

A. INTRODUCTION

This chapter examines the potential effects of the proposed project on the study area transportation systems, and compares the future with the proposed project (With-Action condition) with the future without the proposed project (No-Action condition). The analyses consider the 2023 and 2028 analysis years to identify potential impacts, and if warranted, determine feasible mitigation measures that would be appropriate to address those impacts (Chapter 22, “Mitigation,” presents details on the proposed mitigation measures). The travel demand projections, trip assignments, and capacity analysis contained in this chapter were conducted pursuant to the methodologies outlined in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*.

As described in Chapter 1, “Project Description,” the proposed project would redevelop the northern portion of the Bronx Psychiatric Center (BPC) campus with a mix of commercial and medical office, bio-tech/research, hotel, accessory, college/trade school, community facility, and retail uses along with open space and parking facilities. For the purposes of this Environmental Impact Statement (EIS), it is assumed that in the No-Action condition, the three primary, existing buildings (Bronx Children’s Psychiatric, Thompson, and Parker Buildings) would remain vacant. The powerhouse, two metal shelters, and small storage building on the project site would also be vacated and decommissioned, and the ballfields would remain as in the existing condition. The proposed project would be completed in two phases, with 2023 as the analysis year for Phase I completion, and 2028 as the year for Phase II full build-out. For Phase II, the analyses presented in this chapter assume certain access improvements to be in place along the southbound Hutchinson River Parkway (HRP) adjacent to the project site. However, these improvements, which had been contemplated to include a direct ramp connection to a new roadway constructed as part of the proposed project, are not funded in the New York City Department of Transportation (NYCDOT) capital plan and the City has no current or future plans to construct them. The second phase of the proposed BPC redevelopment is contingent on the construction of the above HRP improvements and assumes that they will be constructed by 2028. Because there is no funding or plan to construct those improvements by 2028, without some other means of addressing traffic expected to be generated by Phase II of the proposed project, this second phase of the proposed project cannot proceed.

PROJECT DESCRIPTION

As noted above and in Chapter 1, “Project Description,” the proposed project would redevelop the northern portion of the BPC campus located at 1500 Waters Place in the Morris Park section of the Bronx and generally bounded by Pelham Parkway to the north, the HRP to the east, Waters Place to the south, and Marconi Street to the west with approximately 1.2 million gross square feet (gsf) of commercial office space for business, professional, or medical facilities; it would also include approximately 100,000 gsf of bio-tech/research space; 250,000 gsf of accessory use (250 housing units) for use by medical staff and/or students and faculty of the college/trade school at the project site; 124,300 gsf of hotel use including 133 rooms and an approximately 11,200 gsf conference center; 100,000 gsf of college/trade school/academic space; 40,000 gsf of retail space to support

Bronx Psychiatric Center Land Use Improvement Project

campus employees and visitors; 2,000 gsf of community facility space; approximately 8.7 acres of open space, including two baseball diamonds with a 2,000 gsf support building and supporting amenities; 8,100 gsf of accessory amenity space; and approximately 4,029 accessory parking spaces.

The proposed project would include five new buildings for office, community facility, accessory, and retail uses, and a new retail building. The existing BPC uses have vacated the three primary existing buildings, the Bronx Children's Psychiatric, John W. Thompson and Betty Parker buildings, and relocated to new facilities located at the southern portion of the campus. As part of the proposed project, the existing John W. Thompson Building (the "Thompson Building") and the existing Betty Parker Building (the "Parker Building") would be renovated to contain a mix of educational, hotel, office, community facility, bio-tech/research, and retail uses. The Bronx Children's Psychiatric building would be demolished. The proposed project would remove the four existing ball fields currently located on the project site, but would include the new recreational uses described above. Construction of the proposed project is expected to occur in two phases over a period of approximately nine years. Therefore, for purposes of the transportation assessment of potential impacts, 2023 was selected as the analysis year for Phase I completion, and 2028 was selected for the Phase II full build-out. **Table 14-1** provides a summary of the proposed development program.

Table 14-1
Proposed Development Program

Components	Phase I (2023)	Phase II (2028)	Total
Office (gsf)	217,029	250,000	467,029
Medical Facility (gsf)	325,543	375,000	700,543
Bio-tech/Research (gsf)	100,000		100,000
Accessory Use	100,000 gsf (100 units)	150,000 gsf (150 units)	250,000 gsf (250 units)
Community College/Trade School (gsf)	100,000		100,000
Hotel (rooms)	133		133
Conference Center (gsf)	11,184		11,184
Local Retail (gsf)	33,500	6,500	40,000
Community Facility (gsf)	2,000		2,000
Open Space and Support Building (gsf) ⁽¹⁾	309,700	71,500	381,200
Amenities Building (accessory)	8,100	--	8,100
Parking Spaces	2,509	1,520	4,029
Note: ⁽¹⁾ Proposed open space would include two baseball diamonds and 2,000-gsf support building.			
Source: Simone Development Companies.			

PRINCIPAL CONCLUSIONS

TRAFFIC

Traffic conditions were evaluated at 29 intersections for the weekday AM, midday, and PM peak hours. In the 2023 With-Action without HRP Improvements condition, there would be the potential for significant adverse traffic impacts at 17 intersections during the weekday AM peak hour, 9 intersections during the weekday midday peak hour, and 16 intersections during the weekday PM peak hour. In the 2028 With-Action with HRP Improvements condition, there would be the potential for significant adverse traffic impacts at 18 intersections during the weekday AM peak hour, 10 intersections during the weekday midday peak hour, and 17 intersections during the weekday PM peak hour. **Table 14-2** summarizes the potential significant adverse traffic impacts for both the 2023 With-Action without HRP Improvements and 2028 With-Action with HRP Improvements conditions.

Table 14-2
Summary of Significant Adverse Traffic Impacts

Intersection		2023 With-Action			2028 With-Action		
EB/WB Street	NB/SB Street	Weekday AM	Weekday Midday	Weekday PM	Weekday AM	Weekday Midday	Weekday PM
Pelham Parkway (Eastbound)	Williamsbridge Road	EB (ML)-LT			EB (ML)-LT		
Pelham Parkway (Westbound)	Eastchester Road			SB-TR			SB-TR
Pelham Parkway (Eastbound)	Eastchester Road	EB (ML)-LT			EB (ML)-LT EB (SR)-TR NB-TR		EB (SR)-TR
				SB-L			SB-L
Morris Park Avenue	Eastchester Road	NB-L SB-LTR	NB-L SB-LTR	EB-L EB-R NB-L SB-LTR	EB-R NB-L SB-LTR	EB-R NB-L SB-LTR	EB-L EB-R NB-L SB-LTR
Waters Place	Eastchester Road	WB-L WB-R NB-TR SB-DefL	WB-L NB-TR SB-DefL	WB-L WB-R NB-TR SB-DefL	WB-L WB-R NB-TR SB-DefL	WB-L NB-TR SB-DefL	WB-L WB-R SB-DefL
Williamsbridge Road	Eastchester Road	NB-LTR SB-TR	NB-LTR SB-TR	NB-LTR SB-TR	NB-LTR SB-TR	NB-LTR SB-TR	NB-LTR SB-TR
East Tremont Avenue	Silver Street	EB-L SB-R	SB-R	SB-R	EB-L SB-R	SB-R	SB-R
Project Driveway	Marconi Street			WB-L			WB-L
Waters Place	Marconi Street	EB-L EB-LT WB-TR SB-R	EB-DefL SB-L SB-R	EB-DefL SB-L SB-R	EB-L EB-LT WB-TR SB-R	EB-DefL SB-L SB-R	EB-DefL SB-L SB-R
Waters Place	BPC Driveway	EB-DefL WB-TR	EB-LT	EB-LT	EB-DefL WB-TR	EB-LT	EB-LT
Waters Place	Fink Avenue/HRP Southbound Off-Ramp	NB-LR SB-R	EB-TR	EB-TR SB-R	NB-LR SB-R		EB-TR NB-LR
Westchester Avenue	Ericson Place/Middletown Road	EB-DefL EB-TR WB-LT NB-LTR	EB-DefL EB-TR WB-LT SB-LTR	EB-DefL EB-TR NB-LTR SB-LTR	EB-DefL EB-TR WB-LT NB-LTR SB-LTR	EB-DefL EB-TR WB-LT SB-LTR	EB-DefL EB-TR WB-LT NB-LTR SB-LTR
Waters Place	Westchester Avenue	NB-DefL SB-LTR	NB-LTR	EB-LT NB-LTR	NB-DefL SB-LTR	NB-DefL NB-TR	EB-LT NB-LTR

Table 14-2 (cont'd)
Summary of Significant Adverse Traffic Impacts

Intersection		2023 With-Action			2028 With-Action		
Waters Avenue	Westchester Avenue	EB-LR			EB-LR NB-LT		
Tan Place	Westchester Avenue	NB-T			WB-R NB-T		
Blondell Avenue	Westchester Avenue	NB-LT		NB-LT	NB-LT		NB-LT
East Tremont Avenue	Westchester Avenue	NB-LT		NB-LT	NB-LT	NB-LT	NB-LT
Commerce Avenue	Westchester Avenue	NB-LTR SB-DefL		SB-LTR	NB-LTR SB-DefL		SB-LTR
East Tremont Avenue	Ericson Place	WB-T NB-LTR		NB-LTR	WB-T NB-LTR	NB-LTR	NB-LTR
East-West Road	HRP Service Road	N/A	N/A	N/A	SB-R (HRP) SB-TR (PP)		EB-R SB-TR (PP)
Total Impacted Intersections/Lane Groups		17/34	9/18	16/29	18/42	10/21	17/33
Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left-turn; T = Through; R = Right Turn; DefL = De facto left-turn; N/A = Not Applicable; ML = Mainline; SR = Service Road; HRP = Hutchinson River Parkway; PP = Pelham Parkway.							

Freeway facility traffic conditions were evaluated for the northbound and southbound HRP for the weekday AM, midday, and PM peak periods. In both the 2023 With-Action without HRP Improvements and 2028 With-Action with HRP Improvements conditions, the proposed project would not result in the potential for significant adverse traffic impacts for the HRP mainline and ramps. This conclusion is based on the analysis results from the FREEVAL highway analysis methodologies. Because some of the projected queues, based on the HCS analysis, for the adjacent intersections could extend beyond the corresponding ramp analysis segments, actual conditions may be worse than the reported levels of service. Accordingly, four freeway locations under the 2023 With-Action conditions and two freeway locations under the 2028 With-Action conditions could experience potential significant adverse impacts, as identified below.

2023

- Northbound HRP: Mainline segment south of the East Tremont Avenue off-ramp (Exit 2) and the East Tremont Avenue off-ramp during the weekday AM and PM peak periods; and
- Southbound HRP: Mainline segment north of the Waters Place off-ramp (Exit 2) and the Waters Place off-ramp during the weekday AM, midday, and PM peak periods.

2028

- Northbound HRP: Mainline segment south of the East Tremont Avenue off-ramp (Exit 2) and the East Tremont Avenue off-ramp during the weekday AM and PM peak periods.

Potential measures to mitigate the projected traffic impacts are described in Chapter 22, “Mitigation.”

TRANSIT

Based on a detailed assignment of project-generated subway trips and in consultation with New York City Transit (NYCT), it was determined detailed analysis of subway facilities and subway line-haul analysis would not be warranted.

Weekday AM and PM peak period bus line-haul analysis were evaluated for the Bx21 and Bx24 local bus routes. In the 2023 With-Action condition, there would be the potential for significant adverse bus line-haul impacts for the westbound Bx24 during the weekday AM peak hour and the

eastbound and westbound Bx24 during the weekday PM peak hour. In the 2028 With-Action condition, there would be the potential for significant adverse bus line-haul impacts for the northbound Bx21, and eastbound and westbound Bx24 during the weekday AM peak hour, and the eastbound and westbound Bx24 during the weekday PM peak hour. **Table 14-3** summarizes the potential bus line-haul impacts for both the 2023 and 2028 With-Action conditions.

Table 14-3

Summary of Significant Adverse Transit (Bus Line-Haul) Impacts

Bus Route	2023 With-Action		2028 With-Action	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Bx21 Northbound			X	
Bx21 Southbound				
Bx24 Eastbound		X	X	X
Bx24 Westbound	X	X	X	X
Total Impacted	1	2	3	2

Notes: X = Impacted

Potential measures to mitigate the projected bus line-haul impacts are described in Chapter 22, “Mitigation.”

PEDESTRIANS

Weekday peak period pedestrian conditions were evaluated at key area sidewalk, corner reservoir, and crosswalk locations. Based on a detailed assignment of pedestrian trips, nine sidewalks, nine corners, and five crosswalks were selected for detailed analysis for the weekday AM, midday, and PM peak hours. In addition, the east and south crosswalks at the Marconi Street and Project Driveway intersection were included in the future No-Action and With-Action conditions analyses. Lastly, a new north crosswalk at the Marconi Street and Project Driveway intersection was also included in the With-Action condition pedestrian analysis. In the 2023 With-Action without HRP Improvements and 2028 With-Action with HRP Improvements conditions, the proposed project would not result in the potential for significant adverse pedestrian impacts.

VEHICULAR AND PEDESTRIAN SAFETY

Crash data for the study area intersections were obtained from NYCDOT for the period between January 1, 2014 and December 31, 2016. During this period, a total of 349 reportable and non-reportable crashes, zero fatalities, 358 injuries, and 60 pedestrian/bicyclist-related crashes occurred at the study area intersections. A rolling yearly total of crash data identifies one study area intersection as a high crash location—Eastchester Road and Waters Place. Potential pedestrian safety improvement measure such as restriping faded crosswalks can be implemented to improve pedestrian safety at this intersection by the Phase I completion of the proposed project.

PARKING

Accounting for the parking supply and demand generated by the proposed project, the 2023 With-Action parking utilization is expected to reach a maximum of 63 percent of the on-site parking capacity during the weekday; and the 2028 With-Action parking utilization is expected to reach a maximum of 75 percent of the on-site parking capacity during the weekday. Therefore, the proposed project would not result in the potential for a parking shortfall or significant adverse parking impacts.

B. PRELIMINARY ANALYSIS METHODOLOGY AND SCREENING ASSESSMENT

The *CEQR Technical Manual* recommends a two-tier screening procedure for the preparation of a “preliminary analysis” to determine if quantified analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation analysis (Level 1) to estimate the volume of person and vehicle trips attributable to the proposed project. If the proposed project is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the proposed project would result in 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the number of person and vehicle trips by mode expected to be generated by the proposed project during the weekday AM, midday, and PM peak hours. These estimates were then compared to the *CEQR Technical Manual* thresholds to determine if a Level 2 screening and/or quantified operational analyses would be warranted.

TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the proposed project were developed based on information from the 2014 *CEQR Technical Manual*, U.S. Census Data, the *ITE Trip Generation Manual*, 9th Edition, travel demand surveys conducted at the Hutchinson Metro Center, and other approved Environmental Assessment Statements (EASs) and Environmental Impact Statements (EISs)—as summarized in **Table 14-4**.

Table 14-4
Travel Demand Assumptions

Use	Office			Medical Facility			Community College/Trade School			Hotel			Conference Center - Employees		
Total Daily Person Trip	(1) Weekday 18.0 Trips / KSF			(5) Weekday 21.63 Trips / KSF			(1) Weekday 26.6 Trips / KSF			(1) Weekday 9.4 Trips / Room			(4) Weekday 10.0 Trips / KSF		
Trip Linkage	0%			0%			0%			0%			0%		
Net Daily Person trip	Weekday 18.0 Trips / KSF			Weekday 21.63 Trips / KSF			Weekday 26.6 Trips / KSF			Weekday 9.4 Trips / Room			Weekday 10.0 Trips / KSF		
Temporal	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
	(1)			(5)			(7)			(9)			(4)		
	12%	15%	14%	7.8%	11.1%	8.1%	10.9%	9.6%	9.2%	8.0%	14.0%	13.0%	14.7%	20.0%	12.9%
Direction	(2)			(5)			(7)			(9)			(4)		
	In	96%	39%	5%	85%	47%	17%	74%	44%	58%	41%	68%	59%	96%	55%
	Out	4%	61%	95%	15%	53%	83%	26%	56%	42%	59%	32%	41%	4%	45%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(3)(4)			(5)(13)			(10)			(11)			(3)(4)		
	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
Auto - Internal	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%
Auto - External	68.3%	17.0%	68.3%	78.9%	62.0%	78.9%	70.0%	70.0%	70.0%	71.8%	71.8%	71.8%	68.3%	17.0%	68.3%
Taxi	4.6%	1.0%	4.6%	4.9%	4.0%	4.9%	5.0%	5.0%	5.0%	15.3%	15.3%	15.3%	4.6%	1.0%	4.6%
Subway	6.9%	2.0%	6.9%	5.7%	5.0%	5.7%	5.0%	5.0%	5.0%	2.6%	2.6%	2.6%	6.9%	2.0%	6.9%
Bus	13.1%	3.0%	13.1%	2.4%	2.0%	2.4%	10.0%	10.0%	10.0%	10.3%	10.3%	10.3%	13.1%	3.0%	13.1%
Shuttle Bus	0.3%	0.0%	0.3%	5.7%	5.0%	5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%
Walk - Internal	0.0%	73.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.0%	0.0%
Walk - External	6.8%	2.0%	6.8%	2.4%	2.0%	2.4%	10.0%	10.0%	10.0%	0.0%	0.0%	0.0%	6.8%	2.0%	6.8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(3)			(5)			(10)			(14)			(3)		
	Weekday			Weekday			Weekday			Weekday			Weekday		
Auto	1.16			1.12			1.20			1.69			1.16		
Taxi	1.38			1.18			1.40			1.75			1.38		
Shuttle Bus	40.00			40.0			40.0			40.00			40.00		
Daily Delivery Trip Generation Rate	(1)			(6)			(4)			(2)			(4)		
	Weekday 0.32			Weekday 0.20			Weekday 0.10			Weekday 0.10			Weekday 0.35		
	Delivery Trips / KSF			Delivery Trips / KSF			Delivery Trips / KSF			Delivery Trips / Room			Delivery Trips / KSF		
Delivery Temporal	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
	(1)			(6)			(4)			(2)			(4)		
	10%	11%	2%	10.0%	9.0%	5.0%	9.7%	9.1%	5.1%	14.0%	8.6%	1.0%	7.9%	14.7%	1.1%
Delivery Direction	(1)			(6)			(4)			(2)			(4)		
	In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Bronx Psychiatric Center Land Use Improvement Project

Table 14-4 (cont'd)
Travel Demand Assumptions

Use	Conference Center - Patrons			Local Retail			Accessory Use			Bio-tech/Research		
Total	(4)			(1)			(1)(15)			(17)		
Daily Person Trip	Weekday 27.2 Trips / KSF			Weekday 205.0 Trips / KSF			Weekday 8.075 Trips / DU			Weekday 6.98 Trips / KSF		
Trip Linkage	0%			0%			25%			0%		
Net Daily Person trip	Weekday 27.2 Trips / KSF			Weekday 205.00 Trips / KSF			Weekday 6.056 Trips / DU			Weekday 6.98 Trips / KSF		
Temporal	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
	(4)	(4)	(4)	(1)	(1)	(1)	(1)	(1)	(1)	(17)	(17)	(17)
	10.5%	9.5%	10.5%	3%	19%	10%	10.0%	5.0%	11.0%	13.0%	10.0%	10.0%
Direction	(4)			(2)			(4)			(17)		
	In	91%	53%	15%	50%	50%	20%	51%	65%	89%	49%	23%
	Out	9%	47%	85%	50%	50%	80%	49%	35%	11%	51%	77%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(11)			(2)(12)			(16)			(18)		
	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
Auto - Internal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%
Auto - External	71.8%	71.8%	71.8%	0.3%	0.3%	0.3%	46.0%	46.0%	46.0%	68.3%	17.0%	68.3%
Taxi	15.3%	15.3%	15.3%	0.2%	0.2%	0.2%	1.0%	1.0%	1.0%	4.6%	1.0%	4.6%
Subway	2.6%	2.6%	2.6%	0.5%	0.5%	0.5%	33.0%	33.0%	33.0%	6.9%	2.0%	6.9%
Bus	10.3%	10.3%	10.3%	1.0%	1.0%	1.0%	14.0%	14.0%	14.0%	13.1%	3.0%	13.1%
Shuttle Bus	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%
Walk - Internal	0.0%	0.0%	0.0%	90.0%	90.0%	90.0%	0.0%	0.0%	0.0%	0.0%	73.0%	0.0%
Walk - External	0.0%	0.0%	0.0%	8.0%	8.0%	8.0%	6.0%	6.0%	6.0%	6.8%	2.0%	6.8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(14)			(2)			(4)(16)			(18)		
	Weekday			Weekday			Weekday			Weekday		
Auto	1.69			1.60			1.09			1.16		
Taxi	1.75			1.20			1.30			1.38		
Shuttle Bus	40.00			40.00			40.00			40.0		
Daily Delivery Trip Generation Rate	(1)			(1)			(1)			(17)		
	Weekday 0.35 Delivery Trips / KSF			Weekday 0.06 Delivery Trips / DU			Weekday 0.32 Delivery Trips / KSF			Weekday 0.32 Delivery Trips / KSF		
Delivery Temporal	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(17)	(17)	(17)
	8%	11%	2%	12.0%	9.0%	2.0%	10.0%	11.0%	2.0%	10.0%	11.0%	2.0%
Delivery Direction	(1)			(1)			(4)			(17)		
	In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sources:

- (1) 2014 CEQR Technical Manual
- (2) Webster Avenue Rezoning FEIS (2011)
- (3) Based on the results of the Hutchinson Metro Center travel demand surveys conducted in June 2015 -- 1200 Waters Place, Excluding Mercy College
- (4) Cornell NYC Tech FEIS (2013).
- (5) Based on the results of the Hutchinson Metro Center travel demand surveys conducted in June 2015 and April 2016 -- 1250 Waters Place, Montefiore Tower Two. Montefiore Tower Two was approximately 75 percent occupied at the time of the travel demand surveys conducted in April 2016. The daily person trip rate developed from the survey results were further adjusted assuming 100 percent occupancy to arrive at the daily person trip rate of 21.63 trips per 1,000 square feet.
- (6) MSK/CUNY-Hunter Project at 74th Street FEIS (2013)
- (7) ITE Trip Generation, 9th Edition, Land Use (540): Junior/Community College. Temporal distribution = ITE average vehicle trip rate for one hour of adjacent street between 7-9 AM / ITE average daily vehicle trip rate.
- (8) ITE Trip Generation, 9th Edition, Land Use (540): Junior/Community College. Temporal distribution = ITE average vehicle trip rate during the PM peak hour of generator / ITE average daily vehicle trip rate.
- (9) ITE Trip Generation, 9th Edition, Land Use (540): Junior/Community College. Temporal distribution = ITE average vehicle trip rate for one hour of adjacent street between 4-6 PM / ITE average daily vehicle trip rate.
- (10) Price Center for Genetic and Translational Medicine (PCGTM) Building for Albert Einstein College of Medicine EAS (2004)
- (11) Based on the results of the Hutchinson Metro Center travel demand surveys conducted in June 2015 -- Marriott Residence Inn
- (12) Retail space would support the other uses at the Bronx Psychiatric Center Redevelopment campus and would generate primarily internal trips.
- (13) 20 percent of weekday midday trips would be internal to the project site and the remaining 80 percent would be external.
- (14) Based on the results of the hotel travel demand surveys conducted at the Holiday Inn located at 1962 Boston Road, Bronx in June 2015.
- (15) 25 percent of daily trips would be internal to the project site and the remaining 75 percent would be external.
- (16) U.S. Census Bureau, ACS 2011-2015 Five-Year Estimates. Journey-to-Work (JTW) Data.
- (17) New York City Department of Sanitation Proposed Manhattan Districts 6/6A/8 Preliminary Transportation Demand Factors & Screening Assessment Memorandum (2015) -- Scientific Research Laboratory Use.
- (18) Modal splits and vehicle occupancies assumed to be the same as the office use.

Office

The daily person trip rate and temporal distribution for the office component are from the 2014 *CEQR Technical Manual*. The directional distribution is from the 2011 *Webster Avenue Rezoning FEIS*. Modal splits for the weekday AM and PM peak periods were estimated based on the results of travel demand surveys conducted in June 2015 at the Hutchinson Metro Center, specifically at 1200 Waters Place (excluding Mercy College). The 2013 *Cornell NYC Tech Final EIS (FEIS)* was used to estimate the weekday midday modal splits. As with the 2013 *Cornell NYC Tech FEIS*, the weekday midday modal split was adjusted assuming that 25 percent of the trips would be made to and from the campus while the remaining 75 percent of the trips would be made within the campus. The vehicle occupancies are based on the results of the travel demand surveys conducted at the Hutchinson Metro Center. The daily delivery trip rate and temporal and directional distributions are from the 2014 *CEQR Technical Manual*.

Medical Facility

The daily person trip rate, temporal distribution, directional distribution, and vehicle occupancies for the medical facility component are based on the results of travel demand surveys conducted at the Hutchinson Metro Center, specifically at 1250 Waters Place (Montefiore Tower Two). Modal splits for the weekday AM, midday, and PM peak periods were estimated based on the results of travel demand surveys conducted at the Hutchinson Metro Center. The weekday midday modal split was further adjusted assuming that approximately 80 percent of the trips would be made to and from the campus while the remaining 20 percent of the trips would be made within the campus. The daily delivery trip rate and temporal and directional distributions are from the 2013 *MSK/CUNY-Hunter Project at 74th Street FEIS*.

