 to 74.7 (5.3) spv.
- *East 149th Street and St. Ann's Avenue:* The northbound approach would deteriorate within LOS F and increase in average delay from 84.6 to 96.5 (11.9) spv. The southbound approach would deteriorate within LOS F and increase in average delay from 71.4 to 92.4 (21.0) spv.

PM PEAK HOUR

- *East 165th Street and Melrose/Webster Avenues:* The southbound left-turn movement on Webster Avenue would deteriorate from LOS D to LOS E and increase in average delay from 48.7 to 59.5 (10.8) spv.
- *East 165th Street and Brook Avenue:* The northbound approach of Brook Avenue would deteriorate within LOS F and increase in average delay from 139.1 to 220.6 (81.5) spv.
- *East 163rd Street and Washington Avenue:* The westbound left-turn movement would deteriorate from LOS C to LOS D and increase in average delay from 32.0 to 45.5 (13.5) spv.
- *East 163rd Street and Third Avenue:* The eastbound approach would deteriorate from LOS F with an average delay of 154.6 spv to a de-facto left-turn movement operating at LOS E with an average delay of 72.4 spv and a through-right movement operating at LOS F with an average delay of 253.3 spv. The northbound approach would deteriorate from LOS E with an average delay of 62.7 spv to a de-facto left-turn movement operating at LOS F with an average delay of 138.8 spv and a through-right movement operating at LOS E with an average delay of 68.0 spv.
- *East 161st Street and Grand Concourse (northern intersection):* The left-turn movement on the northbound main approach would deteriorate within LOS E and increase in average delay from 72.7 to 77.3 (4.6) spv.
- *East 161st Street and Grand Concourse (southern intersection):* The southbound left-turn movement would deteriorate within LOS E and increase in average delay from 58.6 to 74.5 (15.9) spv.
- *East 161st Street and Concourse Village East:* The westbound left-turn movement would deteriorate within LOS E and increase in average delay from 65.0 to 72.3 (7.3) spv. The westbound through-right movement would deteriorate within LOS D and increase in average delay from 44.2 to 51.6 (7.4) spv.
- *East 161st Street and Melrose Avenue:* The eastbound approach would deteriorate within LOS F and increase in average delay from 139.3 to 169.4 (30.1) spv. The westbound approach would deteriorate from LOS C with an average delay of 31.5 spv to a de-facto left-turn movement operating at LOS F with an average delay of 592.1 spv and a through-right movement operating at LOS D with an average delay of 39.9 spv.
- *East 156th Street and Third Avenue:* The eastbound approach would deteriorate within LOS E and increase in average delay from 57.1 to 62.3 (5.2) spv. The westbound approach would deteriorate within LOS F and increase in average delay from 284.0 to 337.6 (53.6) spv.
- *East 156th Street and St. Ann's Avenue:* The eastbound approach would deteriorate within LOS E and increase in average delay from 61.6 to 76.0 (14.4) spv.
- *East 149th Street and Melrose/Third/Willis Avenues:* The southbound through movement on Melrose Avenue would deteriorate from LOS E to LOS F and increase in average delay from 79.4 to 86.4 (7.0) spv.
- *East 149th Street and St. Ann's Avenue:* The northbound approach would deteriorate within LOS F and increase in average delay from 107.8 to 115.7 (7.9) spv. The southbound approach would deteriorate within LOS F and increase in average delay from 359.0 to 466.3 (107.3) spv.

Mitigation measures for these impacts are presented in Chapter 20, “Mitigation.”

PARKING SUPPLY AND UTILIZATION

The proposed development at Boricua Village would provide 174 off-street accessory parking spaces. The Courtlandt Corners development is expected to include approximately 100 parking spaces. While it is likely that the developers of the remaining 546 residential units would also provide some amount of accessory parking, there are currently no specific plans for these sites and the amount of parking that would be provided is not known. Therefore, for the purposes of a conservative analysis, no credit was taken for additional accessory parking at these developments.

Due to the location of the Metro North Railroad tracks to the west, as well as the Third Avenue and East 163rd/161st Street corridors to the west and north, delineating the boundaries of the URA, motorists accessing the proposed developments are more likely to seek parking within the URA boundaries. Based on the local car ownership of 19 percent derived from U.S. census data, and the on-site parking provisions described above, the total overnight residential on-street parking demand for the Build condition would be approximately 105 spaces. During the midday period, parking accumulation calculations indicate a maximum demand of approximately 135 spaces. This demand, which is primarily attributed to Boricua College attendees and the area’s medical office users, could be accommodated by the projected on-street parking supply of approximately 225 and 380 spaces in the URA during the overnight and midday periods, respectively.

Utilization rates for on-street parking in the overall study area would increase from approximately 67 to 70 percent during the overnight period and from 80 to 84 percent during the midday period, with availability during these times declining to approximately 1,195 and 625 spaces respectively. On-street availability within the URA would decrease from approximately 225 and 380 spaces under No Build conditions to approximately 120 and 245 spaces under Build conditions during the overnight and midday periods, respectively.