Community College/Trade School

The daily person trip rate for the community college/trade school component is from the 2014 *CEQR Technical Manual*. The temporal and directional distributions are derived from the *ITE Trip Generation Manual*, 9th Edition. Modal splits for all weekday peak periods and vehicle occupancies are from the 2004 *Price Center for Genetic and Translational Medicine (PCGTM) Building for Albert Einstein College of Medicine EAS*. The daily delivery trip rate and temporal and directional distributions are from the 2013 *Cornell NYC Tech FEIS*.

Hotel

The daily person trip rate and temporal distribution for the hotel component are from the 2014 *CEQR Technical Manual*. The directional distribution is from the 2011 *Webster Avenue Rezoning FEIS*. Modal splits for all weekday peak hours were estimated based on the results of travel demand surveys conducted at the Hutchinson Metro Center Atrium, specifically at the Marriott Residence Inn. The vehicle occupancies are based on the results of the travel demand surveys conducted in June 2015 at the Holiday Inn located at 1962 Boston Road in the Bronx. The daily delivery trip rate and temporal and directional distributions are from the 2011 *Webster Avenue Rezoning FEIS*.

Conference Center

Employees

The daily person trip rate, temporal distribution, and directional distribution for the conference center component's employees are from the 2013 *Cornell NYC Tech FEIS*. Similar to the proposed office use, modal splits for the weekday AM and PM peak periods were estimated based on the results of travel demand surveys conducted at the Hutchinson Metro Center (1200 Waters Place, excluding Mercy College). The 2013 *Cornell NYC Tech FEIS* was used to estimate the weekday

Bronx Psychiatric Center Land Use Improvement Project

midday modal splits. Similar to the office, in line with the 2013 *Cornell NYC Tech FEIS*, the weekday midday modal split was adjusted assuming that 25 percent of the trips would be made to and from the campus while the remaining 75 percent of the trips would be made within the campus. The vehicle occupancies are based on the results of the travel demand surveys conducted at the Hutchinson Metro Center. The daily delivery trip rate and temporal and directional distributions are from the 2013 *Cornell NYC Tech FEIS*.

Patrons

The daily person trip rate, temporal distribution, and directional distribution for the conference center component's patrons are from the 2013 *Cornell NYC Tech FEIS*. Similar to the proposed hotel use, modal splits for all weekday peak hours were estimated based on the results of the travel demand surveys conducted at the Hutchinson Metro Center Atrium (Marriott Residence Inn). Likewise, the vehicle occupancies are based on the results of the travel demand surveys conducted at the Holiday Inn located at 1962 Boston Road in the Bronx.

Local Retail

The daily trip generation rate and temporal distribution for the local neighborhood retail component are from the 2014 *CEQR Technical Manual*. The modal splits and vehicle occupancies are from the 2011 *Webster Avenue Rezoning FEIS*. As with the 2013 *Cornell NYC Tech FEIS*, it was assumed that the local retail component would support the proposed project's other uses and would generate primarily internal trips within the campus. The directional distributions for all three weekday analysis peak periods are from the 2011 *Webster Avenue Rezoning FEIS*. The daily delivery trip rate and temporal and directional distributions are from the 2014 *CEQR Technical Manual*.

Accessory Use

The daily person trip rate and temporal distribution for the accessory use component are based on the residential use from the 2014 *CEQR Technical Manual*. Based on discussions with NYCDOT, an internal linked trip credit of 25 percent was applied to the weekday daily person trip generation rate. The directional distributions for all three weekday analysis peak periods are from the 2013 *Cornell NYC Tech FEIS*. Journey-to-Work (JTW) data from the 2011–2015 U.S. Census Bureau American Community Survey (ACS) Five-Year Estimates for the study area census tracts were used to estimate modal splits for the three weekday analysis peak periods. The vehicle occupancies are from the 2011–2015 U.S. Census ACS for autos and from the 2013 *Cornell NYC Tech FEIS* for taxis. The daily delivery trip rate and temporal distribution are from the 2014 *CEQR Technical Manual*. The delivery trip directional distribution is from the 2013 *Cornell NYC Tech FEIS*.

Bio-Tech/Research

The daily person trip rate, temporal distribution, and directional distribution for the Bio-tech/Research component are based on the scientific research laboratory use from the 2015 *New York City Department of Sanitation Proposed Manhattan Districts 6/6A/8 Preliminary Transportation Demand Factors & Screening Assessment Memorandum*. The modal splits and vehicle occupancies are assumed to be the same as those of the proposed project's office component. The daily delivery trip rate and temporal and directional distributions are from the 2015 *New York City Department of Sanitation Proposed Manhattan Districts 6/6A/8 Preliminary Transportation Demand Factors & Screening Assessment Memorandum*.

Community Facility

The community facility space would primarily be used for the community for meetings, events, and other functions, most of which would take place outside of the proposed project's weekday

AM, midday, and PM peak analysis periods. Based on discussions with NYCDOT, it was agreed that this use and potential events do not need to be considered in estimating future trip-making associated with the proposed project.

Recreational Uses

As described above, the proposed project would replace four existing ball fields currently located on the project site with two baseball diamonds with supporting amenities. Because these uses already exist on the project site, the replacement facility and fields would not result in new incremental trips to the project site.

TRAVEL DEMAND PROJECTION SUMMARY

As summarized in **Table 14-5**, Phase I completion of the proposed project would generate 1,812, 3,255, and 2,392 person trips during the weekday AM, midday, and PM peak hours, respectively. Approximately 1,122, 941, and 1,180 vehicle trips would be generated during the same respective peak hours under Phase I completion. As summarized in **Table 14-6**, Phase II full build-out of the proposed project would generate 3,116, 5,127, and 3,910 person trips during the weekday AM, midday, and PM peak hours, respectively. Approximately 2,037, 1,662, and 2,163 vehicle trips would be generated during the same respective peak hours under Phase II full build-out.

Table 14-5
Trip Generation Summary: Phase I Completion

Peak Hour	In/Out	Person Trip								Vehicle Trip						
		Auto – Internal	Auto – External	Taxi	Subway	Bus	Shuttle Bus	Walk – Internal	Walk – External	Total	Auto – Internal	Auto – External	Taxi	Shuttle Bus	Delivery	Total
AM	In	0	948	70	82	114	27	93	78	1,412	0	809	64	0	10	883
	Out	0	204	18	30	27	5	93	23	400	0	165	64	0	10	239
	Total	0	1,152	88	112	141	32	186	101	1,812	0	974	128	0	20	1,122
Midday	In	6	459	45	42	49	19	861	77	1,558	5	375	61	0	11	452
	Out	8	485	41	45	50	21	964	83	1,697	7	410	61	0	11	489
	Total	14	944	86	87	99	40	1,825	160	3,255	12	785	122	0	22	941
PM	In	0	299	31	34	41	6	309	49	769	0	238	74	0	2	314
	Out	0	926	70	86	114	28	309	90	1623	0	790	74	0	2	866
	Total	0	1,225	101	120	155	34	618	139	2,392	0	1,028	148	0	4	1,180

Table 14-6
Trip Generation Summary: Phase II Full Build-Out

Peak Hour	In/Out	Person Trip									Vehicle Trip					
		Auto – Internal	Auto – External	Taxi	Subway	Bus	Shuttle Bus	Walk – Internal	Walk – External	Total	Auto – Internal	Auto – External	Taxi	Shuttle Bus	Delivery	Total
AM	In	0	1,734	120	155	197	60	111	129	2,506	0	1,501	110	1	19	1,631
	Out	0	328	25	61	42	10	111	33	610	0	276	110	1	19	406
	Total	0	2,062	145	216	239	70	222	162	3,116	0	1,777	220	2	38	2,037
Midday	In	11	777	65	77	70	40	1,252	102	2,394	10	658	98	1	19	786
	Out	16	861	64	85	76	45	1,474	112	2,733	14	744	98	1	19	876
	Total	27	1,638	129	162	146	85	2,726	214	5,127	24	1,402	196	2	38	1,662
PM	In	0	438	39	64	58	12	369	63	1,043	0	363	123	1	5	492
	Out	0	1,781	125	169	211	61	369	151	2,867	0	1,542	123	1	5	1,671
	Total	0	2,219	164	233	269	73	738	214	3,910	0	1,905	246	2	10	2,163

TRAFFIC

As shown in **Table 14-5**, the trips generated by the proposed project's Phase I completion would be 1,122, 941, and 1,180 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. As shown in **Table 14-6**, the trips generated by the proposed project's Phase II full build-out would be 2,037, 1,662, and 2,163 vehicle trips during the weekday AM, midday, and

PM peak hours, respectively. Since the incremental vehicle trips would be greater than 50 vehicles for both phases, a Level 2 screening assessment (presented in the section below) was conducted for the proposed project's Phase I completion and the Phase II full build-out to determine if a quantified traffic analysis is warranted.

TRANSIT

Public transit options to and from the study area are shown in **Figure 14-1**. The proposed project is located near two NYCT No. 6 subway stations: (1) Middletown Road; and (2) Westchester Square–East Tremont Avenue Station. There are also numerous bus routes with stops near the project site, including the Bx4, Bx4A, Bx8, Bx12, Bx21, Bx24, Bx31, Bx40, and Bx42 bus routes. In addition, as part of its Penn Station Access Study, the Metropolitan Transit Authority (MTA) has committed to initiating Metro-North Railroad (MNR) service to a proposed new Morris Park MNR station intended to serve New Haven Line trains along existing Amtrak tracks, adjacent to the Bronx Psychiatric Campus, into Penn Station¹. However, the completion date for the study and the project are unknown at this time, and therefore, the new station is not assumed to be part of this travel demand analysis. A qualitative discussion of the proposed new Morris Park MNR station is provided below in Section D, “Detailed Traffic Analysis.”

As detailed in **Table 14-5**, the transit trips generated by the proposed project's Phase I completion would be 112, 87, and 120 person trips by subway; and 141, 99, and 155 person trips by bus during the weekday AM, midday, and PM peak hours, respectively. As shown in **Table 14-6**, the transit trips generated by the proposed project's Phase II full build-out would be 216, 162, and 233 person trips by subway; and 239, 146, and 269 person trips by bus during the weekday AM, midday, and PM peak hours, respectively.

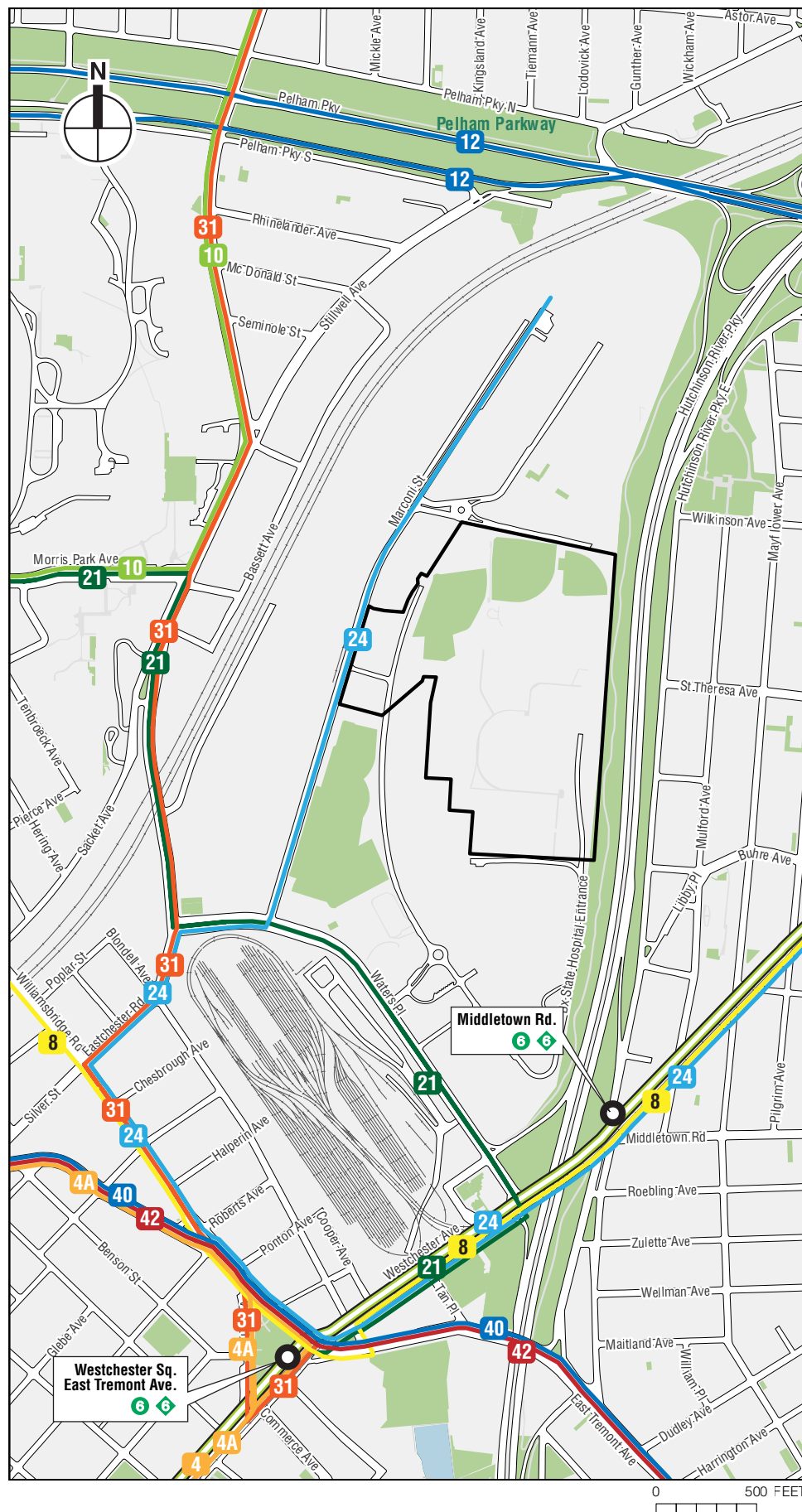
The incremental subway trips would be greater than the *CEQR Technical Manual* analysis threshold of 200 peak hour trips made by subway during the weekday AM and PM peak hours under the Phase II full build-out. However, the incremental subway trips would be distributed to the Middletown Road and Westchester Square–East Tremont Avenue subway stations such that no subway station would incur 200 or more peak hour subway riders per station. Therefore, a detailed analysis of subway facilities is not warranted. While more than 200 peak hour incremental subway trips would be generated under the Phase II full build-out and would be concentrated on one subway line, fewer than 200 incremental peak hour subway trips would pass through the peak load points (located at 125th Street and 59th Street) in the peak direction. As such, it was determined, in consultation with NYCT, that a subway line-haul analysis would not be warranted.


The incremental bus trips would be greater than 200 during the weekday AM and PM peak hours under Phase II. Therefore, a Level 2 screening assessment for the proposed project was conducted to determine if a quantified bus line-haul analysis is warranted.

PEDESTRIANS

All incremental person trips generated by the proposed project would traverse the pedestrian elements surrounding the project site. As shown in **Tables 14-5 and 14-6**, the incremental pedestrian trips would be greater than 200 during all peak hours for both phases of the proposed project. A Level 2 screening assessment (presented in the section below) was conducted for the proposed project's Phase I completion and Phase II full build-out to determine if a quantified pedestrian analysis is warranted.

¹ <http://web.mta.info/mta/planning/psas/>.



-  Project Site
-  Subway Line
-  Bus Route

LEVEL 2 SCREENING ASSESSMENT

As part of the Level 2 screening assessment, project-generated trips were assigned to specific intersections and pedestrian elements near the project site. As previously stated, further quantified analyses to assess the potential impacts of the proposed project on the transportation system would be warranted if the trip assignments were to identify key intersections incurring 50 or more peak hour vehicle-trips or pedestrian elements incurring 200 or more peak hour pedestrian-trips. Similarly, for buses, the projected trips were considered in determining the likely bus routes requiring a detailed analysis of potential impacts.

SITE ACCESS AND EGRESS

New roads would be constructed to provide access within the project site and connect to the existing street network. A new access drive (East-West Road) would be constructed through the project site. Building entrances would be distributed adjacent to interior parking lots accessible by the East-West Road and other interior streets connected to Marconi Street, a public roadway. Access and egress to the project site would primarily be through the Project Driveway (East-West Road) at Marconi Street, located across from the Hutchinson Metro Center Atrium driveway. The Project Driveway was an existing unsignalized private driveway at the time of the existing data collection efforts. As described further below in Section D, NYCDOT has since independently installed a new traffic signal at this intersection and the signal is currently operational. As part of the proposed project, geometry and operational improvements will also be made at this intersection to accommodate the projected future traffic demand. These measures include relocating an existing Bx24 bus stop on Marconi Street from south to north of the intersection to facilitate the addition of a dedicated northbound right-turn lane. The construction of this lane will require an action to map private land to facilitate the proposed roadway geometry for the intersection of Marconi Street and the East-West Road. This mapping action would be undertaken by the Developer in the future. Additionally, the proposed project would introduce one new driveway north of the East-West Road along Marconi Street to provide an additional access point for project-generated vehicle trips.

OMH has agreed to permit use of the BPC west access road by the developer's future newly tenanted building employees and accessory use residents to access/egress to and from the proposed project. The BPC west access road would provide a secondary access and egress point (at the intersection of Waters Place and BPC Driveway) for the future proposed project traffic demands. This would be in addition to the main access point at the intersection of Waters Place and Marconi Street. The existing BPC roundabout has been incorporated into the traffic analysis study area to assess the potential effects of the future traffic demand on the BPC west access road. Furthermore, based on discussions with OMH, the proposed project's pedestrian trips would be restricted from using the BPC west access road to walk to and from the project site. They would walk to and from the project site along Marconi Street.

The developer would undertake potential traffic calming measures and design features in coordination with OMH along the BPC west access road to facilitate its use as a secondary access and egress point for the future proposed project traffic demands. Some of these measures/features would include:

- Provide enhanced signage at the BPC west access road entrance from Waters Place and along the BPC west access road to indicate the direction of travel to the BPC campus and the Hutchinson Metro Center. The enhanced signage would also indicate for the Hutchinson Metro Center that access would be limited to their employees only;

Bronx Psychiatric Center Land Use Improvement Project

- Provide raised crosswalks along the BPC west access road to provide safe crossings for pedestrians and as speed tables to slow vehicular speeds;
- Station traffic control agents along the BPC west access road at strategic locations per agreement with OMH to enforce usage of the BPC west access road to only authorized vehicles (i.e., BPC vehicles and Hutchinson Metro Center employees); and
- Provide traffic control agents to meter traffic along the BPC west access road during peak traffic periods (i.e., inbound traffic during the morning and outbound traffic during the evening commuter peak periods).
- Provide two booths along the BPC west access road at strategic locations to provide shelter and resting space for the traffic control agents.
- Install a swing gate on the BPC west access road just south of the powerhouse driveway to close access to the Hutchinson Metro Center campus during nighttime and weekend hours per agreement with OMH.
- Provide landscaping along the BPC west access road to provide safety and privacy for BPC's sensitive population.

In addition to the design features described above, the proposed project, at the request of OMH, would relocate the existing Bx21 bus stop within the BPC campus to the intersection of Waters Place and BPC Driveway. Specifically, the Bx21 Mott Haven-bound bus stop would be relocated to just west of the Waters Place and BPC Driveway intersection, on the north side of Waters Place. The Bx21 Westchester Square-bound bus stop would be relocated to just east of the Waters Place and BPC Driveway intersection, on the south side of Waters Place. NYCT has determined the proposed bus stop relocation to be preliminarily feasible.

NYCDOT has conducted a preliminary study and developed conceptual designs for access improvements to the southbound HRP (With HRP Improvements); these would include reconfiguring the HRP on- and off-ramps and introducing a new service road along the southbound HRP between Exit 2 (Westchester Avenue) and Exit 3 (Pelham Parkway). The new service road would also create a new signalized intersection at the eastern end of the Project Driveway (East-West Road) bisecting the project site. With the HRP Improvements, it is assumed NYCDOT would map the East-West Road as a public street (which would otherwise remain a private driveway without the HRP Improvements) to connect to Marconi Street to the west. NYCDOT had previously estimated that the access improvements to the southbound HRP could materialize by 2028. Therefore, for the proposed project's Phase II build year, the travel demand and detailed analyses consider the potential HRP improvements in place. However, because there is currently no funding or plan to construct these potential HRP improvements by NYCDOT, absent other means of addressing traffic expected to be generated by Phase II of the proposed project, this second phase of the BPC redevelopment cannot proceed.

As discussed above, a new East-West Road would be constructed through the project site and connect to the existing street network at Marconi Street. The East-West Road would align with the driveway access to the Hutchinson Metro Center Atrium on the west side of Marconi Street, and would also connect with the BPC west access road. The East-West Road would terminate within the project site (Without HRP Improvements; 2023 Phase I) or potentially connect with a new service road along the southbound HRP (With HRP Improvements; 2028 Phase II). Another internal access road (North-South Spine Road) would be constructed from approximately the Parker building to the existing Hutchinson Metro Center roadway on the northern boundary of the

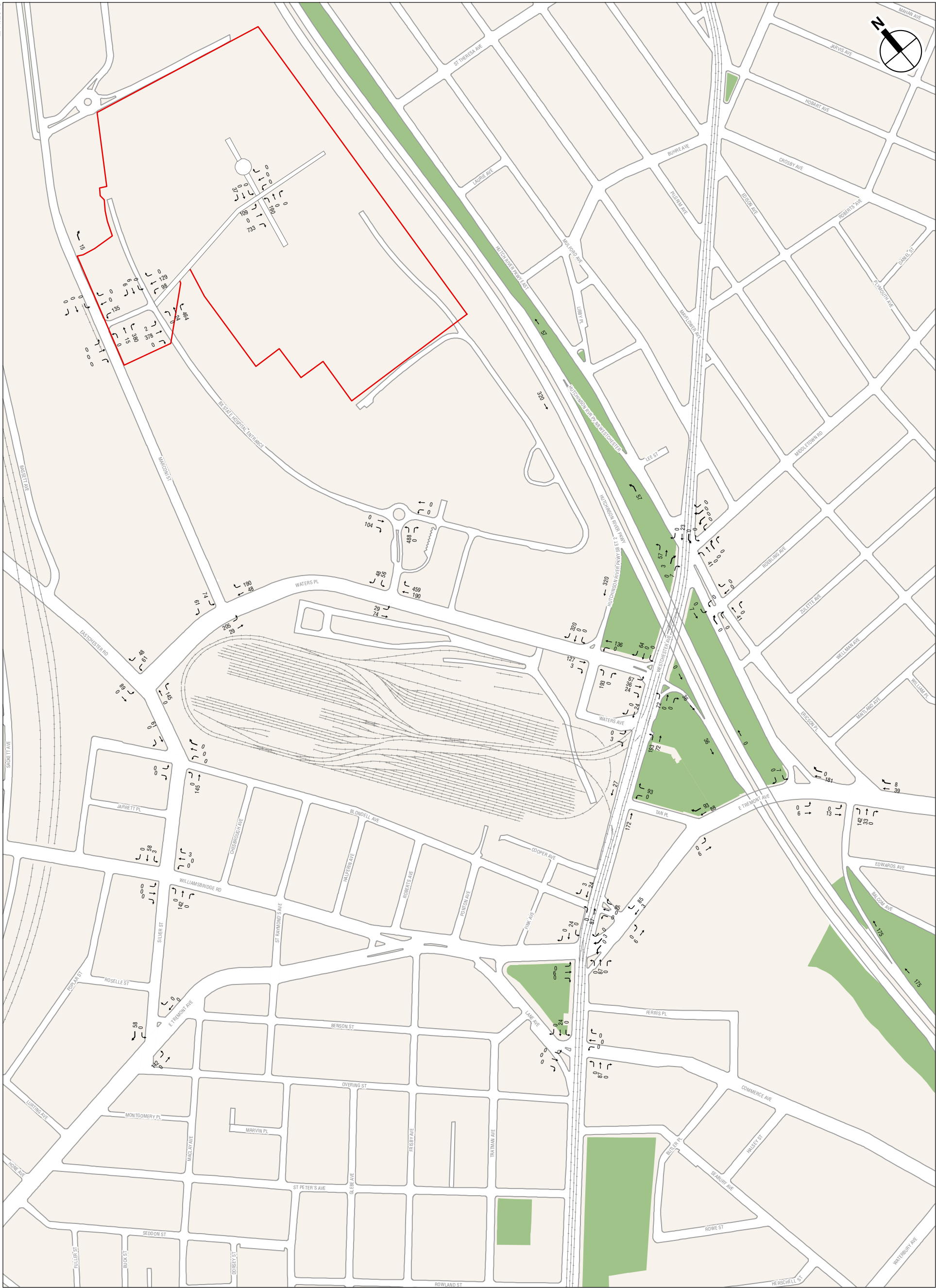
project site. The East-West Road would create two new signalized intersections—at the BPC west access road and at the North-South Spine Road, and will be analyzed as part of the future 2028 Phase II With-Action conditions. In addition, the East-West Road would create a new signalized intersection at the new southbound HRP service road under the With HRP Improvements future conditions, and will be analyzed as part of the 2028 Phase II future No-Action and With-Action conditions.

TRAFFIC

As shown in **Tables 14-5 and 14-6**, incremental vehicle trips resulting from the proposed project would exceed the *CEQR* Level-1 screening threshold during all analysis peak hours for both Phase I completion and Phase II full build-out. The most likely travel routes to and from the project site, prevailing travel patterns, commuter origin-destination (O-D) summaries from the census data, the configuration of the roadway network, and the anticipated locations of site access and egress were initially examined to develop preliminary trip assignment patterns for review with NYCDOT. In comparing these patterns with Skycomp survey (i.e., helicopter aerial origin-destination surveys) and Streetlight data (i.e., cellphone Bluetooth data) compiled as part of NYCDOT's on-going study, refinements in the proposed project's trip assignment patterns (all except for the accessory use component) were made to reflect the aggregate trip-making pattern pertained to the various land uses that currently exists at the Hutchinson Metro Center. Auto trips were assigned to the project site parking lots. Taxi trips were assigned to the various project site entrances. Shuttle bus trips were assigned based on their existing routes/patterns. All delivery trips were assigned to the project site via the NYCDOT-designated truck routes. For the accessory use component, the auto and taxi vehicle trip assignment patterns were developed based on the 2006-2010 U.S. Census ACS JTW origin-destination estimates. Furthermore, Phase II of the proposed project considers potential access improvements to the southbound HRP to be in place. The potential HRP geometric improvements would reconfigure the HRP on- and off-ramps and introduce a new service along the southbound HRP between Exit 2 (Westchester Avenue) and Exit 3 (Pelham Parkway). The new service road would also create a new signalized intersection at the East-West Road bisecting the project site. The southbound HRP improvements would provide direct access and egress between the existing Hutchinson Metro Center and the proposed project and the southbound HRP. Much of the inbound traffic from the north that currently exits onto Waters Place would be diverted from Waters Place to the new East-West Road through the project site. Similarly, outbound traffic to the south would not have to traverse Marconi Street and Waters Place to access the southbound HRP on-ramp at Westchester Avenue.

Summary

The Phase I completion and Phase II full build-out project generated vehicle trips are shown in **Figures 14-2A through 14-7B** and summarized in **Table 14-7**. The Phase I completion project generated vehicle trips (**Figures 14-2A through 14-4B**) account for the BPC west access road providing a secondary access and egress point at the intersection of Waters Place and BPC Driveway for future proposed project traffic demands. The Phase II full build-out project generated vehicle trips (**Figures 14-5A through 14-7B**), in addition to the BPC west access road secondary access and egress point, also considers potential access improvements to the southbound HRP to be in place. In total, 29 intersections for Phase I completion and for Phase II full build-out, comprising the traffic study area, have been selected for analysis, in consultation with NYCDOT, based on the volume of trips projected and the turning movements anticipated to occur at those locations. In addition, 10 highway elements along the Hutchison River Parkway have been selected for analysis.



Project Site

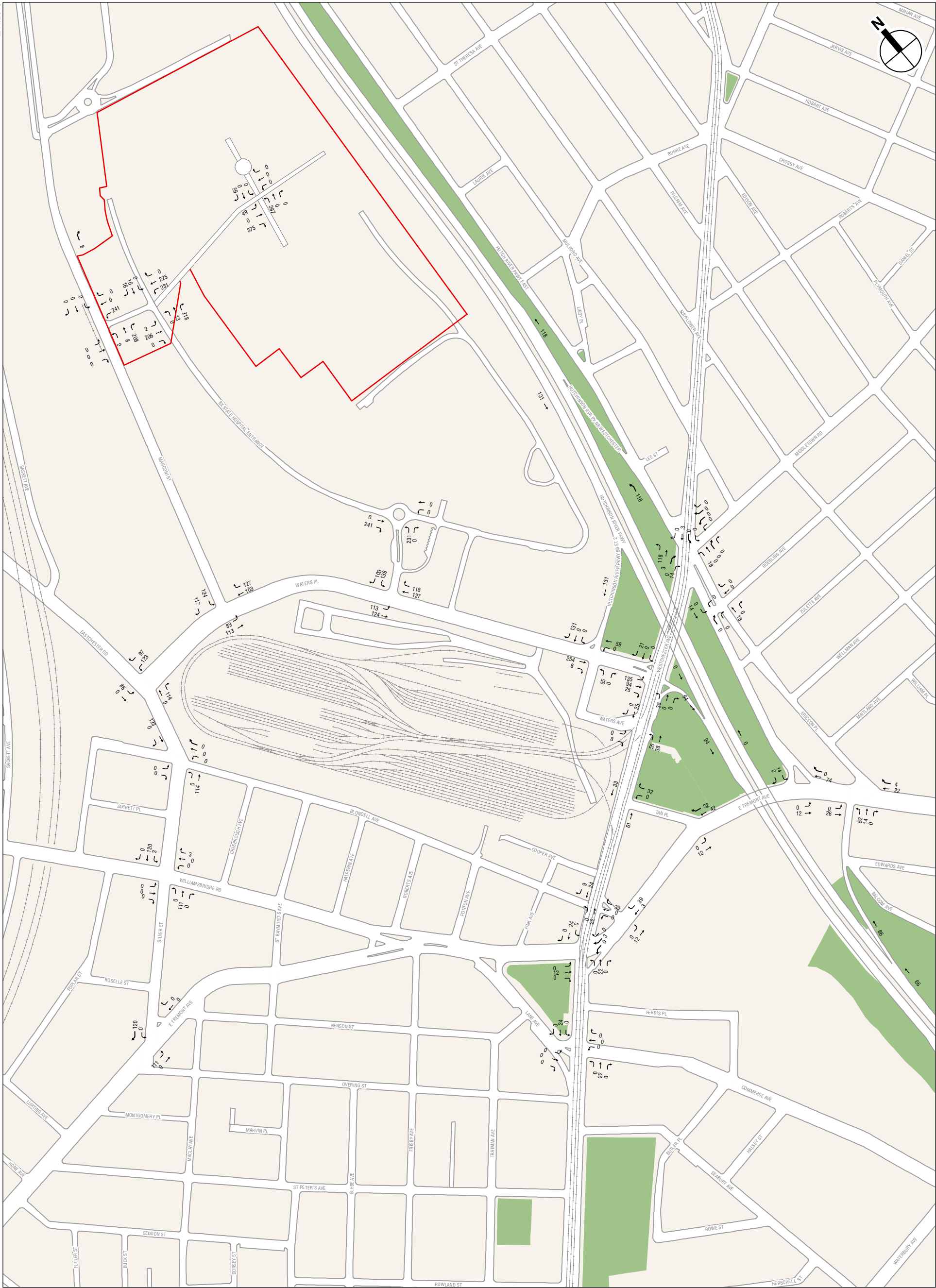
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Phase I Completion Project Generated Vehicle Trips (Without HRP Improvements)
Weekday AM Peak Hour
Figure 14-2A



Project Site

Phase I Completion Project Generated Vehicle Trips (Without HRP Improvements)
Weekday AM Peak Hour
Figure 14-2B



Project Site

0 800 FEET

Phase I Completion Project Generated Vehicle Trips (Without HRP Improvements)
Weekday Midday Peak Hour
Figure 14-3A



 Project Site

Phase I Completion Project Generated Vehicle Trips (Without HRP Improvements)
Weekday Midday Peak Hour
Figure 14-3B



 Project Site

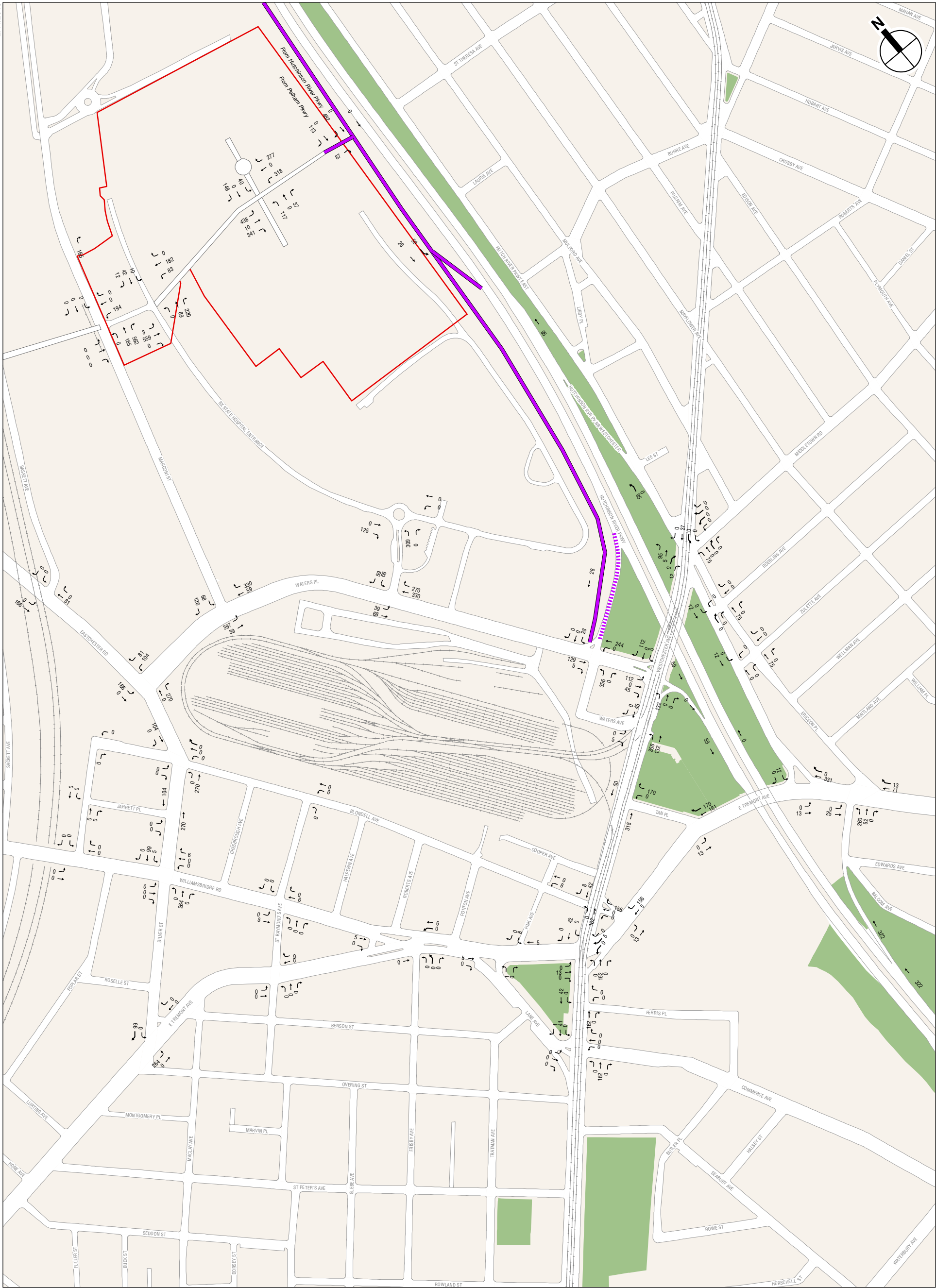
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Phase I Completion Project Generated Vehicle Trips (Without HRP Improvements)
Weekday PM Peak Hour
Figure 14-4A



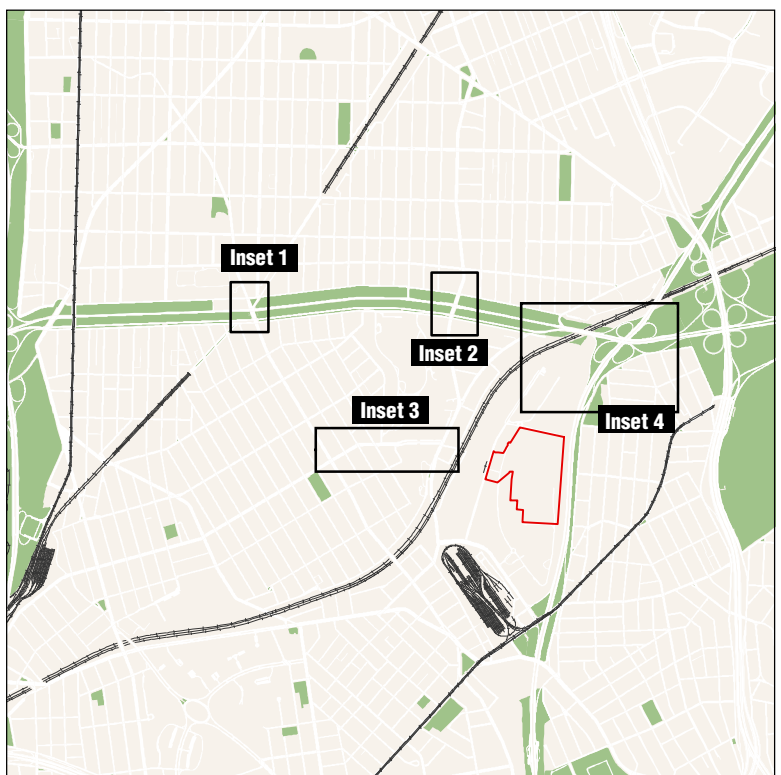
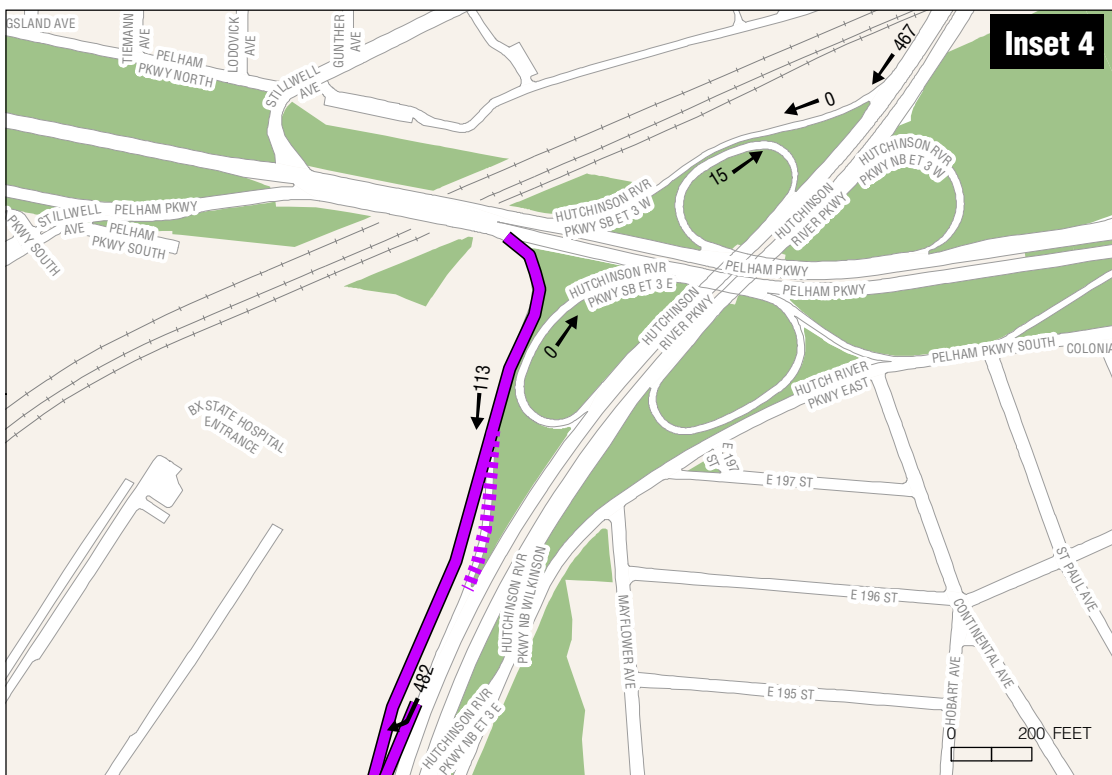
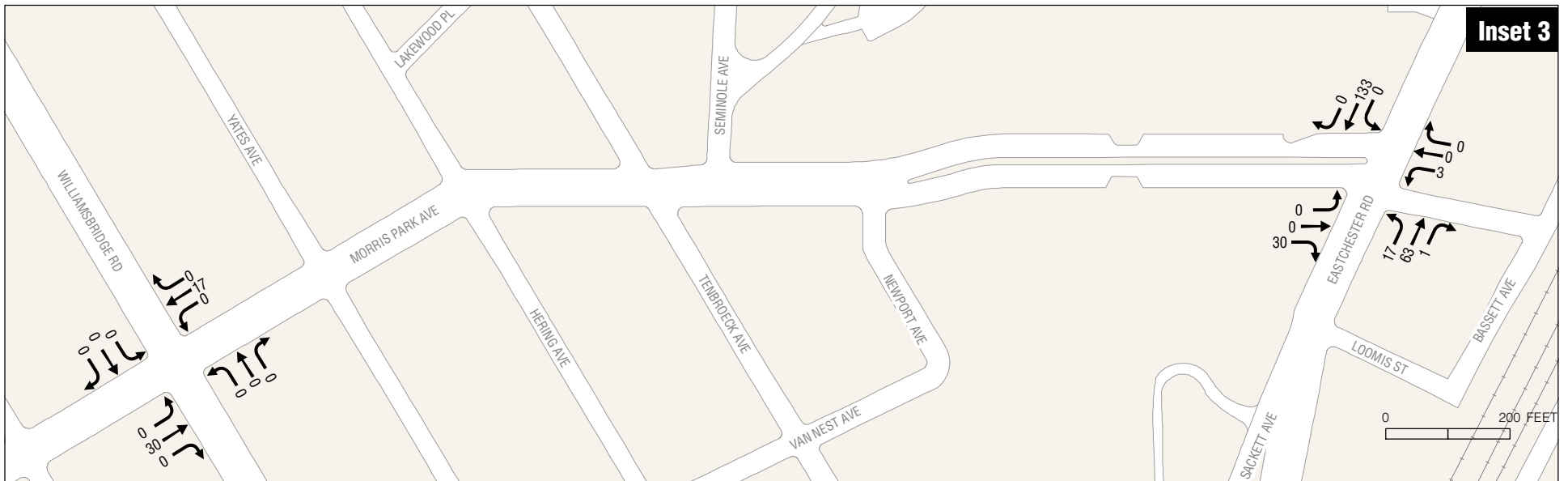
 Project Site

Phase I Completion Project Generated Vehicle Trips (Without HRP Improvements)
Weekday PM Peak Hour
Figure 14-4B



*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

Phase II Full Build-Out Project Generated Vehicle Trips (With HRP Improvements)
Weekday AM Peak Hour
Figure 14-5A



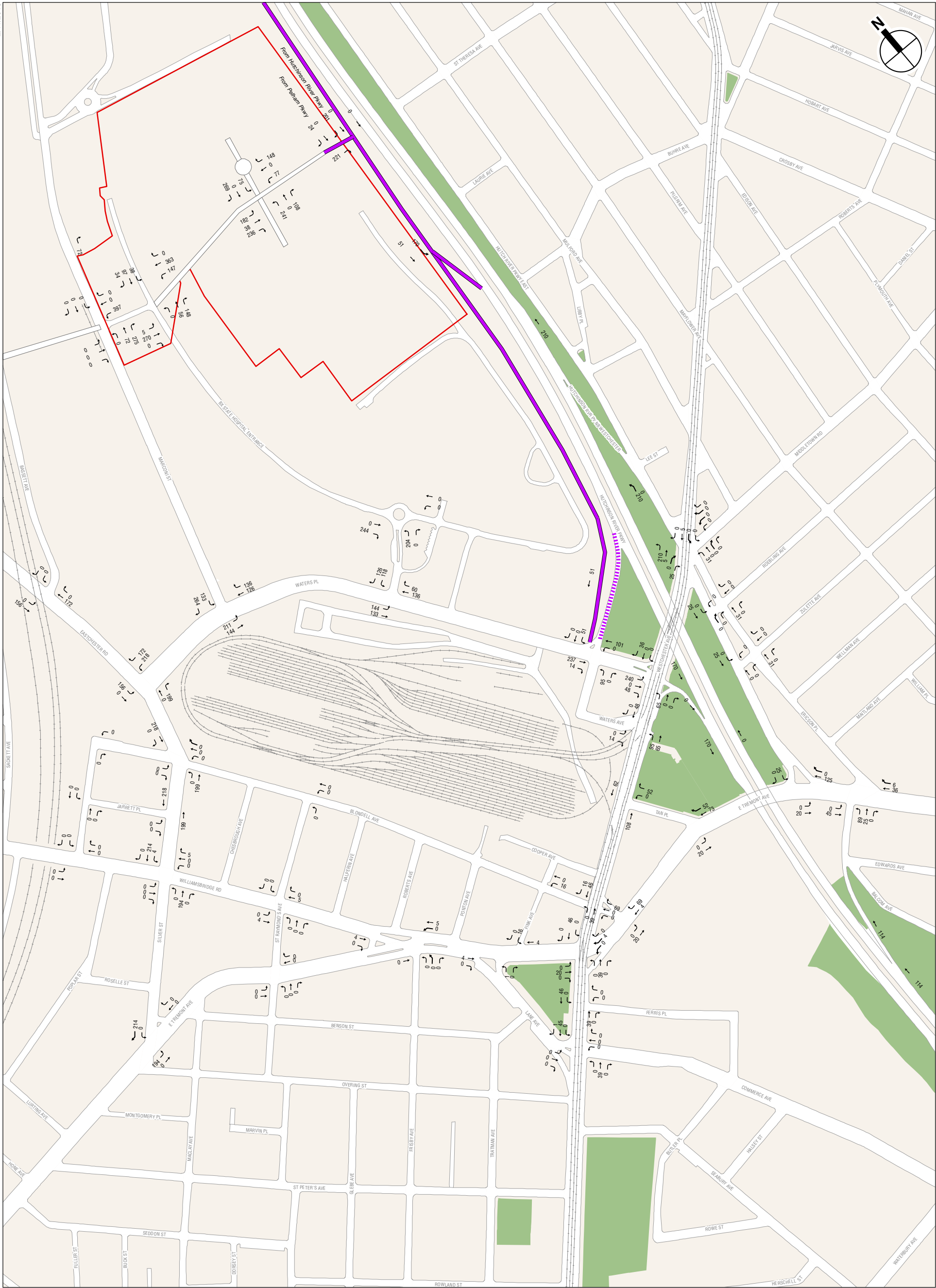
Project Site

 Hutchinson River Parkway Improvement* (Proposed Roadway)

■■■■■ Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

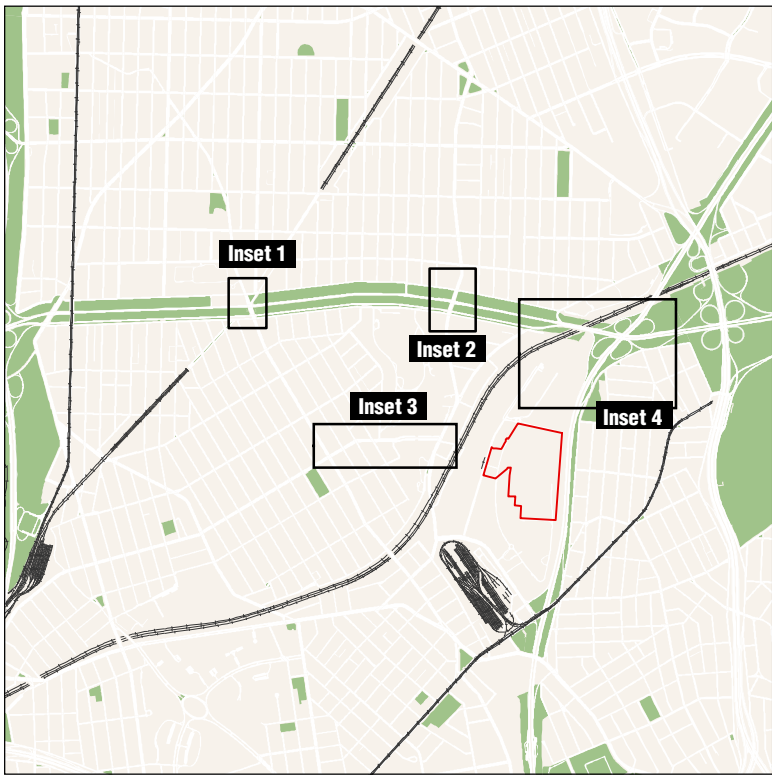
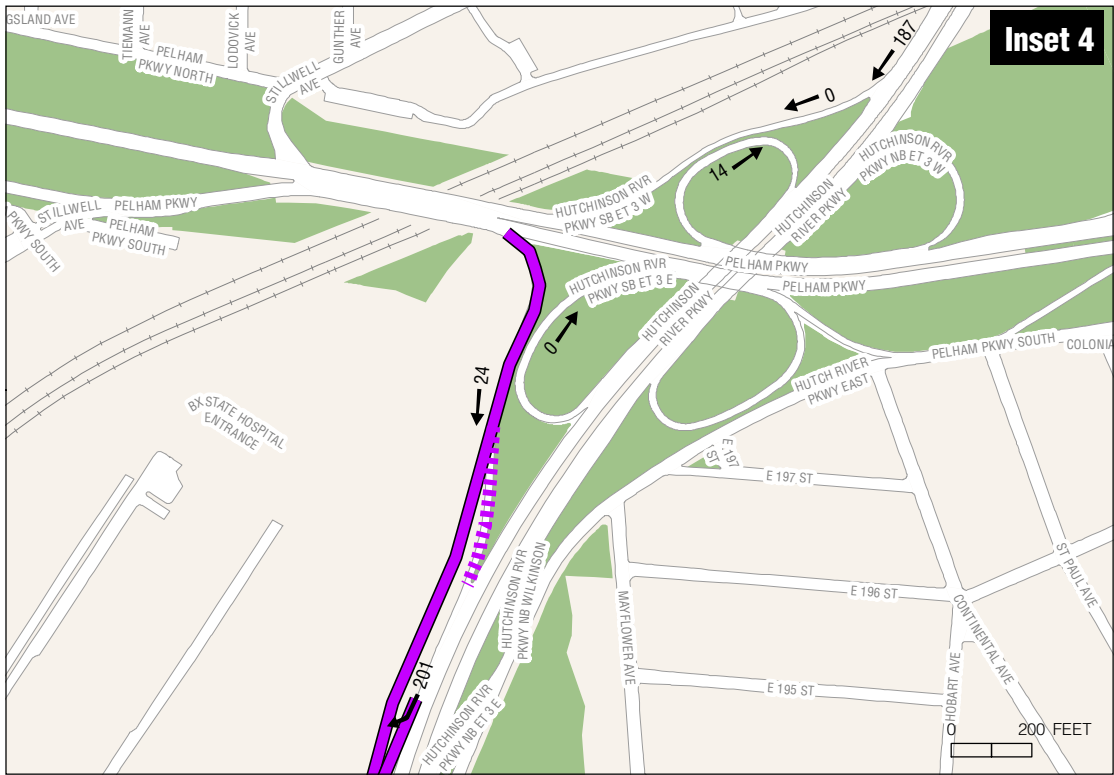
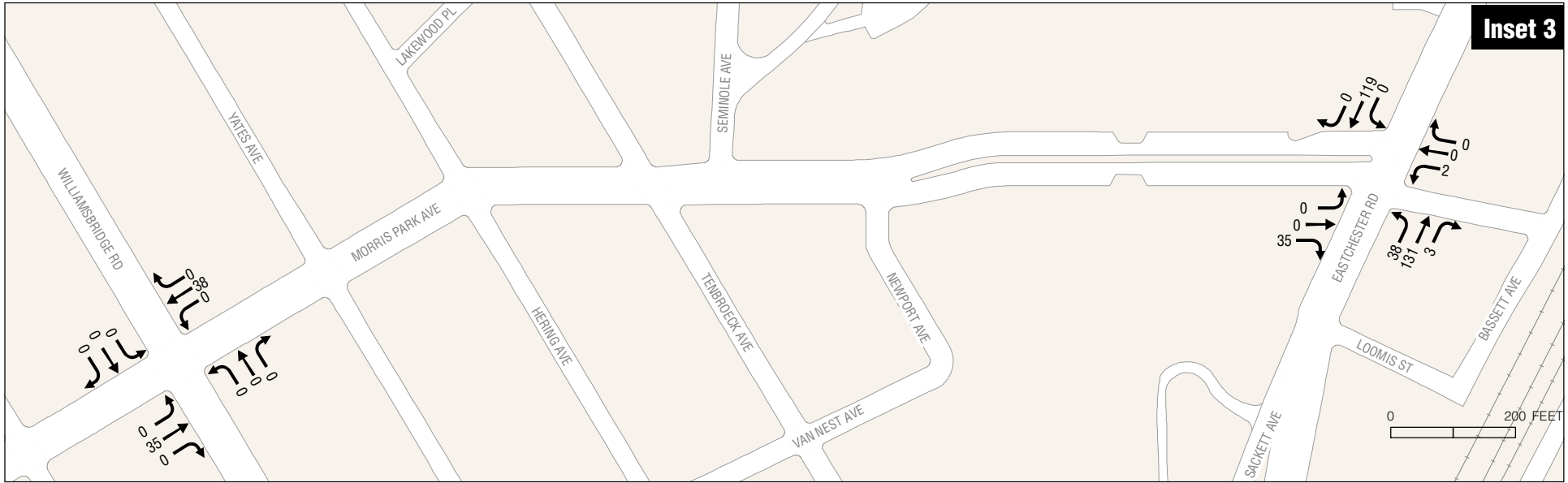
Phase II Full Build-Out Project Generated Vehicle Trips (With HRP Improvements)
Weekday AM Peak Hour
NT PROJECT **Figure 14-5B**