Based on this analysis, the projected parking demand from the project could be accommodated by the anticipated future on- and off-street parking supply. Therefore, the proposed and future actions are not expected to result in significant adverse parking impacts.

TRAFFIC AND SAFETY

Accident data used in the DEIS for the study area intersections were obtained from the New York State and New York City Departments of Transportation (NYSDOT & NYCDOT) for the time period between January 1, 2001 and December 31, 2003. Since the publication of the DEIS, NYCDOT made available more recent accident data (January 1, 2003 to December 31, 2005). The data obtained quantify the total number of reportable accidents (involving fatality, injury or more than \$1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related accidents at each location. According to the *City Environmental Quality Review (CEQR) Technical Manual*, a high pedestrian accident location is one where there were five or more pedestrian-related accidents in any year of the most recent three-year period for which data are available.

In the 2001-2003 data used in the DEIS, a total of 335 reportable accidents, one fatality, 510 injuries, and 76 pedestrian related accidents occurred in study area intersections. The more recent data shows a drop of approximately 25 percent in all categories but fatalities, with 249

reportable accidents, one fatality, 376 injuries, and 56 pedestrian related accidents. This reduction in accidents may be attributed, in part, to safety improvements instituted by NYCDOT at a number of study area intersections. As shown in Table 14-9, only one study area intersection was identified as high pedestrian accident location in the 2003-2005 period. This intersection, the East 149th Street intersection with Melrose, Third, and Willis Avenues had 5 and 6 pedestrian related accidents in 2003 and 2004, respectively. The East 161st/Concourse Village East/Morris Avenue intersection, which was listed in the DEIS as a high pedestrian accident location in 2002 with 7 pedestrian related accidents, is no longer considered a high pedestrian accident location in the more recent data.

Table 14-9
Accident Data

Intersection		Study Period			Accidents by Year					
North-South Roadway	East-West Roadway	Reportable Accidents	Total Fatalities	Total Injuries	Pedestrian			Bicycle		
					2003	2004	2005	2003	2004	2005
Webster/Melrose/ Park/Brook Ave's.	E. 165th Street	18	1	50	2	0	0	0	0	0
Third Avenue	Boston Post Rd.	4	0	8	0	0	0	0	0	1
		4								
Melrose Avenue	E. 163rd Street		0	8	0	0	0	0	0	0
Washington Ave.	E. 163rd Street	18	0	31	0	0	0	1	0	1
Third Avenue	E. 163rd Street	20	0	26	4	0	4	0	0	0
Prospect Avenue	E. 163rd Street	13	0	24	1	0	1	0	0	0
Grand Concourse	E. 161st Street	29	0	49	2	1	1	0	0	0
Concourse Village W./Sheridan Ave.	E. 161st Street	13	0	13	4	1	0	0	1	0
Concourse Village E./Morris Avenue	E. 161st Street	26	0	38	1	1	4	0	1	0
Park Avenue (SB)	E. 161st Street	7	0	7	1	0	1	0	0	0
Park Avenue (NB)	E. 161st Street	0	0	0	0	0	0	0	0	0
Melrose Avenue	E. 161st Street	11	0	12	0	0	1	0	0	0
Elton Avenue	E. 161st Street	2	0	3	0	0	0	0	0	0
Concourse Village East/Park Avenue	E. 156th Street	0	0	0	0	0	0	0	0	0
Melrose Avenue	E. 156th Street	2	0	3	0	0	0	0	1	0
Third Avenue	E. 156th Street	5	0	5	2	0	0	0	0	0
St. Ann's Avenue	E. 156th Street	12	0	15	0	0	0	0	1	1
Morris Avenue	E. 149th Street	18	0	25	4	3	0	0	0	1
Melrose/Third/ Willis Avenues	E. 149th Street	29	0	30	5*	6*	2	0	2	2
St. Ann's Avenue	E. 149th Street	18	0	29	1	2	1	0	0	0
Note: * High vehicular-pedestrian accident location										
Source: NYSDOT										

Traffic volumes throughout the study area would increase in the No Build condition, due to background growth and traffic added by specific No Build projects near the study area. Under the Build condition, most of the pedestrian activity generated by the proposed and future actions would consist of short trips to neighborhood uses, or trips to one of the several bus routes serving the area. While approximately 27 percent of the project's vehicular traffic would pass through the East 149th Street/Third/Willis Avenue intersection, the proposed action would not generate any pedestrian-only trips to this location. Most project-generated pedestrian activity at the intersection would consist of commuters walking between bus stops and subway entrances. The majority of these trips can be accomplished without crossing any streets. A review of the accident histories at this location indicates that the majority of the pedestrian-related accidents were caused by

Melrose Commons

inattentiveness, signal disregard, and other human factors by the driver or the pedestrian. Overall, there were very few distinct trends in the accident patterns beyond typical vehicular and pedestrian traffic conflicts. Therefore, it was concluded that the proposed and future actions would not result in significant adverse safety impacts at this intersection. Pedestrian safety, however, could be improved by the placement of signs on all approaches warning motorists to yield to pedestrians.

*