- Project Site
- Hutchinson River Parkway Improvement* (Proposed Roadway)
- Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

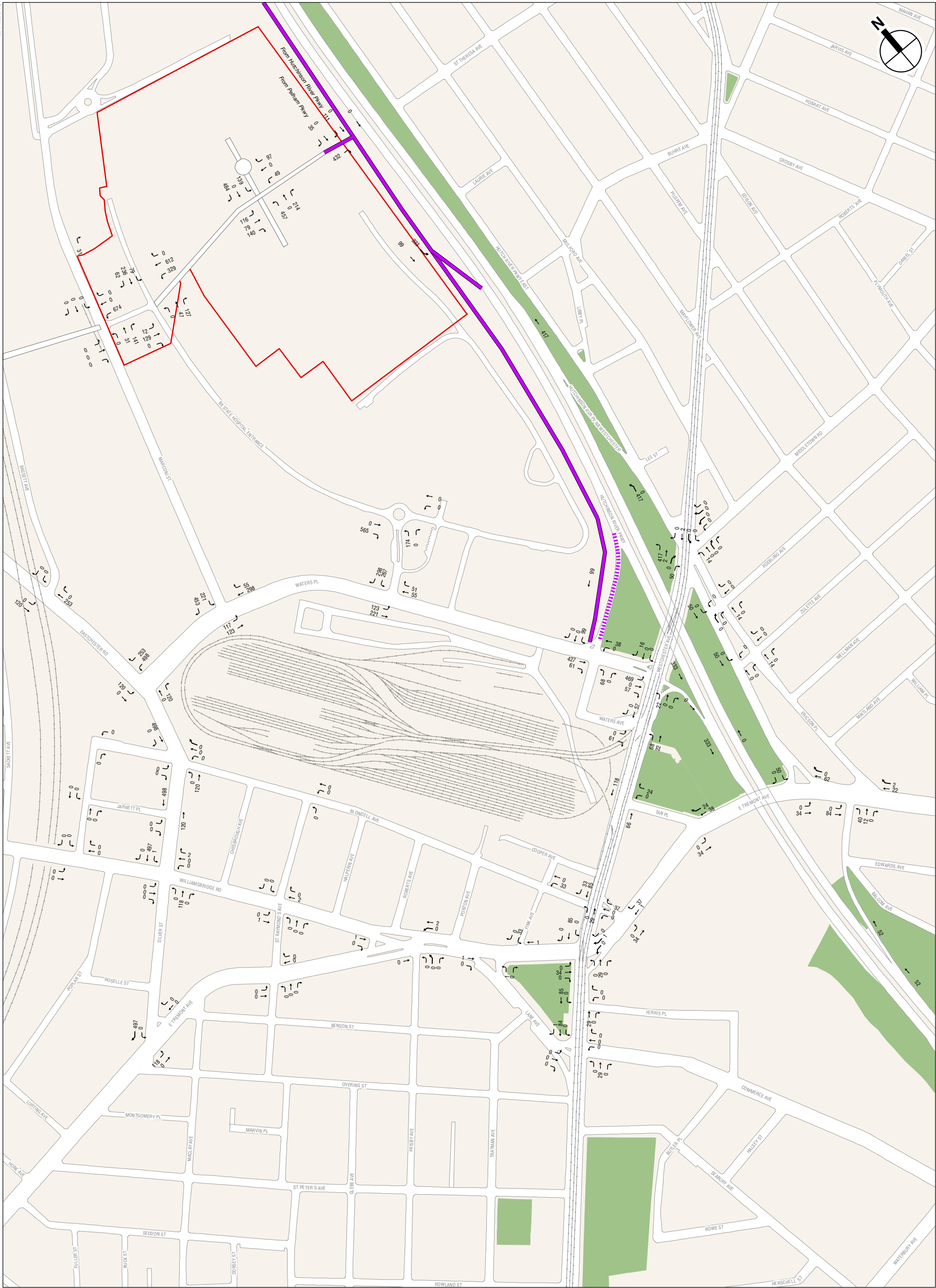
Phase II Full Build-Out Project Generated Vehicle Trips (With HRP Improvements)
Weekday Midday Peak Hour
Figure 14-6A



- ▬ Project Site
- ▬ Hutchinson River Parkway Improvement* (Proposed Roadway)
- ▬▬▬▬▬ Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

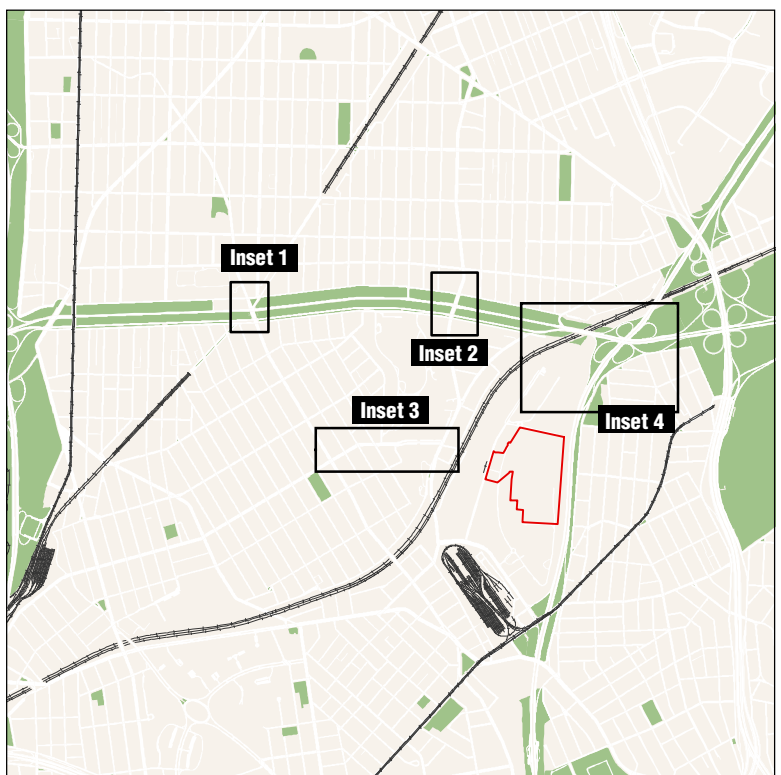
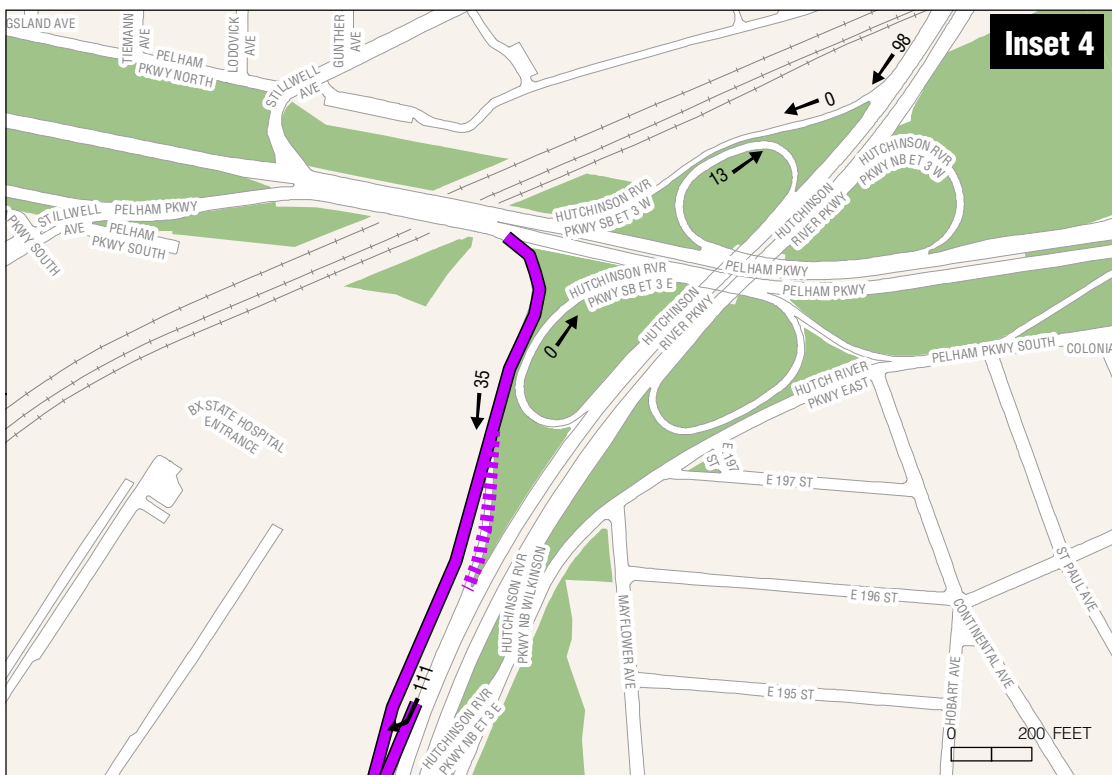
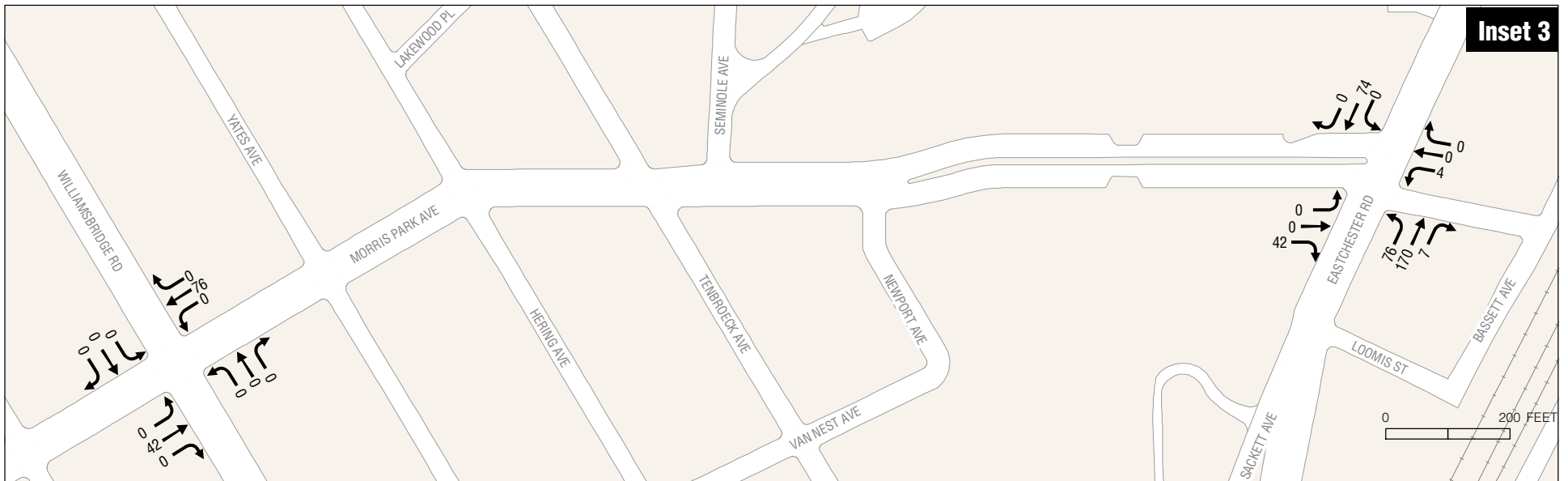
Phase II Full Build-Out Project Generated Vehicle Trips (With HRP Improvements)
Weekday Midday Peak Hour
Figure 14-6B



- Project Site
- Hutchinson River Parkway Improvement* (Proposed Roadway)
- Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

Phase II Full Build-Out Project Generated Vehicle Trips (With HRP Improvements)
Weekday PM Peak Hour
Figure 14-7A



Project Site

 Hutchinson River Parkway Improvement (Proposed Roadway)*

■■■■■ *Hutchinson River Parkway Improvement* (Removal of Existing Ramp)*

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

Phase II Full Build-Out Project Generated Vehicle Trips (With HRP Improvements)
Weekday PM Peak Hour
NT PROJECT **Figure 14-7B**

Bronx Psychiatric Center Land Use Improvement Project

Table 14-7

Traffic Level 2 Screening Analysis Results—Selected Analysis Locations

Intersection	Incremental Vehicle Trips (Weekday)						Analysis Locations	
	Phase I Completion (Without HRP Improvements)			Phase II Full Build-Out (With HRP Improvements)				
	AM	Midday	PM	AM	Midday	PM	Selected	Control
Pelham Parkway North and Williamsbridge Road	0	0	0	0	0	0	✓	Signalized
Pelham Parkway North and Laconia Avenue	0	0	0	0	0	0		Signalized
Pelham Parkway North and Eastchester Road	105	137	136	188	240	240	✓	Signalized
Pelham Parkway and Williamsbridge Road	2	2	0	4	5	2	✓	Signalized
Pelham Parkway and Eastchester Road	107	139	136	192	245	242	✓	Signalized
Pelham Parkway (Mainline) and Williamsbridge Road	39	0	0	80	0	0	✓	Signalized
Pelham Parkway (Mainline) and Eastchester Road	146	139	136	272	245	242	✓	Signalized
Pelham Parkway (Service Road) and Williamsbridge Road	2	2	0	4	5	2	✓	Signalized
Pelham Parkway (Service Road) and Eastchester Road	109	141	136	196	250	244	✓	Signalized
Morris Park Avenue and Williamsbridge Road	26	41	66	47	73	118		Signalized
Morris Park Avenue and Eastchester Road	137	185	209	247	328	373	✓	Signalized
HRP (NB) On-Ramp and HRP East	57	118	215	95	210	417		Unsignalized
Middletown Road/Ericson Place and Westchester Avenue	131	156	251	224	276	485	✓	Signalized
Project Driveway and Marconi Street *	530	457	583	921	744	846	✓	Unsignalized
Bassett Avenue and Eastchester Road	137	185	209	247	328	373		Signalized
Waters Place and Eastchester Road	343	422	545	621	745	991	✓	Signalized
Waters Place and Marconi Street	607	673	886	1,019	1,014	1,267	✓	Signalized
Waters Place and BPC Driveway	856	723	938	832	717	1,015	✓	Signalized
Waters Place and Hutchinson Parkway (SB) Off-Ramp	779	507	635	762	498	693	✓	Signalized
Waters Place/Hutchinson Parkway (SB) On-Ramp and Westchester Avenue	263	313	468	401	389	564	✓	Signalized
Roebling Avenue and HRP East	7	14	25	12	25	50		Unsignalized
Roebling Avenue and Ericson Place	41	18	9	75	31	14	✓	Unsignalized
Zulette Avenue and HRP East	7	14	25	12	25	50		Unsignalized
Zulette Avenue and Ericson Place	41	18	9	75	31	14		Unsignalized
Waters Avenue and Westchester Avenue	292	126	119	538	222	208	✓	Unsignalized
Tan Place and Westchester Avenue	292	126	119	538	222	208	✓	Signalized
Blondell Avenue and Poplar Street	0	0	0	0	0	0		Unsignalized
Blondell Avenue and Eastchester Road	206	237	336	374	417	618	✓	Signalized
Blondell Avenue and Saint Raymond Avenue	0	0	0	0	0	0		Unsignalized
Blondell Avenue and Fink Avenue	3	9	17	8	16	33		Unsignalized
Blondell Avenue and Westchester Avenue	199	94	103	368	170	184	✓	Signalized
Jarrett Place and Poplar Street	0	0	0	0	0	0		Unsignalized
Jarrett Place and Eastchester Road	206	237	336	374	417	618		Unsignalized
Williamsbridge Road and Poplar Street	0	0	0	0	0	0		Unsignalized
Williamsbridge Road and Eastchester Road	206	237	336	374	417	618	✓	Signalized
Williamsbridge Road and Saint Raymond Avenue	6	6	0	11	9	3		Signalized
East Tremont Avenue and Silver Street	200	231	336	363	408	615	✓	Signalized
East Tremont Avenue and Saint Raymond Avenue	0	0	0	0	0	0		Signalized
East Tremont Avenue/Williamsbridge Road and Frisby Avenue	6	6	0	11	9	3		Signalized
East Tremont Avenue and Lane Avenue/Fink Avenue	9	15	17	19	25	36		Signalized
East Tremont Avenue and Westchester Avenue	120	61	80	222	109	149	✓	Signalized
East Tremont Avenue and Blondell Avenue	94	54	40	174	93	72		Unsignalized
East Tremont Avenue and Tan Place	187	86	56	344	145	96	✓	Unsignalized
East Tremont Avenue and HRP East	194	100	81	356	170	146	✓	Signalized
East Tremont Avenue and HRP (NB) Off-Ramp	235	118	90	431	201	160	✓	Signalized
Ferris Place and Westchester Avenue	111	46	63	204	85	114		Unsignalized
Commerce Avenue and Westchester Avenue	111	46	63	204	85	114	✓	Signalized
BPC Roundabout	592	472	597	434	448	739	✓	Unsignalized
Total number of selected analysis locations								29

Note: ✓ denotes intersections selected for detailed traffic analysis.

* The Project Driveway was an unsignalized private driveway at the time of the existing data collection efforts. Since the existing data collection efforts, NYCDOT has independently installed a new traffic signal at this intersection and the signal is currently operational.

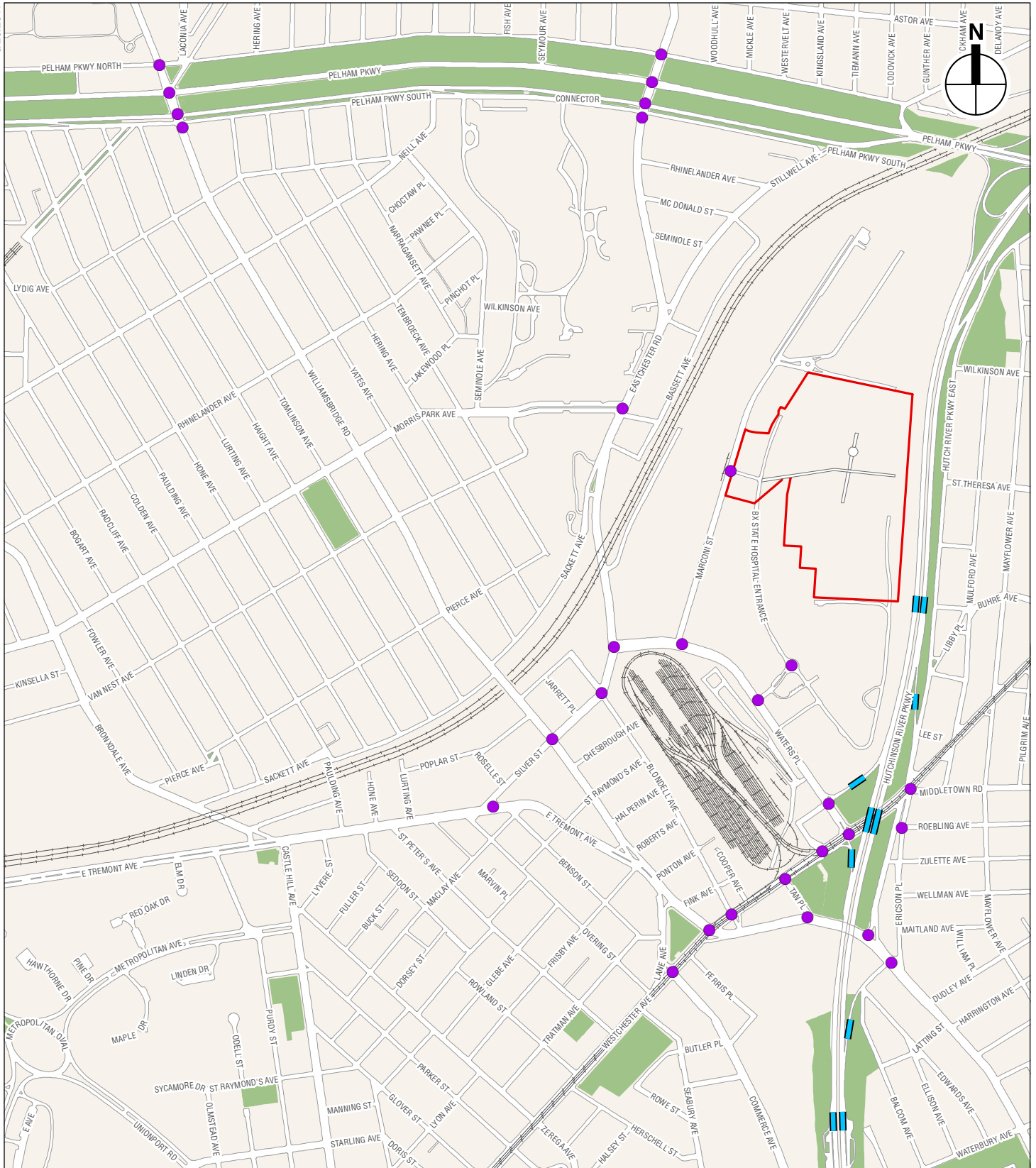
These highway elements include:

- Northbound HRP segment, south of East Tremont Avenue off-ramp;
- Northbound HRP off-ramp to East Tremont Avenue;
- Northbound HRP segment between East Tremont Avenue off-ramp and HRP East on-ramp;
- Northbound HRP on-ramp from HRP East;
- Northbound HRP segment, north of HRP East on-ramp;
- Southbound HRP segment, north of Waters Place off-ramp;
- Southbound Hutchinson River Parkway off-ramp to Waters Place;
- Southbound HRP segment between Waters Place off-ramp and Westchester Avenue/Waters Place on-ramp;
- Southbound HRP on-ramp from Westchester Avenue/Waters Place; and
- Southbound HRP segment, south of Westchester Avenue/Waters Place on-ramp.

The selected traffic analysis locations and highway elements are shown in **Figure 14-8**.

TRANSIT

There are numerous bus routes with stops near the project site, including the Bx4, Bx4A, Bx8, Bx12, Bx21, Bx24, Bx31, Bx40, and Bx42 bus routes. Project-generated peak hour bus trips for both project phases would exceed the *CEQR Technical Manual* analysis thresholds. In addition, as the project site is located at significant distances from the nearest subway stations, the majority of the estimated project-generated subway trips would also use the existing shuttle service that serves the Hutchinson Metro Center and the Bx21 and Bx24 bus routes, which have stops near the analyzed subway stations, to connect with the No. 6 subway line. Therefore, based on a detailed assignment of project-generated bus trips, detailed bus-line haul analysis is expected to be warranted for the Bx21 and Bx24 bus routes.



- Project Area
- Traffic Analysis Location
- Highway Element

0 1,000 FEET

Phase I Completion and Phase II Full Build-Out
Traffic Analysis Locations/Highway Elements
BRONX PSYCHIATRIC CENTER LAND USE IMPROVEMENT PROJECT
Figure 14-8

PEDESTRIANS

As shown in **Tables 14-5 and 14-6**, the projected peak hour incremental pedestrian trips for both project phases would exceed the *CEQR* analysis threshold of 200 pedestrians during all peak hours. Level 2 pedestrian trip assignments were individually developed for all the proposed uses, as shown in **Figures 14-9 through 14-14** and discussed below.

- **Auto Trips**—For all uses, motorists would park at the on-site parking lots. Therefore, motorists would walk to and from these on-site parking lots and proposed project buildings via the interior circulation roads.
- **Taxi Trips**—For all uses, taxi patrons would get dropped off and picked up at the project site's interior circulation roads and to on-site parking lots adjacent to the proposed project's buildings.
- **City Bus Trips**—City bus riders would take buses stopping on Marconi Street, Waters Place, Eastchester Road, and Westchester Road. For the office, medical facility, bio-tech/research, and community college uses, 10 percent of bus riders would take the Bx4 and Bx4a buses with a subsequent transfer to the Bx24 bus; 22 percent would take the Bx8 bus with a subsequent transfer to the Bx24 bus; 3 percent would take the Bx12 bus with a subsequent transfer to the Bx31 bus; 22 percent would take the Bx21 bus; 12 percent would take the Bx24 bus (excluding transfers from other buses), 11 percent would take the Bx31 bus (excluding transfers from other buses); 10 percent would take the Bx40 bus with a subsequent transfer to the Bx24 bus; and 10 percent would take the Bx42 bus with a subsequent transfer to the Bx24 bus. For the local retail use, 10 percent would take the Bx8 bus with a subsequent transfer to the Bx24 bus; 10 percent would take the Bx31 bus; and 80 percent would take the Bx24 bus. For the hotel and conference center uses, 100 percent would take the Bx24 bus. For the accessory use, 18 percent of bus riders would take the Bx4 and Bx4a buses with a subsequent transfer to the Bx24 bus; 17 percent would take the Bx8 bus with a subsequent transfer to the Bx24 bus; 8 percent would take the Bx12 bus with a subsequent transfer to the Bx31 bus; 7 percent would take the Bx21 bus; 18 percent would take the Bx24 bus (excluding transfers from other buses), 17 percent would take the Bx31 bus (excluding transfers from other buses); 7 percent would take the Bx40 bus with a subsequent transfer to the Bx24 bus; and 8 percent would take the Bx42 bus with a subsequent transfer to the Bx24 bus. Near the project site, Bx4/4a buses stop along Lane Avenue next to Owen Dolen Park; Bx8 buses stop on East Tremont Avenue near Westchester Avenue; Bx12 buses stop along Pelham Parkway near Stillwell Avenue; Bx21 buses stop along Waters Place near Eastchester Road; Bx24 buses stop along Marconi Street; Bx31 buses stop along Eastchester Road near Waters Place and Bassett Avenue; and Bx40 and Bx42 buses stop along East Tremont Avenue just west of Westchester Avenue.
- **Subway Trips**—Subway riders were assigned to the Westchester Square–East Tremont Avenue and Middletown Road stations (No. 6 train). For the office, medical facility, bio-tech/research, community college, and local retail uses, 75 percent of subway riders would take the No. 6 train to the Westchester Square Station, and all would subsequently transfer to the Bx24 bus to stops along Marconi Street; 25 percent would take the No. 6 train to the Middletown Road Station, with 15 percent subsequently transferring to the Bx24 bus, and 10 percent subsequently walking along the north side of Westchester Avenue, taking a right on Waters Place to a right on Marconi Street to the site entrances. For the hotel and conference center uses, 100 percent would take the No. 6 train to Westchester Square Station, and all would subsequently transfer to the Bx24 bus to stops along Marconi Street. For the accessory use, 77 percent of subway riders would take the No. 6 train to the Westchester Square Station, and all would subsequently transfer to the Bx24 bus to stops along Marconi Street; 23 percent would take the No. 6 train to the Middletown



Project Site

0 500 FEET

Phase I Completion Project Generated Pedestrian Trips
Weekday AM Peak Hour
Figure 14-9



Project Site

0 500 FEET

Phase I Completion Project Generated Pedestrian Trips
Weekday Midday Peak Hour
Figure 14-10



Project Site

0 500 FEET

Phase I Completion Project Generated Pedestrian Trips
Weekday PM Peak Hour
Figure 14-11

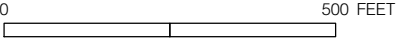


Project Site

0 500 FEET



Project Site



Phase II Full Build-Out Project Generated Pedestrian Trips
Weekday Midday Peak Hour
Figure 14-13



Project Site

0 500 FEET

Phase II Full Build-Out Project Generated Pedestrian Trips
Weekday PM Peak Hour
Figure 14-14

Road Station, with 13 percent subsequently transferring to the Bx24 bus, and 10 percent subsequently walking along the north side of Westchester Avenue, taking a right on Waters Place to a right on Marconi Street to the site entrances.

- **Walk-Only Trips**—Pedestrian walk-only trips were developed by distributing project-generated person trips to area pedestrian facilities (i.e., sidewalks, corner reservoirs, and crosswalks) based on population data as well as the land use characteristics of the surrounding neighborhood.

Based on the detailed assignment of pedestrian trips and in consultation with NYCDOT, nine sidewalks, nine corner reservoirs, and five crosswalks have been selected for detailed analysis of weekday peak hour conditions for Phase 1 completion and Phase II full build-out, as summarized in **Table 14-8** and depicted in **Figure 14-15**.

Table 14-8

Pedestrian Level 2 Screening Analysis Results—Selected Analysis Locations

Pedestrian Elements	Incremental Pedestrian Trips (Weekday)						Analysis Locations
	Phase I Completion			Phase II Full Build-Out			
	AM	Midday	PM	AM	Midday	PM	
Westchester Avenue and Middletown Road							
East Sidewalk along Westchester Avenue between Middletown Road and Mulford Avenue	10	15	13	15	21	20	
West Sidewalk along Westchester Avenue between Middletown Road and Mulford Avenue	20	22	27	36	35	43	
North Sidewalk along Middletown Road between Westchester Avenue and Mulford Avenue	19	31	28	30	42	43	
South Sidewalk along Middletown Road between Westchester Avenue and Mulford Avenue	0	0	0	0	0	0	
Northeast Corner	48	78	68	78	105	105	✓
Southeast Corner	10	15	13	15	21	20	
North Crosswalk	38	63	55	63	84	85	
East Crosswalk	10	15	13	15	21	20	
West Crosswalk	61	87	81	102	121	129	✓
Westchester Avenue and Ericson Place/HRP East							
North Sidewalk along Ericson Place between Westchester Avenue and Roebling Avenue	10	15	13	15	21	20	
East Sidewalk along Westchester Avenue between HRP East and Waters Place	0	0	0	0	0	0	
West Sidewalk along Westchester Avenue between Middletown Road and Waters Place	61	87	81	102	121	129	✓
East Crosswalk (Ericson Place)	0	0	0	0	0	0	
East Crosswalk (HRP East)	0	0	0	0	0	0	
Westchester Avenue and Waters Place							
Northwest Corner	71	102	94	117	142	149	✓
South Crosswalk	0	0	0	0	0	0	
West Crosswalk	10	15	13	15	21	20	
Westchester Avenue and East Tremont Avenue							
West Sidewalk along Westchester Avenue between East Tremont Avenue and Blondell Avenue	0	0	0	0	0	0	
West Sidewalk along Westchester Avenue between East Tremont Avenue and Lane Avenue	139	108	148	259	193	264	✓
North Sidewalk along East Tremont Avenue between Westchester Avenue and Lane Avenue	174	138	192	322	242	330	✓
South Sidewalk along East Tremont Avenue between Westchester Avenue and Lane Avenue	0	0	0	0	0	0	
Northwest Corner	139	108	148	259	193	264	✓
Southwest Corner	139	108	148	259	193	264	✓
North Crosswalk	0	0	0	0	0	0	
South Crosswalk	0	0	0	0	0	0	
West Crosswalk	139	108	148	259	193	264	✓

Table 14-8 (cont'd)

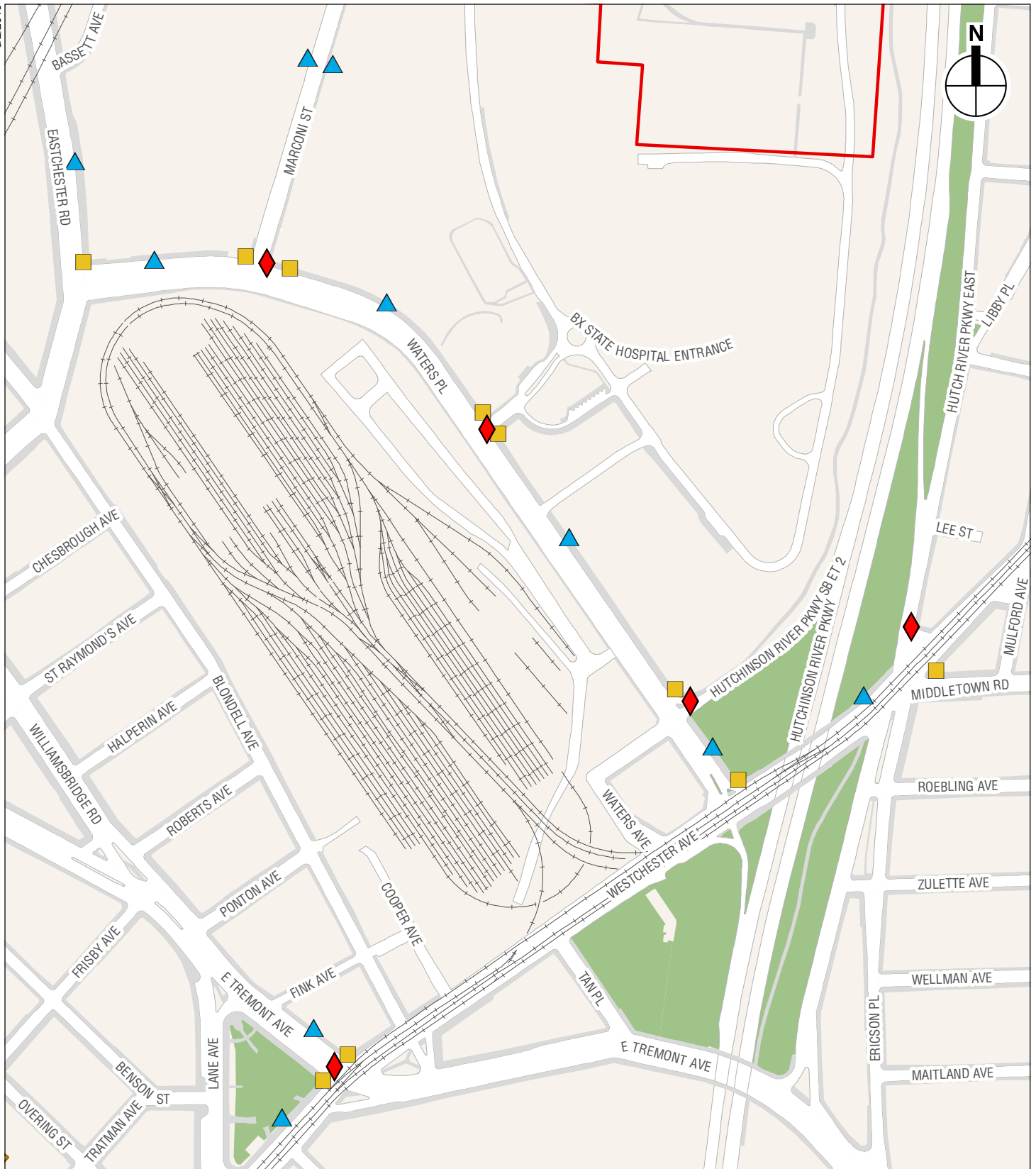
Pedestrian Level 2 Screening Analysis Results—Selected Analysis Locations

Pedestrian Elements	Incremental Pedestrian Trips (Weekday)						Analysis Locations
	Phase I Completion			Phase II Full Build-Out			
	AM	Midday	PM	AM	Midday	PM	
Waters Place and Fink Avenue							
West Sidewalk along Fink Avenue between Waters Place and HRP	0	0	0	0	0	0	
North Sidewalk along Waters Place between Fink Avenue and Westchester Avenue	73	105	94	120	145	149	✓
North Sidewalk along Waters Place between Fink Avenue and BPC Driveway	73	105	94	120	145	149	✓
Northwest Corner ⁽¹⁾	73	105	94	120	145	149	
North Crosswalk	73	105	94	120	145	149	✓
West Sidewalk along Fink Avenue between Waters Place and HRP	0	0	0	0	0	0	
Waters Place and BPC Driveway							
East Sidewalk along Albert Einstein Entrance between Waters Place and HRP	0	0	0	0	0	0	
West Sidewalk along Albert Einstein Entrance between Waters Place and HRP	0	0	0	0	0	0	
North Sidewalk along Waters Place between BPC Driveway and Marconi Street	73	105	94	120	145	149	✓
Northeast Corner	73	105	94	120	145	149	✓
Northwest Corner	73	105	94	120	145	149	✓
North Crosswalk	73	105	94	120	145	149	✓
Waters Place and Marconi Street							
East Sidewalk along Marconi Street between Waters Place and Project Driveway	152	81	70	134	109	105	✓
West Sidewalk along Marconi Street between Waters Place and Project Driveway ⁽²⁾	0	0	0	0	0	0	
North Sidewalk along Waters Place between Marconi Street and Eastchester Road	60	78	94	103	118	161	✓
South Sidewalk along Waters Place between Marconi Street and Eastchester Road	37	0	0	61	0	0	
Northeast Corner	161	199	175	275	276	269	✓
Northwest Corner	88	94	81	155	131	120	✓
West Crosswalk	37	0	7	61	0	7	
North Crosswalk	88	94	81	155	131	120	✓
Waters Place and Eastchester Road							
East Sidewalk along Eastchester Road between Waters Place and Bassett Avenue	13	28	41	23	45	55	✓
West Sidewalk along Eastchester Road between Waters Place and Bassett Avenue	26	21	19	42	30	30	
East Sidewalk along Eastchester Road between Waters Place and Blondell Avenue	10	0	0	16	0	0	
West Sidewalk along Eastchester Road between Waters Place and Blondell Avenue	10	15	13	15	21	20	
Northeast Corner	54	62	69	87	91	141	✓
Southeast Corner	30	49	41	46	67	63	
North Crosswalk	26	21	19	42	30	30	
South Crosswalk	10	15	13	15	21	20	
East Crosswalk	10	15	13	15	21	20	
Total number of selected sidewalk locations							9
Total number of selected corner locations							9
Total number of selected crosswalk locations							5
Notes:							
✓ denotes pedestrian elements selected for detailed analysis.							
⁽¹⁾ The northwest corner at the intersection of Waters Place and Fink Avenue was not analyzed since it is adjacent to the stop-controlled HRP southbound off-ramp right-turn to Waters Place and is not controlled by the traffic signal.							
⁽²⁾ The Marconi Street west sidewalk between Waters Place and Project Driveway was not analyzed since there is no continuous sidewalk provided at this location.							

C. TRANSPORTATION ANALYSIS METHODOLOGIES

TRAFFIC OPERATIONS

The operation of all signalized intersections and unsignalized intersections in the study area were assessed using methodologies presented in the *2000 Highway Capacity Manual* (HCM) using the *Highway Capacity Software* (HCS+ 5.5). For the one roundabout intersection at the BPC Driveway included in the traffic study area, HCS 2010 (Version 6.90) was used to assess its operations in the same manner as unsignalized intersections. Additionally, several highway elements were included for analysis using the FREEVAL spreadsheet model. The HCM procedure evaluates the LOS for signalized and unsignalized intersections using average stop control delay, in seconds per vehicle, and highway facilities using density, in passenger car per mile per lane (pc/mi/ln), as described below.



- Project Site
- ◆ Crosswalk
- Corner
- ▲ Sidewalk

0 500 FEET

Phase I Completion and Phase II Full Build-Out
Pedestrian Analysis Locations
Figure 14-15

SIGNALIZED INTERSECTIONS

The average control delay per vehicle is the basis for LOS determination for individual lane groups (grouping of movements in one or more travel lanes), the approaches, and the overall intersection. The levels of service are defined in **Table 14-9**.

Table 14-9
Level of Service Criteria for Signalized Intersections

LOS	Average Control Delay
A	≤ 10.0 seconds
B	>10.0 and ≤ 20.0 seconds
C	>20.0 and ≤ 35.0 seconds
D	>35.0 and ≤ 55.0 seconds
E	>55.0 and ≤ 80.0 seconds
F	>80.0 seconds

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

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 capacity 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 where congestion levels are more noticeable and individual cycle failures (a condition where 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, and 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. The overall intersection delay, which determines the intersection's LOS, is based on a weighted average of control delays of the individual lane groups. Within New York City, the midpoint of LOS D (45 seconds of delay) is generally considered as the threshold between acceptable and unacceptable operations.

Significant Adverse Impact Criteria

According to the criteria presented in the *CEQR Technical Manual*, impacts are considered significant and require examination of mitigation if they result in an increase in the With-Action condition of 5 or more seconds of delay in a lane group over No-Action levels beyond mid-LOS D. For No-Action LOS E, a 4-second increase in delay is considered significant. For No-Action LOS F, a 3-second increase in delay is considered significant. In addition, impacts are considered significant if levels of service deteriorate from acceptable A, B, or C in the No-Action condition to marginally unacceptable LOS D (a delay in excess of 45 seconds, the midpoint of LOS D), or unacceptable LOS E or F in the With-Action condition.

UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, the average control delay is defined as the total elapsed time from which a vehicle stops at the end of the queue until the vehicle departs from the stop line. This

includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average control delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The LOS criteria for unsignalized intersections are summarized in **Table 14-10**.

Table 14-10
Level of Service Criteria for Unsignalized Intersections

LOS	Average Control Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 15.0 seconds
C	> 15.0 and ≤ 25.0 seconds
D	> 25.0 and ≤ 35.0 seconds
E	> 35.0 and ≤ 50.0 seconds
F	> 50.0 seconds
Source: Transportation Research Board. <i>Highway Capacity Manual</i> , 2000.	

The LOS thresholds for unsignalized intersections are different from those for signalized intersections. The primary reason is that drivers expect different levels of performance from different types of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection; hence, the corresponding control delays are higher at a signalized intersection than at an unsignalized intersection for the same LOS. In addition, certain driver behavioral considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections. For these reasons, the corresponding delay thresholds for unsignalized intersections are lower than those of signalized intersections. As with signalized intersections, within New York City, the midpoint of LOS D (30 seconds of delay) is generally perceived as the threshold between acceptable and unacceptable operations.

Significant Adverse Impact Criteria

The same sliding scale of significant delays described for signalized intersections applies for unsignalized intersections. For the minor street to trigger significant adverse impacts, at least 90 passenger car equivalents (PCE) must be identified in the With-Action condition in any peak hour.

FREEWAY FACILITIES

The freeway facility analysis is conducted by applying FREEVAL modeling. FREEVAL generates average measures of effectiveness (MOEs) for the facility overall and individual segments. The program also computes, for each 15-minute interval of the peak period, MOEs for the individual segments. The reported busiest 15-minute period MOEs (density, speed, travel time) are compared with the average of the interval MOEs. The busiest 15-minute interval is generally identified as the period during which the facility average density is the highest, the speed is the lowest and the time to traverse the analyzed facility is the longest as result of the traffic flow profile created by the facility's mainline, ramps, and weaving sections' traffic demand. The analyses results are summarized by direction, at both the segment and facility levels in terms of the following MOEs:

- Volume-to-capacity ratio (v/c);
- Demand-to-capacity ratio (d/c);
- Density (passenger cars per mile per lane [pc/mi/ln]);
- Space mean speed (miles per hour [mph]); and
- Level of service (LOS).

Freeway facility LOS is based on the weighted average density for all segments within the defined facility. Weighting is done on the basis of segment length and the number of lanes in each segment. The HCM LOS criteria—for both the facility as a whole and for individual segments—are shown in **Table 14-11**. These are the same criteria used for basic freeway segments. LOS “F” is defined as a case in which any component segment of the freeway facility exceeds a demand-to-capacity (d/c) ratio of 1.00, or the average density exceeds 45 passenger cars per mile per lane (pc/mi/ln). In some cases, the performance of freeway facilities could be affected by queues extended from signalized or unsignalized intersections. For example, if the FREEVAL analysis for a freeway off-ramp shows LOS C or D but the 95th percentile queue length (defined as the queue length in vehicles that has only a 5-percent probability of being exceeded during the analysis time period), based on HCS, for the adjacent intersection extends through the off-ramp, that ramp’s ability to process the demand volume would be diminished. Because the queue could also extend onto the connected freeway mainline, its performance could be affected as well and cause congestion on both the analyzed ramp and mainline. In these instances, to reflect HCS’s 95th percentile queue conditions, LOS results would be depicted as LOS C/F* or LOS D/F*.

Table 14-11
Level of Service Criteria for Freeway Facilities and Segments

LOS	Density (pc/mi/ln)
A	≤ 11
B	> 11-18
C	> 18-26
D	> 26-35
E	> 35-45
F	F > 45 or any component d/c ratio > 1.00

Significant Adverse Impact Criteria

According to the criteria presented in the *CEQR Technical Manual* for highway sections and current NYCDOT practices for significant impact determination, *CEQR* significant adverse impact criteria for freeway facilities are summarized as follows:

- For sections operating under the No-Action condition at LOS A through C, With-Action densities shall be no worse than 30.5 pc/mi/ln (mid-LOS D)
- For sections operating under the No-Action condition at LOS D, E, and F, allowable density increases under the With-Action condition shall not exceed densities of 5.0, 4.0, and 3.0 pc/mi/ln, respectively.
- Exacerbation of identified LOS C/F* or LOS D/F* conditions between No-Action and With-Action conditions such that the With-Action projected queues based on the HCS analysis for the adjacent intersection extend beyond the corresponding ramp analysis segment, is also denoted as a significant adverse impact.

TRANSIT OPERATIONS*SUBWAY STATION ELEMENTS*

The methodology for assessing station circulation (stairs, escalators, and passageways) and fare control (regular turnstiles, high entry/exit turnstiles, and high exit turnstiles) elements compares the user volume with the analyzed element's design capacity, resulting in a v/c ratio. For stairs, the design capacity considers the effective width of a tread, which accounts for railings or other obstructions, the friction or counter-flow between upward and downward pedestrians (up to 10 percent capacity reduction is applied to account for counter-flow friction), surging of entering and exiting pedestrians (up to 25 percent capacity reduction is applied to account for surged flows off of platforms and onto platforms), and the average area required for circulation. For passageways, similar considerations are made. For escalators and turnstiles, capacities are measured by the number and width of an element and NYCT's optimum capacity per element, also account for the potential for surging of entering and exiting pedestrians. In the analysis for each of these elements, volumes and capacities are presented for 15-minute intervals. The estimated v/c ratio is compared with NYCT criteria to determine an LOS for the operation of an element, as summarized in **Table 14-12**.

Table 14-12
Level of Service Criteria for Subway Station Elements

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

Source: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*.

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

Significant Adverse Impact Criteria

The determination of significant adverse impacts for station elements varies based on their type and use. For stairs and passageways, significant adverse impacts are defined in term of width increment threshold (WIT) based on the minimum amount of additional capacity that would be required either to mitigate the location to its service conditions (LOS) under the No-Action levels, or to bring it to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Significant adverse impacts are typically considered to occur once the WITs in **Table 14-13** are reached or exceeded.

Table 14-13

Significant Adverse Impact Guidance for Stairs and Passageways

With-Action V/C Ratio	WIT for Significant Adverse Impact (inches)	
	Stairway	Passageway
1.00 to 1.09	8.0	13.0
1.10 to 1.19	7.0	11.5
1.20 to 1.29	6.0	10.0
1.30 to 1.39	5.0	8.5
1.40 to 1.49	4.0	6.0
1.50 to 1.59	3.0	4.5
1.60 and up	2.0	3.0
Note: WIT = Width Increment Threshold.		
Sources: New York City Mayor's Office of Environmental Coordination, <i>CEQR Technical Manual</i> .		

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

SUBWAY AND BUS LINE-HAUL CAPACITIES

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

Bus line-haul capacities are evaluated when a proposed project is anticipated to generate 50 or more bus passengers to a single bus line in one direction. The assessment of bus line-haul conditions involves analyzing bus routes at their peak load points and, if necessary, also their bus stops closest to the project site to identify the potential for the analyzed routes to exceed their guideline (or practical) capacities. NYCT and the MTA Bus Company operate three types of buses: standard and articulated buses, and over-the-road coaches. During peak hours, standard buses operate with up to 54 passengers per bus, articulated buses operate with up to 85 passengers per bus, and over-the-road coaches operate with up to 55 passengers per bus.

Significant Adverse Impact Criteria

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

PEDESTRIAN OPERATIONS

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

The primary performance measure for sidewalks and walkways is pedestrian space, expressed as square feet per pedestrian (SFP), which is an indicator of the quality of pedestrian movement and comfort. The calculation of the sidewalk SFP is based on the pedestrian volumes by direction, the effective sidewalk or walkway width, and average walking speed. The SFP forms the basis for a sidewalk LOS analysis. The determination of sidewalk LOS is also dependent on whether the pedestrian flow being analyzed is best described as "non-platoon" or "platoon." Non-platoon flow occurs when pedestrian volume within the peak 15-minute period is relatively uniform, whereas, platoon flow occurs when pedestrian volumes vary significantly with the peak 15-minute period. Such variation typically occurs near bus stops, subway stations, and/or where adjacent crosswalks account for much of the walkway's pedestrian volume.

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

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

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet-second. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the total crosswalk pedestrian occupancy time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk. The LOS standards for sidewalks, corner reservoirs, and crosswalks are summarized in **Table 14-14**. The *CEQR Technical Manual* specifies acceptable LOS in Central Business District (CBD) areas is mid-LOS D or better, while acceptable LOS in non-CBD areas is LOS C or better.

Table 14-14
Level of Service Criteria for Pedestrian Elements

LOS	Sidewalks		Corner Reservoirs and Crosswalks
	Non-Platoon Flow	Platoon Flow	
A	> 60 SFP	> 530 SFP	> 60 SFP
B	> 40 and ≤ 60 SFP	> 90 and ≤ 530 SFP	> 40 and ≤ 60 SFP
C	> 24 and ≤ 40 SFP	> 40 and ≤ 90 SFP	> 24 and ≤ 40 SFP
D	> 15 and ≤ 24 SFP	> 23 and ≤ 40 SFP	> 15 and ≤ 24 SFP
E	> 8 and ≤ 15 SFP	> 11 and ≤ 23 SFP	> 8 and ≤ 15 SFP
F	≤ 8 SFP	≤ 11 SFP	≤ 8 SFP

Note: SFP = square feet per pedestrian.
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*.

SIGNIFICANT ADVERSE IMPACT CRITERIA

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

Sidewalks

There are two sliding-scale formulas for determining significant adverse sidewalk impacts. For non-platoon flow, the determination of significant adverse sidewalk impacts is based on the sliding scale using the following formula: $Y \geq X/9.0 - 0.31$, where Y is the decrease in pedestrian space in SFP and X is the No-Action pedestrian space in SFP. For platoon flow, the sliding-scale formula is $Y \geq X/(9.5 - 0.321)$. Since a decrease in pedestrian space within acceptable levels would not constitute a significant adverse impact, these formulas would apply only if the With-Action pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table 14-15** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant adverse sidewalk impacts.

Corner Reservoirs and Crosswalks

The determination of significant adverse corner and crosswalk impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.31$, where Y is the decrease in pedestrian space in SFP and X is the No-Action pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant adverse impact, this formula would apply only if the With-Action pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table 14-16** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant adverse corner reservoir and crosswalk impacts.

Table 14-15
Significant Adverse Impact Guidance for Sidewalks

Non-Platoon Flow				Platoon Flow			
Sliding Scale Formula: $Y \geq X/9.0 - 0.31$				Sliding Scale Formula: $Y \geq X/(9.5 - 0.321)$			
Non-CBD Areas		CBD Areas		Non-CBD Areas		CBD Areas	
No-Action Ped. Space (X, SFP)	With-Action Ped. Space Reduc. (Y, SFP)	No-Action Ped. Space (X, SFP)	With-Action Ped. Space Reduc. (Y, SFP)	No-Action Ped. Space (X, SFP)	With-Action Ped. Space Reduc. (Y, SFP)	No-Action Ped. Space (X, SFP)	With-Action Ped. Space Reduc. (Y, SFP)
—	—	—	—	43.5 to 44.3	≥ 4.3	—	—
—	—	—	—	42.5 to 43.4	≥ 4.2	—	—
—	—	—	—	41.6 to 42.4	≥ 4.1	—	—
—	—	—	—	40.6 to 41.5	≥ 4.0	—	—
—	—	—	—	39.7 to 40.5	≥ 3.9	—	—
—	—	—	—	38.7 to 39.6	≥ 3.8	38.7 to 39.2	≥ 3.8
—	—	—	—	37.8 to 38.6	≥ 3.7	37.8 to 38.6	≥ 3.7
—	—	—	—	36.8 to 37.7	≥ 3.6	36.8 to 37.7	≥ 3.6
—	—	—	—	35.9 to 36.7	≥ 3.5	35.9 to 36.7	≥ 3.5
—	—	—	—	34.9 to 35.8	≥ 3.4	34.9 to 35.8	≥ 3.4
—	—	—	—	34.0 to 34.8	≥ 3.3	34.0 to 34.8	≥ 3.3
—	—	—	—	33.0 to 33.9	≥ 3.2	33.0 to 33.9	≥ 3.2
—	—	—	—	32.1 to 32.9	≥ 3.1	32.1 to 32.9	≥ 3.1
—	—	—	—	31.1 to 32.0	≥ 3.0	31.1 to 32.0	≥ 3.0
—	—	—	—	30.2 to 31.0	≥ 2.9	30.2 to 31.0	≥ 2.9
—	—	—	—	29.2 to 30.1	≥ 2.8	29.2 to 30.1	≥ 2.8
25.8 to 26.6	≥ 2.6	—	—	28.3 to 29.1	≥ 2.7	28.3 to 29.1	≥ 2.7
24.9 to 25.7	≥ 2.5	—	—	27.3 to 28.2	≥ 2.6	27.3 to 28.2	≥ 2.6
24.0 to 24.8	≥ 2.4	—	—	26.4 to 27.2	≥ 2.5	26.4 to 27.2	≥ 2.5
23.1 to 23.9	≥ 2.3	—	—	25.4 to 26.3	≥ 2.4	25.4 to 26.3	≥ 2.4
22.2 to 23.0	≥ 2.2	—	—	24.5 to 25.3	≥ 2.3	24.5 to 25.3	≥ 2.3
21.3 to 22.1	≥ 2.1	21.3 to 21.5	≥ 2.1	23.5 to 24.4	≥ 2.2	23.5 to 24.4	≥ 2.2
20.4 to 21.2	≥ 2.0	20.4 to 21.2	≥ 2.0	22.6 to 23.4	≥ 2.1	22.6 to 23.4	≥ 2.1
19.5 to 20.3	≥ 1.9	19.5 to 20.3	≥ 1.9	21.6 to 22.5	≥ 2.0	21.6 to 22.5	≥ 2.0
18.6 to 19.4	≥ 1.8	18.6 to 19.4	≥ 1.8	20.7 to 21.5	≥ 1.9	20.7 to 21.5	≥ 1.9
17.7 to 18.5	≥ 1.7	17.7 to 18.5	≥ 1.7	19.7 to 20.6	≥ 1.8	19.7 to 20.6	≥ 1.8
16.8 to 17.6	≥ 1.6	16.8 to 17.6	≥ 1.6	18.8 to 19.6	≥ 1.7	18.8 to 19.6	≥ 1.7
15.9 to 16.7	≥ 1.5	15.9 to 16.7	≥ 1.5	17.8 to 18.7	≥ 1.6	17.8 to 18.7	≥ 1.6
15.0 to 15.8	≥ 1.4	15.0 to 15.8	≥ 1.4	16.9 to 17.7	≥ 1.5	16.9 to 17.7	≥ 1.5
14.1 to 14.9	≥ 1.3	14.1 to 14.9	≥ 1.3	15.9 to 16.8	≥ 1.4	15.9 to 16.8	≥ 1.4
13.2 to 14.0	≥ 1.2	13.2 to 14.0	≥ 1.2	15.0 to 15.8	≥ 1.3	15.0 to 15.8	≥ 1.3
12.3 to 13.1	≥ 1.1	12.3 to 13.1	≥ 1.1	14.0 to 14.9	≥ 1.2	14.0 to 14.9	≥ 1.2
11.4 to 12.2	≥ 1.0	11.4 to 12.2	≥ 1.0	13.1 to 13.9	≥ 1.1	13.1 to 13.9	≥ 1.1
10.5 to 11.3	≥ 0.9	10.5 to 11.3	≥ 0.9	12.1 to 13.0	≥ 1.0	12.1 to 13.0	≥ 1.0
9.6 to 10.4	≥ 0.8	9.6 to 10.4	≥ 0.8	11.2 to 12.0	≥ 0.9	11.2 to 12.0	≥ 0.9
8.7 to 9.5	≥ 0.7	8.7 to 9.5	≥ 0.7	10.2 to 11.1	≥ 0.8	10.2 to 11.1	≥ 0.8
7.8 to 8.6	≥ 0.6	7.8 to 8.6	≥ 0.6	9.3 to 10.1	≥ 0.7	9.3 to 10.1	≥ 0.7
6.9 to 7.7	≥ 0.5	6.9 to 7.7	≥ 0.5	8.3 to 9.2	≥ 0.6	8.3 to 9.2	≥ 0.6
6.0 to 6.8	≥ 0.4	6.0 to 6.8	≥ 0.4	7.4 to 8.2	≥ 0.5	7.4 to 8.2	≥ 0.5
5.1 to 5.9	≥ 0.3	5.1 to 5.9	≥ 0.3	6.4 to 7.3	≥ 0.4	6.4 to 7.3	≥ 0.4
< 5.1	≥ 0.2	< 5.1	≥ 0.2	< 6.4	≥ 0.3	< 6.4	≥ 0.3
Notes: SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No-Action pedestrian space in SFP. Sources: New York City Mayor's Office of Environmental Coordination, <i>CEQR Technical Manual</i> .							

Table 14-16

Significant Adverse Impact Guidance for Corners and Crosswalks

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

Notes:
SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No-Action pedestrian space in SFP.

Sources:
New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*.

VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

An evaluation of vehicular and pedestrian safety is necessary for locations within the traffic and pedestrian study areas that have been identified as high crash locations, where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent 3-year period for which data are available. For these locations, crash trends are identified to determine whether projected vehicular and pedestrian traffic would further impact safety at these locations. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety are identified and coordinated with NYCDOT for their approval.

PARKING CONDITIONS ASSESSMENT

The parking analysis identifies the extent to which on-street and off-street parking is available and utilized under existing and future conditions. It takes into consideration anticipated changes in area parking supply and provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from parking displacement attributable to the project or additional demand generated by a proposed project. Typically, the study area for this analysis encompasses facilities in which vehicular traffic bound for the project site would likely park. In cases where sufficient accessory and/or public parking is provided on-site, there is no need to define a parking study area unless the proposed project would eliminate a significant amount of available public parking.

Bronx Psychiatric Center Land Use Improvement Project

For areas outside of the CBD in New York City, a parking shortfall that exceeds more than half the available on-street and off-street parking spaces within a ¼ mile of the project site may be considered significant. Additional factors, such as the availability and extent of transit in the area, proximity of the project to such transit, and patterns of automobile usage by area residents, could be considered to determine the significance of the identified parking shortfall. In some cases, if there is adequate parking supply within a ½ mile of the project site, the projected parking shortfall may also not necessarily be considered significant.

PRESENTATION OF DETAILED ANALYSES

The detailed analyses presented below follows the same order as the transportation analysis methodologies discussed above. The detailed traffic analysis is followed by the detailed transit analysis, the detailed pedestrian analysis, the vehicular and pedestrian safety assessment, and finally the parking assessment. A detailed breakdown of each analysis area and section is listed below.

DETAILED TRAFFIC ANALYSIS: SURFACE STREETS

- Existing Conditions
- 2023 No-Action (Without HRP Improvements)
- 2023 With-Action (Without HRP Improvements)
- 2028 No-Action (With HRP Improvements)
- 2028 With-Action (With HRP Improvements)

DETAILED TRAFFIC ANALYSIS: HUTCHINSON RIVER PARKWAY

- Existing Conditions
- 2023 No-Action (Without HRP Improvements)
- 2023 With-Action (Without HRP Improvements)
- 2028 No-Action (With HRP Improvements)
- 2028 With-Action (With HRP Improvements)

DETAILED TRANSIT ANALYSIS

- Existing Conditions
- 2023 No-Action
- 2023 With-Action
- 2028 No-Action
- 2028 With-Action

DETAILED PEDESTRIAN ANALYSIS

- Existing Conditions
- 2023 No-Action (Without HRP Improvements)
- 2023 With-Action (Without HRP Improvements)
- 2028 No-Action (With HRP Improvements)
- 2028 With-Action (With HRP Improvements)

VEHICULAR AND PEDESTRIAN SAFETY ASSESSMENT***PARKING ASSESSMENT*****D. DETAILED TRAFFIC ANALYSIS: SURFACE STREETS**

As described above in Section B, “Preliminary Analysis Methodology and Screening Assessment,” the Level 1 and Level 2 screening analyses indicated a need for a detailed analysis of 29 traffic analysis locations during the weekday AM, midday, and PM peak periods. All analysis intersections are signalized with the exception of the intersections of Project Driveway at Marconi Street, Westchester Avenue at Waters Avenue, Roebling Avenue at Ericson Place/HRP East, and BPC Roundabout.

EXISTING CONDITIONS***ROADWAY NETWORK AND TRAFFIC STUDY AREA***

The traffic study area includes major thoroughfares in the Bronx, with major north-south two-way flows on the HRP; major two-way east-west flows on East Tremont Avenue, Morris Park Avenue, Pelham Parkway, and Westchester Avenue; local north-south circulation on Eastchester Avenue and Williamsbridge Road; and local east-west circulation on Waters Place. The traffic study area is generally bounded by Pelham Parkway to the north, East Tremont Avenue to the south, Eastchester Road to the west, and Westchester Avenue to the east.

The HRP is a major two-way northbound and southbound roadway and is classified as a Principal Arterial Expressway. The northbound and southbound roadways are separated by a landscaped median. It generally operates with three lanes in each direction. Williamsbridge Road and Eastchester Avenue are both classified as Principal Arterial Other and generally run in the northbound and southbound directions. Both generally provide two through lanes in each direction in addition to on-street parking.

Pelham Parkway, Westchester Avenue, and East Tremont Avenue (west of Westchester Avenue) are all classified as Principal Arterial Other. Morris Park Avenue and East Tremont Avenue (east of Westchester Avenue) are both classified as Minor Arterials. Pelham Parkway typically provides three through lanes in each direction with an express bus lane and two through lanes and on-street parking provided along the North and South service roads. East Tremont Avenue, Morris Park Avenue, and Westchester Avenue all generally operate with two through lanes and on-street parking in each direction. Lastly, Waters Place is classified as a Major Collector and provides two through lanes with on-street parking in both directions.

TRAFFIC CONDITIONS

Traffic data were collected in June 2015 for the weekday AM, midday, and PM peak periods using a combination of intersection turning movement counts using cameras and 24-hour Automatic Traffic Recorder (ATR) machine counts. Existing (2015) peak period traffic volumes were developed based on these counts. The peak hours used for analysis purposes are 7:30 to 8:30 AM, 12:15 PM to 1:15 PM, and 4:15 PM to 5:15 PM. The BPC Roundabout traffic volumes were collected in March 2017 and were incorporated into the previously balanced existing traffic networks. An additional data collection effort was undertaken in late 2018 to assess the validity of the previously collected data. NYCDOT provided guidance on how this data collection effort was to be performed and, after review of the collected data, deemed the 2015 baseline traffic volumes to be appropriate for use in this study’s traffic analysis.

Bronx Psychiatric Center Land Use Improvement Project

Inventories of roadway geometry, traffic controls, bus stops, and parking regulations/activities were recorded to provide appropriate inputs for the operational analyses. Official signal timings obtained from NYCDOT Signals were field verified and used in the analysis of the study area signalized intersections. **Figures 14-16A through 14-18B** show the existing traffic volumes for the weekday AM, midday, and PM peak hours, respectively.

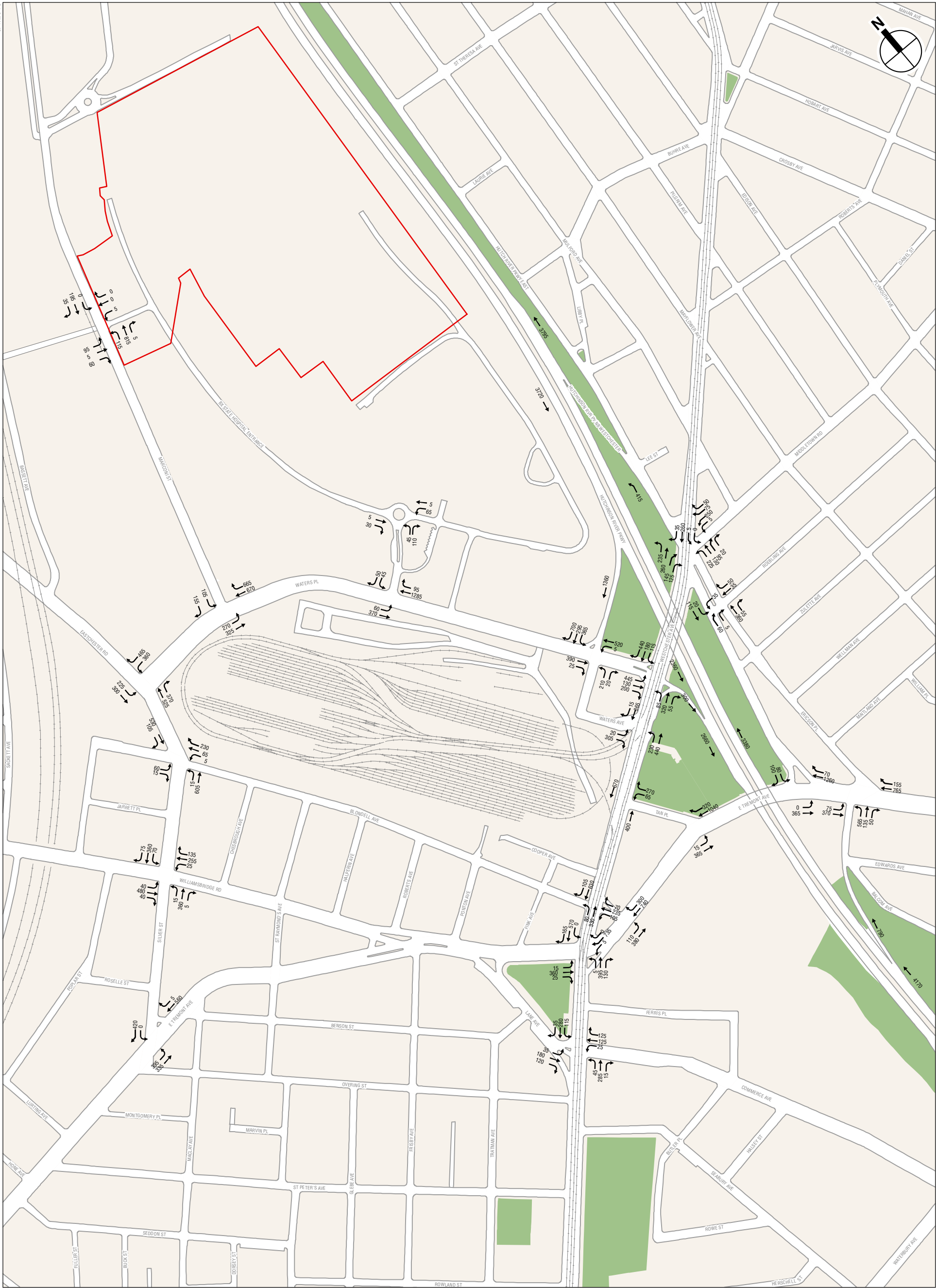
LEVELS OF SERVICE

A summary of the existing conditions traffic analysis results by lane group is presented in **Table 14-17**. Details on LOS, v/c ratios, and average delays are presented in **Table 14-18** for signalized intersections and **Table 14-19** for unsignalized intersections. Overall, the capacity analysis indicates that most of the study area's intersection approaches/lane groups operate acceptably at mid-LOS D or better (delays of 45 seconds or less per vehicle for signalized intersections and 30 seconds or less per vehicle for unsignalized intersections) for the peak hours. Approaches/lane groups operating beyond mid-LOS D and those with v/c ratios of 0.90 or greater are listed below.

Table 14-17
Summary of Existing Traffic Analysis Results

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
<i>Signalized Intersections</i>			
Lane Groups at LOS A/B/C	68	83	63
Lane Groups at LOS D	15	10	16
Lane Groups at LOS E	5	4	10
Lane Groups at LOS F	11	2	10
Total	99	99	99
Lane Groups with v/c \geq 0.90	18	5	17
<i>Unsignalized Intersections</i>			
Lane Groups at LOS A/B/C	13	14	15
Lane Groups at LOS D	0	0	0
Lane Groups at LOS E	1	2	1
Lane Groups at LOS F	2	0	0
Total	16	16	16
Lane Groups with v/c \geq 0.90	1	0	0

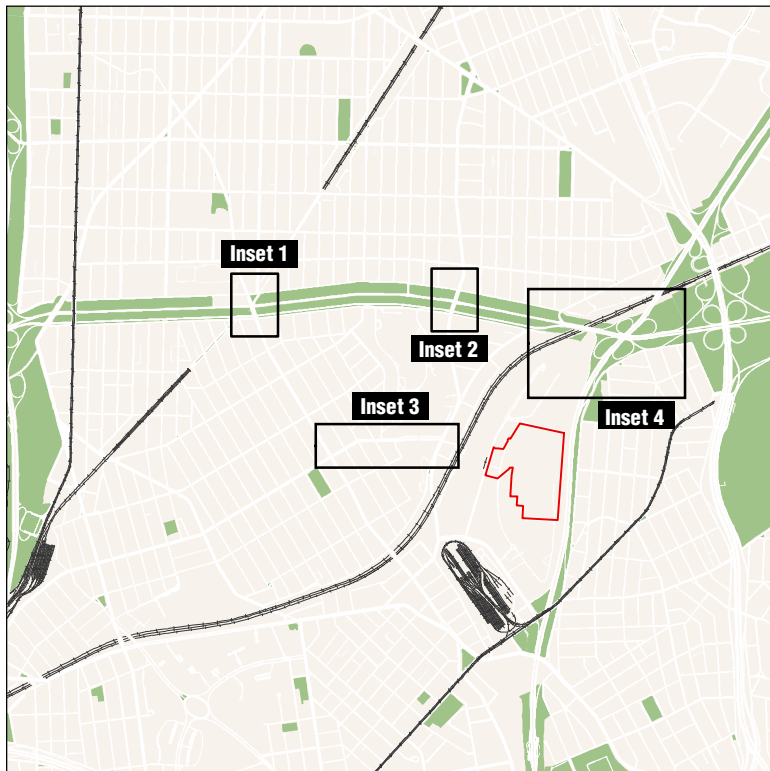
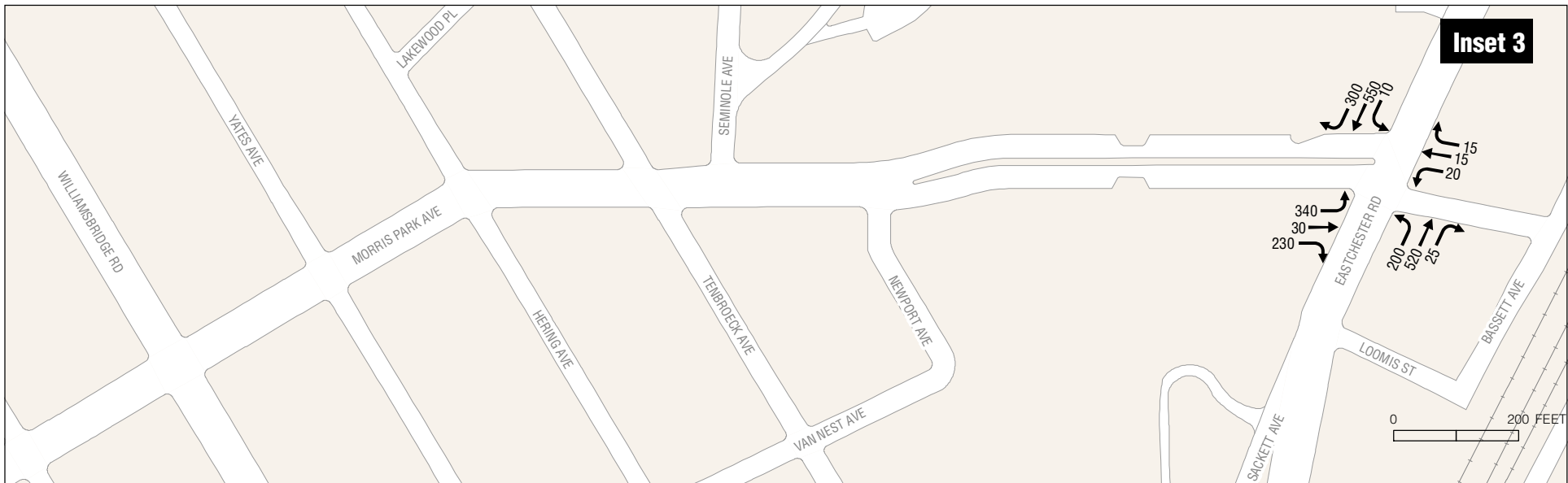
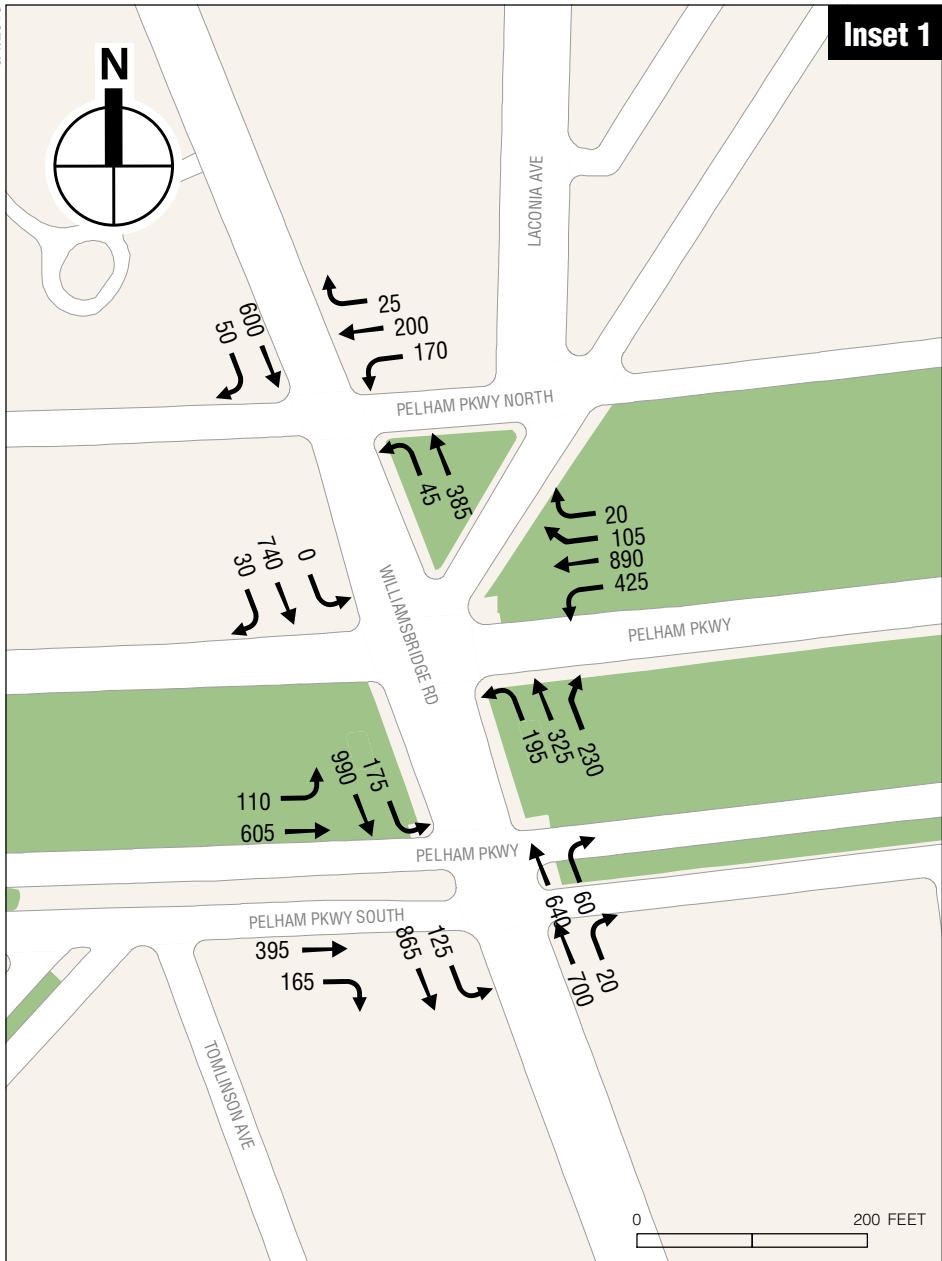
Notes: LOS = Level of service; v/c = volume-to-capacity ratio.



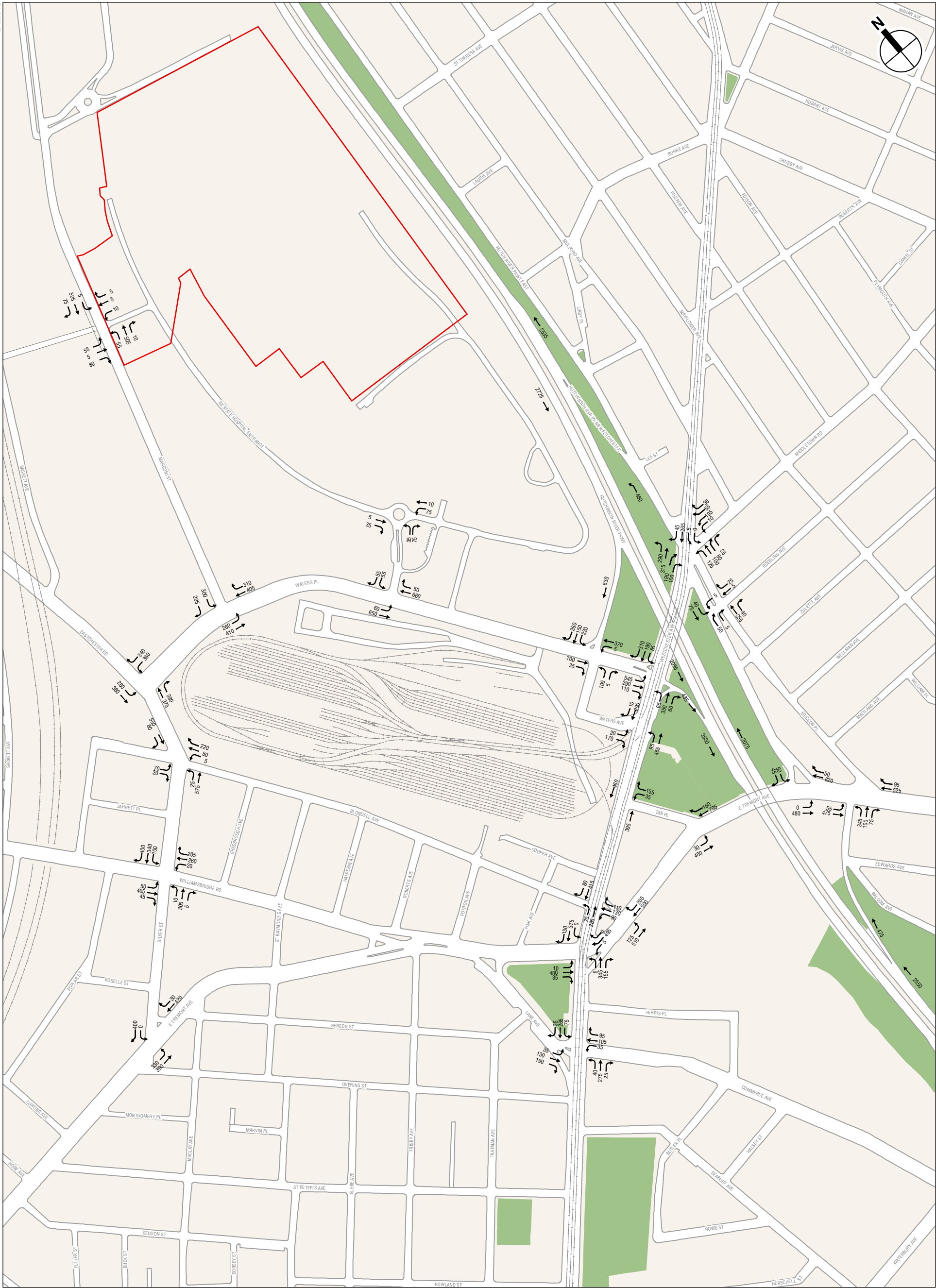
 Project Site

0 800 FEET

2015 Existing Traffic Volumes
Weekday AM Peak Hour
Figure 14-16A

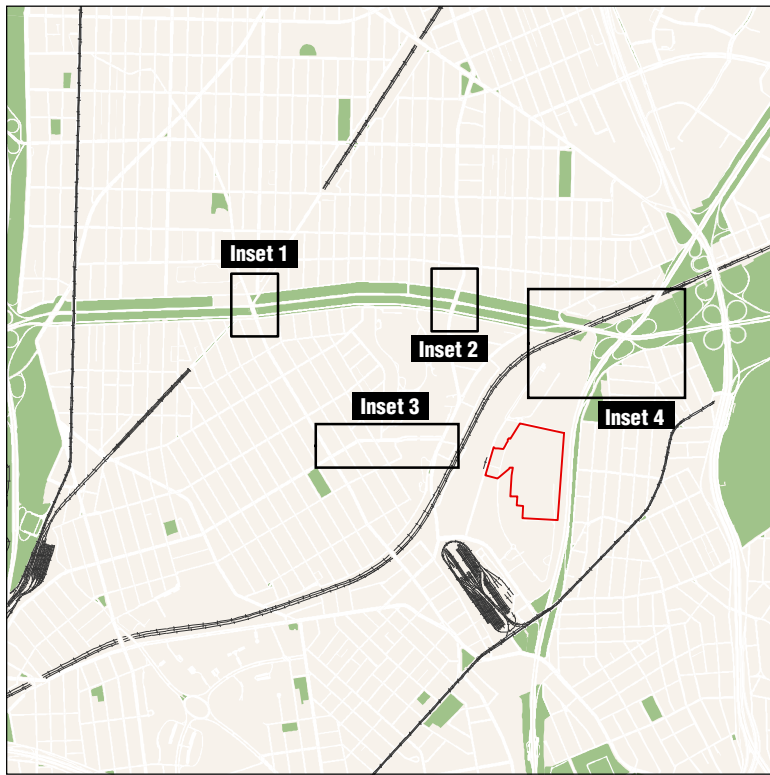


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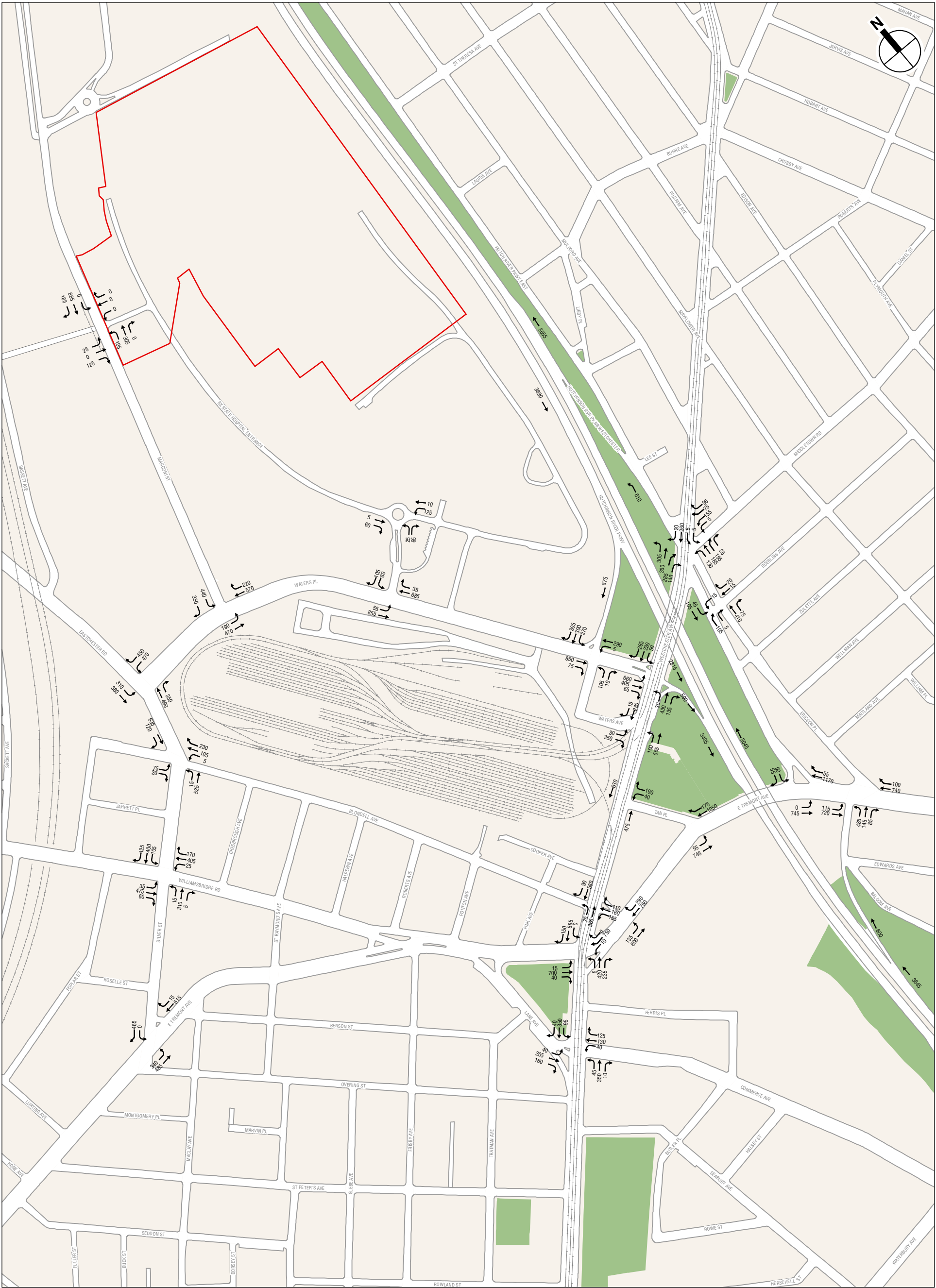


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0 800 FEET

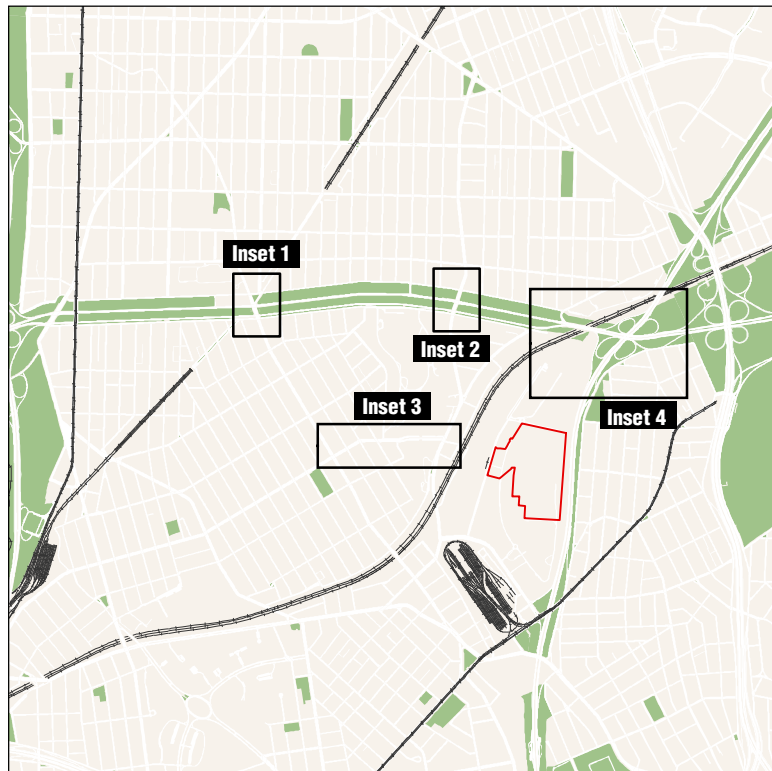
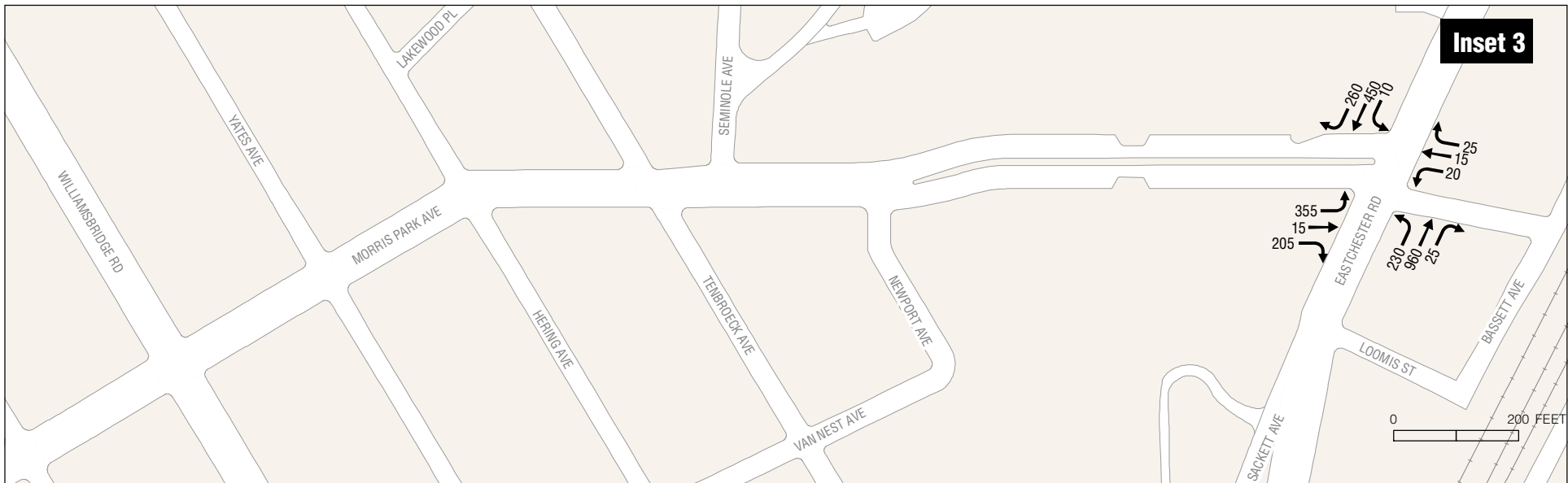
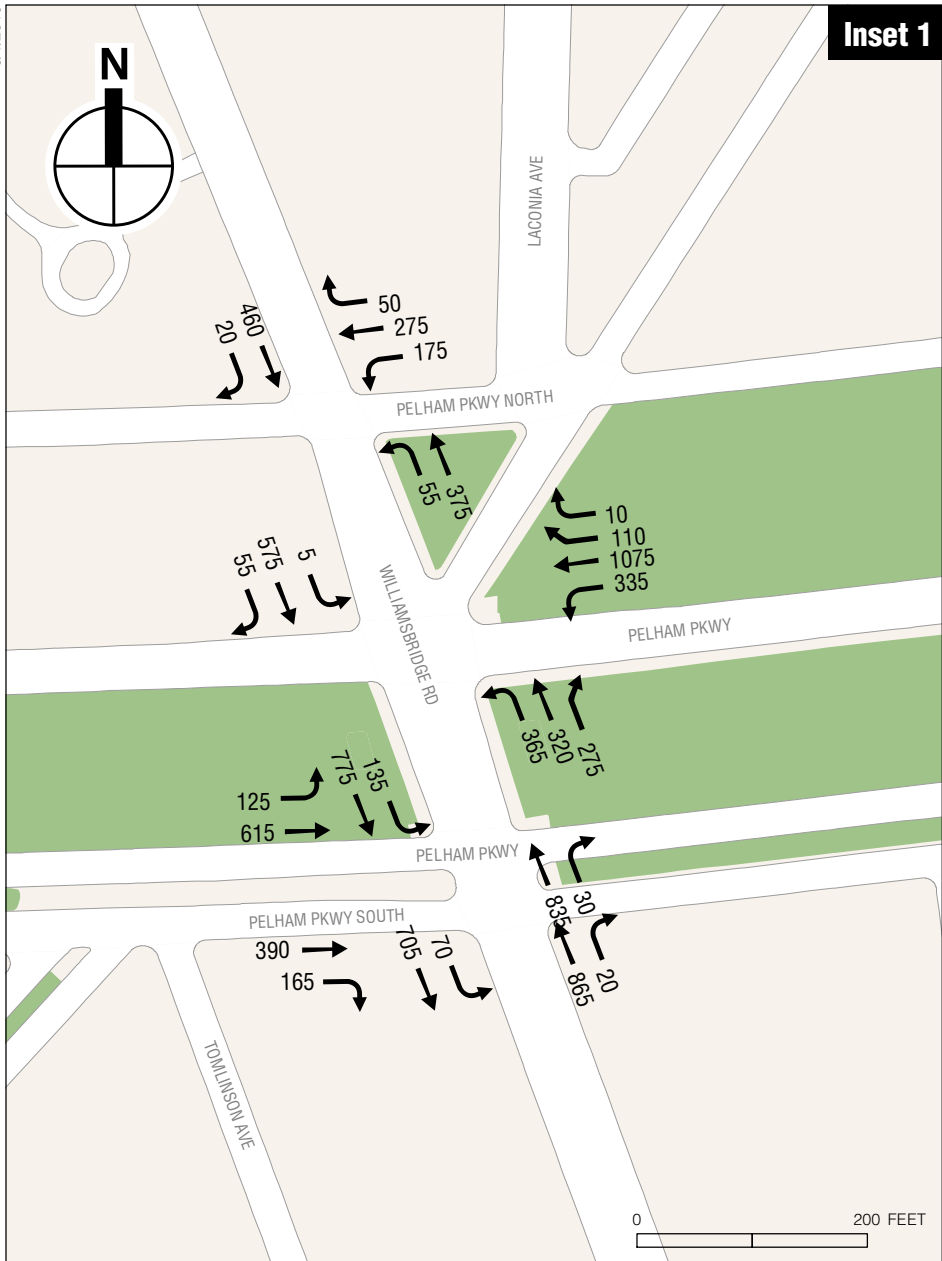


2015 Existing Traffic Volumes
Weekday Midday Peak Hour
Figure 14-17B



 Project Site

0 800 FEET



 Project Site

Table 14-18

Existing Conditions Level of Service Analysis: Signalized Intersections

Intersection	Weekday AM				Weekday Midday				Weekday 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
1. Pelham Parkway North & Williamsbridge Road												
WB	L	0.23	21.9	C	L	0.25	22.2	C	L	0.26	22.4	C
	LTR	0.48	25.7	C	LTR	0.26	22.2	C	LTR	0.55	27.2	C
NB	LT	0.35	12.3	B	LT	0.21	10.8	B	LT	0.30	11.7	B
SB	TR	0.51	14.2	B	TR	0.30	11.7	B	TR	0.37	12.4	B
	Int.		16.4	B	Int.		14.4	B	Int.		16.8	B
2. Pelham Parkway (Westbound) & Williamsbridge Road & Esplanade												
WB	LT	0.99	51.4	D	LT	0.85	35.8	D	LT	1.00	54.2	D
	R	0.36	26.9	C	R	0.21	24.1	C	R	0.31	25.7	C
NB	L	0.32	22.7	C	L	0.33	18.1	B	L	0.45	23.3	C
	T	0.34	10.5	B	T	0.24	9.6	A	T	0.47	12.0	B
SB	LTR	0.97	54.7	D	LTR	0.70	33.3	C	LTR	0.85	40.3	D
	Int.		42.1	D	Int.		28.8	C	Int.		38.1	D
3. & 4. Pelham Parkway (Eastbound) & Williamsbridge Road												
EB (ML)	LT	1.05	80.6	F	LT	0.98	62.9	E	LT	1.05	83.0	F
EB (SR)	TR	0.68	36.4	D	TR	0.38	30.5	C	TR	0.61	34.7	C
	R	0.75	49.3	D	R	0.85	62.6	E	R	0.88	71.6	E
NB	T	0.82	38.8	D	T	0.66	32.0	C	T	1.03	70.2	E
	R	0.28	27.2	C	R	0.31	27.6	C	R	0.17	25.1	C
SB	L	0.45	11.2	B	L	0.23	7.8	A	L	0.31	10.9	B
	LT	0.56	9.7	A	LT	0.35	7.4	A	LT	0.48	8.8	A
	Int.		37.8	D	Int.		35.1	D	Int.		50.0	D
5. Pelham Parkway North & Eastchester Road												
WB	LTR	0.60	33.2	C	LTR	0.36	28.9	C	LTR	0.64	42.0	D
NB	LT	0.33	8.1	A	LT	0.28	7.7	A	LT	0.42	11.1	B
SB	TR	0.60	29.8	C	TR	0.57	29.3	C	TR	0.55	36.9	D
	Int.		22.2	C	Int.		20.1	C	Int.		26.9	C
6. Pelham Parkway (Westbound) & Eastchester Road												
WB	L	0.53	24.6	C	L	0.47	23.6	C	L	0.76	54.2	D
	LT	0.74	26.9	C	LT	0.52	22.8	C	LT	1.02	78.2	E
	R	0.13	18.9	B	R	0.10	18.5	B	R	0.25	38.7	D
NB	L	0.37	24.4	C	L	0.52	25.7	C	L	0.39	20.6	C
	T	0.38	14.6	B	T	0.38	14.6	B	T	0.43	10.1	B
SB	TR	0.75	34.8	C	TR	0.53	28.8	C	TR	0.73	46.9	D
	Int.		25.8	C	Int.		22.6	C	Int.		47.6	D
7. & 8. Pelham Parkway (Eastbound) & Eastchester Road												
EB (ML)	LT	0.91	37.9	D	LT	0.85	32.3	C	LT	1.05	75.1	E
EB (SR)	TR	0.90	48.4	D	TR	0.67	29.6	C	TR	0.98	71.7	E
NB	TR	0.76	32.8	C	TR	0.61	28.2	C	TR	0.50	26.7	C
SB	L	0.47	27.1	C	L	0.24	18.7	B	L	0.45	31.4	C
	LT	0.72	20.6	C	LT	0.45	15.5	B	LT	0.47	17.9	B
	Int.		32.3	C	Int.		26.5	C	Int.		49.4	D
9. Morris Park Avenue & Eastchester Road												
EB	L	0.91	63.4	E	L	0.75	47.0	D	L	0.97	76.8	E
	LT	0.47	32.1	C	LT	0.23	26.7	C	LT	0.52	33.7	C
	R	0.67	37.9	D	R	0.62	36.2	D	R	0.65	36.9	D
WB	LTR	0.23	27.1	C	LTR	0.14	25.3	C	LTR	0.23	26.8	C
NB	L	0.78	56.1	E	L	0.74	51.7	D	L	0.89	68.9	E
	TR	0.39	13.1	B	TR	0.39	13.2	B	TR	0.69	17.9	B
SB	LTR	1.05	74.7	E	LTR	1.02	68.2	E	LTR	0.99	60.5	E
	Int.		49.9	D	Int.		43.6	D	Int.		42.4	D

Table 14-18 (cont'd)

Existing Conditions Level of Service Analysis: Signalized Intersections

Intersection	Weekday AM				Weekday Midday				Weekday 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
10. Waters Place & Eastchester Road												
WB NB SB	L	1.05	90.9	F	L	0.68	31.6	C	L	1.05	87.2	F
	R	0.84	34.0	C	R	0.53	19.9	B	R	0.73	27.3	C
	TR	0.87	31.7	C	TR	0.78	28.0	C	TR	0.75	25.3	C
	DefL	0.58	29.6	C	DefL	0.83	48.9	D	DefL	0.71	32.6	C
	T	0.41	9.6	A	T	0.52	15.7	B	T	0.49	10.7	B
Int.		39.3		D	Int.		28.0		C	Int.		D
11. Blondell Avenue & Eastchester Road												
EB WB NB SB	LR	0.24	18.8	B	LR	0.28	19.3	B	LR	0.33	20.5	C
	LTR	0.61	25.1	C	LTR	0.49	22.3	C	LTR	0.59	24.8	C
	LT	0.54	18.2	B	LT	0.49	17.4	B	LT	0.43	16.5	B
	TR	0.53	17.9	B	TR	0.50	17.4	B	TR	0.53	17.9	B
	Int.		19.5		B	Int.		18.4		B	Int.	
12. Williamsbridge Road & Eastchester Road												
EB WB NB SB	LTR	0.55	20.2	C	LTR	0.51	19.8	B	LTR	0.55	20.4	C
	LTR	0.44	18.6	B	LTR	0.55	20.3	C	LTR	0.59	21.0	C
	LTR	0.64	23.8	C	LTR	0.55	21.5	C	LTR	0.51	20.7	C
	L	0.24	17.3	B	L	0.32	18.5	B	L	0.29	17.8	B
	TR	0.79	31.2	C	TR	0.84	34.9	C	TR	0.86	37.0	D
Int.		23.1		C	Int.		23.8		C	Int.		C
13. East Tremont Avenue & Silver Street												
EB WB SB	L	0.61	24.6	C	L	0.44	14.9	B	L	0.52	23.7	C
	T	0.40	8.5	A	T	0.46	9.8	A	T	0.51	9.9	A
	TR	0.64	35.8	D	TR	0.65	34.5	C	TR	0.72	38.3	D
	R	1.05	94.2	F	R	0.92	55.1	E	R	1.05	93.5	F
	Int.		43.4		D	Int.		29.6		C	Int.	
15. Waters Place & Marconi Street												
EB WB SB	L	1.05	94.5	F	L	0.82	40.3	D	L	0.64	19.9	B
	LT	0.44	10.6	B	LT	0.43	11.0	B	LT	0.46	11.4	B
	TR	0.85	27.5	C	TR	0.53	18.5	B	TR	0.54	18.5	B
	L	0.28	26.4	C	L	0.68	35.8	D	L	1.01	374.0	F
	R	0.46	30.0	C	R	0.78	43.6	D	R	0.91	358.2	F
Int.		33.2		C	Int.		26.2		C	Int.		F
16. Waters Place & BPC Driveway												
EB WB SB	LT	0.55	18.1	B	LT	0.61	18.5	B	LT	0.81	24.4	C
	TR	1.02	50.7	D	TR	0.51	16.4	B	TR	0.56	17.1	B
	L	0.09	17.7	B	L	0.11	18.0	B	L	0.13	18.1	B
	LR	0.13	18.3	B	LR	0.14	18.3	B	LR	0.21	19.2	B
	Int.		41.7		D	Int.		17.5		B	Int.	
17. Waters Place & Fink Avenue/HRP Southbound Off-Ramp												
EB WB NB SB	TR	0.38	17.6	B	TR	0.63	21.6	C	TR	0.78	119.0	F
	LT	0.45	18.6	B	LT	0.31	16.7	B	LT	0.25	16.1	B
	LR	1.05	93.6	F	LR	0.33	18.5	B	LR	0.48	23.8	C
	L	0.59	22.2	C	L	0.32	17.3	B	L	0.43	19.0	B
	T	0.61	23.6	C	T	0.29	17.2	B	T	0.65	25.3	B
Int.		30.0		C	Int.		19.3		B	Int.		E

Table 14-18 (cont'd)
Existing Conditions Level of Service Analysis: Signalized Intersections

Intersection	Weekday AM				Weekday Midday				Weekday 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
18. Westchester Avenue & Ericson Place/Middletown Road												
EB	LTR	0.88	132.3	F	LTR	1.05	223.9	F	LTR	1.05	198.1	F
WB	LT	0.47	44.2	D	LT	0.50	48.9	D	LT	0.49	45.8	D
NB	LTR	1.05	153.3	F	LTR	0.70	52.2	D	LTR	1.05	145.9	F
SB	LTR	1.05	134.3	F	LTR	1.01	138.2	F	LTR	1.05	140.0	F
	Int.		126.3	F	Int.		151.7	F	Int.		156.7	F
19. Waters Place & Westchester Avenue												
EB	LT	0.51	19.4	B	LT	0.68	22.8	C	LT	0.84	199.1	F
NB	LTR	1.01	191.9	F	LTR	0.77	29.4	C	LTR	0.63	53.9	D
SB	LTR	1.01	146.8	F	LTR	0.75	26.8	C	LTR	0.65	23.1	C
	Int.		119.5	F	Int.		25.7	C	Int.		114.6	F
21. Tan Place & Westchester Avenue												
WB	L	0.14	18.4	B	L	0.08	17.6	B	L	0.07	17.5	B
	R	0.56	25.8	C	R	0.34	21.2	C	R	0.38	21.7	C
NB	T	0.57	55.4	E	T	0.49	16.8	B	T	0.50	22.7	C
SB	T	0.54	20.7	C	T	0.53	17.5	B	T	0.56	17.2	B
	Int.		32.1	C	Int.		17.8	B	Int.		19.7	B
22. Blondell Avenue & Westchester Avenue												
WB	L	0.17	21.9	C	L	0.16	17.9	B	L	0.27	23.4	C
	T	0.34	24.3	C	T	0.20	18.2	B	T	0.25	23.0	C
NB	LT	0.53	32.0	C	LT	0.56	19.1	B	LT	0.53	32.2	C
SB	TR	0.66	28.3	C	TR	0.42	15.8	B	TR	0.55	25.0	C
	Int.		28.3	C	Int.		17.4	B	Int.		26.8	C
23. East Tremont Avenue & Westchester Avenue												
EB	LTR	0.40	24.9	C	LTR	0.52	22.2	C	LTR	0.64	29.8	C
WB	LTR	0.58	28.0	C	LTR	0.43	20.6	C	LTR	0.56	27.5	C
NB	LT	0.91	80.2	F	LT	0.65	22.8	C	LT	0.72	38.5	D
SB	TR	0.49	24.9	C	TR	0.42	15.7	B	TR	0.55	26.5	C
	Int.		36.6	D	Int.		20.2	C	Int.		29.6	C
24. Commerce Avenue & Westchester Avenue												
EB	LT	0.43	19.2	B	LT	0.28	16.9	B	LT	0.44	19.4	B
WB	LT	0.32	17.6	B	LT	0.26	16.8	B	LT	0.31	17.4	B
	R	0.33	18.3	B	R	0.21	16.3	B	R	0.29	17.4	B
NB	LTR	0.58	39.1	D	LTR	0.54	21.2	C	LTR	0.61	36.4	D
SB	LTR	0.68	47.4	D	LTR	0.64	24.4	C	LTR	0.74	52.0	D
	Int.		33.1	C	Int.		20.7	C	Int.		34.4	C
26. East Tremont Avenue & HRP East												
EB	T	0.49	29.3	C	T	0.59	31.0	C	T	0.98	57.6	E
WB	T	0.67	12.3	B	T	0.45	9.2	A	T	0.64	11.8	B
SB	LR	0.61	38.5	D	LR	0.35	31.8	C	LR	0.49	34.4	C
	Int.		18.8	B	Int.		18.3	B	Int.		30.5	C
27. East Tremont Avenue & Ericson Place												
EB	LT	0.38	14.2	B	LT	0.42	14.6	B	LT	0.69	19.7	B
WB	T	0.98	58.3	E	T	0.69	33.7	C	T	0.88	43.3	D
NB	LTR	0.96	54.3	D	LTR	0.73	34.2	C	LTR	1.02	70.2	E
	Int.		46.9	D	Int.		27.2	C	Int.		43.2	D

Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity; Def = De Facto.

Table 14-19
Existing Conditions Level of Service Analysis
Unsignalized Intersections

Intersection	Weekday AM				Weekday Midday				Weekday 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
14. Project Driveway & Marconi Street												
EB	LTR	0.85	74.5	F	LTR	0.71	49.2	E	LTR	0.68	42.6	E
WB	LTR	0.10	68.1	F	LTR	0.20	42.3	E	LTR	0.00	0.0	A
NB	LT	0.11	8.3	A	LT	0.01	9.4	A	LT	0.17	11.7	B
SB	LT	0.00	10.6	B	LT	0.07	13.3	B	LT	0.00	8.3	A
17. Waters Place & HRP Southbound Off-Ramp *												
SB	R	0.99	49.6	E	R	0.26	9.5	A	R	0.47	13.4	B
19. Waters Place & Westchester Avenue *												
EB	R	0.18	8.1	A	R	0.10	8.1	A	R	0.06	8.0	A
20. Westchester Avenue & Waters Avenue												
EB	LR	0.66	21.6	C	LR	0.27	11.4	B	LR	0.51	12.9	B
NB	LT	0.31	10.8	B	LT	0.11	9.2	A	LT	0.10	8.8	A
22. Blondell Avenue & Westchester Avenue *												
WB	R	0.07	8.3	A	R	0.12	8.6	A	R	0.11	8.6	A
24. Commerce Avenue & Westchester Avenue *												
EB	R	0.24	12.6	B	R	0.33	13.8	B	R	0.29	12.9	B
25. East Tremont Avenue & Tan Place **												
28. Roebling Avenue and Ericson Place/HRP East												
WB	LR	0.14	9.2	A	LR	0.05	7.9	A	LR	0.07	9.3	A
NB	TR	0.56	13.3	B	TR	0.39	10.1	B	TR	0.69	17.6	C
SB	LT	0.22	9.4	A	LT	0.18	8.7	A	LT	0.25	10.0	B
30. BPC Roundabout												
EB	TR	0.04	4.3	A	TR	0.05	4.8	A	TR	0.08	4.8	A
WB	LT	0.09	4.5	A	LT	0.11	5.1	A	LT	0.15	4.9	A
NB	LR	0.17	4.8	A	LR	0.13	4.9	A	LR	0.10	4.6	A
Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity * Channelized Right Turn analyzed as Stop Controlled. ** No traffic control.												

2. Pelham Parkway (Westbound) and Williamsbridge Road

- Westbound left-turn/through operates at LOS D with a v/c ratio of 0.99 and a delay of 51.4 seconds per vehicle (spv) during the weekday AM peak hour; and LOS D with a v/c ratio of 1.00 and a delay of 54.2 spv during the weekday PM peak hour.
- Southbound approach operates at LOS D with a v/c ratio of 0.97 and a delay of 54.7 spv during the weekday AM peak hour.

3. & 4. Pelham Parkway (Eastbound) and Williamsbridge Road

- Eastbound mainline left-turn/through operates at LOS F with a v/c ratio of 1.05 and a delay of 80.6 spv during the weekday AM peak hour; at LOS E with a v/c ratio of 0.98 and a delay of 62.9 spv during the weekday midday peak hour; and at LOS F with a v/c ratio of 1.05 and a delay of 83.0 spv during the weekday PM peak hour.
- Eastbound service road right-turn operates at LOS D with a v/c ratio of 0.75 and a delay of 49.3 spv during the weekday AM peak hour; at LOS E with a v/c ratio of 0.85 and a delay of 62.6 spv during the weekday midday peak hour; and at LOS E with a v/c ratio of 0.88 and a delay of 71.6 during the weekday PM peak hour.
- Northbound through operates at LOS E with a v/c ratio of 1.03 and a delay of 70.2 spv during the weekday PM peak hour.

6. Pelham Parkway (Westbound) and Eastchester Road

- Westbound left-turn operates at LOS D with a v/c ratio of 0.76 and a delay of 54.2 spv during the weekday PM peak hour.
- Westbound left-turn/through operates at LOS E with a v/c ratio of 1.02 and a delay of 78.2 spv during the weekday PM peak hour.
- Southbound through/right-turn operates at LOS D with a v/c ratio of 0.73 and a delay of 46.9 spv during the weekday PM peak hour.

7. & 8. Pelham Parkway (Eastbound) and Eastchester Road

- Eastbound mainline left-turn/through operates at LOS E with a v/c ratio of 1.05 and a delay of 75.1 spv during the weekday PM peak hour.
- Eastbound service road through/right-turn operates at LOS D with a v/c ratio of 0.90 and a delay of 48.4 spv during the weekday AM peak hour; and at LOS E with a v/c ratio of 0.98 and a delay of 71.7 spv during the weekday PM peak hour.

9. Morris Park Avenue and Eastchester Road

- Eastbound left-turn operates at LOS E with a v/c ratio of 0.91 and a delay of 63.4 spv during the weekday AM peak hour; at LOS D with a v/c ratio of 0.75 and a delay of 47.0 spv during the weekday midday peak hour; and at LOS E with a v/c ratio of 0.97 and a delay of 76.8 spv during the weekday PM peak hour.
- Northbound left-turn operates at LOS E with a v/c ratio of 0.78 and a delay of 56.1 spv during the weekday AM peak hour; at LOS D with a v/c ratio of 0.74 and a delay of 51.7 spv during the weekday midday peak hour; and at LOS E with a v/c ratio of 0.89 and a delay of 68.9 during the weekday PM peak hour.
- Southbound left-turn/through/right-turn operates at LOS E with a v/c ratio of 1.05 and a delay of 74.7 spv during the weekday AM peak hour; at LOS E with a v/c ratio of 1.02 and a delay

Bronx Psychiatric Center Land Use Improvement Project

of 68.2 spv during the weekday midday peak hour; and at LOS E with a v/c ratio of 0.99 and a delay of 60.5 spv during the weekday PM peak hour.

10. Waters Place and Eastchester Road

- Westbound left-turn operates at LOS F with a v/c ratio of 1.05 and a delay of 90.9 spv during the weekday AM peak hour; and at LOS F with a v/c ratio of 1.05 and a delay of 87.2 spv during the weekday PM peak hour.
- Southbound de facto left-turn operates at LOS D with a v/c ratio of 0.83 and a delay of 48.9 spv during the weekday midday peak hour.

13. East Tremont Avenue and Silver Street

- Southbound right-turn operates at LOS F with a v/c ratio of 1.05 and a delay of 94.2 spv during the weekday AM peak hour; at LOS E with a v/c ratio of 0.92 and a delay of 55.1 spv during the weekday midday peak hour; and LOS F with a v/c ratio of 1.05 and a delay of 93.5 spv during the weekday PM peak hour.

14. Project Driveway and Marconi Street (Unsignalized)

- Eastbound left-turn/through/right-turn operates at LOS F with a v/c ratio of 0.85 and a delay of 74.5 spv during the weekday AM peak hour; at LOS E with a v/c ratio of 0.71 and a delay of 49.2 spv during the weekday midday peak hour; and at LOS E with a v/c ratio of 0.68 and a delay of 42.6 spv during the weekday PM peak hour.
- Westbound left-turn/through/right-turn operates at LOS F with a v/c ratio of 0.10 and a delay of 68.1 spv during the weekday AM peak hour; and at LOS E with a v/c ratio of 0.20 and a delay of 42.3 spv during the weekday midday peak hour.

15. Waters Place and Marconi Street

- Eastbound left-turn operates at LOS F with a v/c ratio of 1.05 and a delay of 94.5 spv during the weekday AM peak hour.
- Southbound left-turn operates at LOS F with a v/c ratio of 1.01 and a delay of 374 spv during the weekday PM peak hour.
- Southbound right-turn operate at LOS F with a v/c ratio of 0.91 and a delay of 358.2 spv during the weekday PM peak hour.

16. Waters Place and BPC Driveway

- Westbound through/right-turn operates at LOS D with a v/c ratio of 1.02 and a delay of 50.7 spv during the weekday AM peak hour.

17. Waters Place, Fink Avenue, and Hutchinson River Parkway Southbound Off-Ramp

- Eastbound through/right-turn operates at LOS F with a v/c ratio of 0.78 and a delay of 119.0 spv during the weekday PM peak hour.
- Northbound left-turn/right-turn operates at LOS F with a v/c ratio of 1.05 and a delay of 93.6 spv during the weekday AM peak hour.
- Southbound channelized right-turn (unsignalized) operates at LOS E with a v/c ratio of 0.99 and a delay of 49.6 spv during the weekday AM peak hour.

18. Westchester Avenue, Ericson Place, and Middletown Road

- Eastbound left-turn/through/right-turn operates at LOS F with a v/c ratio of 0.88 and a delay of 132.3 spv during the weekday AM peak hour; at LOS F with a v/c ratio of 1.05 and a delay of 223.9 spv during the weekday midday peak hour; and at LOS F with a v/c ratio of 1.05 and a delay of 198.1 spv during the weekday PM peak hour.
- Westbound left-turn/through operates at LOS D with a v/c ratio of 0.50 and a delay of 48.9 spv during the weekday midday peak hour; and at LOS D with a v/c ratio of 0.49 and a delay of 45.8 spv during the weekday PM peak hour.
- Northbound left-turn/through/right-turn operates at LOS F with a v/c ratio of 1.05 and a delay of 153.3 spv during the weekday AM peak hour; at LOS D with a v/c ratio of 0.70 and a delay of 52.2 spv during the weekday midday peak hour; and at LOS F with a v/c ratio of 1.05 and a delay of 145.9 spv during the weekday PM peak hour.
- Southbound left-turn/through/right-turn operates at LOS F with a v/c ratio of 1.05 and a delay of 134.4 spv during the weekday AM peak hour; at LOS F with a v/c ratio of 1.01 and a delay of 138.2 spv during the weekday midday peak hour; and at LOS F with a v/c ratio of 1.05 and a delay of 140 spv during the weekday PM peak hour.

19. Waters Place and Westchester Avenue

- Eastbound left-turn/through operates at LOS F with a v/c ratio of 0.84 and a delay of 199.1 spv during the weekday PM peak hour.
- Northbound left-turn/through/right-turn operates at LOS F with a v/c ratio of 1.01 and a delay of 191.9 spv during the weekday AM peak hour; and at LOS D with a v/c ratio of 0.63 and a delay of 53.9 spv during the weekday PM peak hour.
- Southbound left-turn/through/right-turn operates at LOS F with a v/c ratio of 1.01 and a delay of 146.8 spv during the weekday AM peak hour.

21. Tan Place and Westchester Avenue

- Northbound through operates at LOS E with a v/c ratio of 0.57 and a delay of 55.4 spv during the weekday AM peak hour.

23. East Tremont Avenue and Westchester Avenue

- Northbound left-turn/through operates at LOS F with a v/c ratio of 0.91 and a delay of 80.2 spv during the weekday AM peak hour.

24. Commerce Avenue and Westchester Avenue

- Southbound left-turn/through/right-turn operates at LOS D with a v/c ratio of 0.68 and a delay of 47.4 spv during the weekday AM peak hour; and at LOS D with a v/c ratio of 0.74 and a delay of 52.0 spv during the weekday PM peak hour.

26. East Tremont Avenue and Hutchinson River Parkway East

- Eastbound through operates at LOS E with a v/c ratio of 0.98 and a delay of 57.6 spv during the weekday PM peak hour.

27. East Tremont Avenue and Ericson Place

- Westbound through operates at LOS E with a v/c ratio of 0.98 and a delay of 58.3 spv during the weekday AM peak hour.

Bronx Psychiatric Center Land Use Improvement Project

- Northbound left-turn/through/right-turn operates at LOS D with a v/c ratio of 0.96 and a delay of 54.3 spv during the weekday AM peak hour; and at LOS E with a v/c ratio of 1.02 and a delay of 70.2 spv during the weekday PM peak hour.

THE FUTURE WITHOUT THE PROPOSED PROJECT (WITHOUT HRP IMPROVEMENTS)

2023 NO-ACTION

The 2023 No-Action without HRP Improvements condition was developed by increasing existing (2015) traffic levels by the expected growth in overall travel through and within the study area. As per *CEQR Technical Manual* guidelines, an annual background growth rate of 0.25 percent was assumed for the first five years (year 2015 to year 2020) and then 0.125 percent for the remaining years (year 2020 to year 2023). A total of 79 development projects expected to occur in the No-Action condition (No-Action projects) were identified as being planned for the 1-mile study area (see **Figure 14-19**). However, some of these planned projects are modest in size and would be very modest traffic generators. After reviewing the development programs for each of the planned projects, it was determined that background growth would address the increase in traffic and pedestrian levels for 64 of the small- to moderate-sized projects in the study area. Four of the No-Action projects (projects 3, 6, 14, and 29) were clustered together (Cluster 1) due to close proximity to one another. Another three No-Action projects (projects 26, 27, and 28) were also clustered together (Cluster 2) for the same reason. **Table 14-20** and **Figure 14-19** summarize the projects that were accounted for in this future 2023 baseline, and include those that were considered as part of the study area background growth.

Table 14-20
No-Action Projects

Map Ref. No. ¹	Project Name/ Address	Development Program	Transportation Assumptions	Status/Build Year ²
Development Projects within 1-Mile				
1	3006 Buhre Avenue	Residential: 35 units	Included in background growth	2023
2	3113 Westchester Avenue	Commercial: 6,324 gsf retail	Included in background growth	2023
3	1538 Stillwell Avenue	Commercial: 22,258 gsf self-storage	Transportation assumptions from <i>Webster Avenue Rezoning FEIS</i> (2011). Clustered with project sites 6, 14, and 29 due to proximity. ³	2023
4	1539 Castle Hill Avenue	Residential: 8 units	Included in background growth	2023
5	1553 Glebe Avenue	Residential: 3 units	Included in background growth	2023
6	1680 Pelham Parkway South	Residential: 130 units	Transportation assumptions from <i>CEQR Technical Manual</i> (2014), <i>Webster Avenue Rezoning FEIS</i> (2011), and the U.S. Census American Community Survey (ACS) estimates. ³	2023
7	1701 Parkview Avenue	Residential: 22 units	Included in background growth	2023
8	1320 Zerega Avenue	Commercial: 39,135 gsf self-storage	See project site 3, above	2023
9	2208 Boller Avenue	Community facility: 17,437 gsf church	Included in background growth	2023
10	2434-2440 Esplanade	Residential: 6 units	Included in background growth	2023
11	1857 Bronxdale Avenue	Residential: 6 units	Included in background growth	2023
12	1336 Balcom Avenue	Residential: 2 units	Included in background growth	2023
13	2913 La Salle Avenue	Residential: 2 units	Included in background growth	2023
14	1540 Bassett Avenue	Commercial: 9,271 gsf self-storage	See project site 3, above. Clustered with project sites 3, 6, and 29 due to proximity. ³	2023
15	2231 Boller Avenue	Residential: 2 units	Included in background growth	2023
16	2233 Boller Avenue	Residential: 2 units	Included in background growth	2023
17	292 Baychester Avenue	Commercial: 120 gsf retail	Included in background growth	2023
18	1526 Dwight Place	Residential: 1 unit	Included in background growth	2023
19	3151 Griswold Avenue	Residential: 2 units	Included in background growth	2023
20	1149 Pierce Avenue	Residential: 2 units	Included in background growth	2023
21	1332 Balcom Avenue	Residential: 2 units	Included in background growth	2023
22	2134 Barnes Avenue	Mixed commercial/residential: 3,094 gsf retail, 4,998 gsf community facility, 16 residential units	Included in background growth	2023
23	2169 Hone Avenue	Residential: 10 units	Included in background growth	2023
24	2552 Yates Avenue	Residential: 4 units	Included in background growth	2023

Chapter 14: Transportation

Table 14-20 (cont'd)
No-Action Projects

Map Ref. No. ¹	Project Name/ Address	Development Program	Transportation Assumptions	Status/Build Year ²
Development Projects within 1-Mile (cont'd)				
25	2437 Esplanade Avenue	Residential: 2 units	Included in background growth	2023
26	2137 Williamsbridge Road	Mixed commercial/residential: 4,688 gsf retail and 8 residential units	Transportation assumptions from <i>Pelham Parkway / Indian Village Rezoning EAS</i> (2006). Clustered with project sites 27 and 28 due to proximity. ⁴	2016
27	1957 Williamsbridge Road	Mixed commercial/residential: 3,750 gsf retail and 6 residential units	See project site 32, above. Clustered with project sites 26 and 28 due to proximity. ⁴	2016
28	1919 Williamsbridge Road	Mixed commercial/residential: 9,375 gsf retail and 16 residential units	See project site 32, above. Clustered with project sites 26 and 27 due to proximity. ⁴	2016
29	1648 Pelham Parkway South	Residential: 30 units	See project site 3, above. Clustered with project sites 3, 6, and 14 due to proximity. ³	2016
30	3261 Westchester Avenue	Commercial: 8,311 gsf retail	Included in background growth	2023
31	1634 Purdy Street	Residential: 8 units	Included in background growth	2023
32	2889 East 197th Street	Residential: 5 units	Included in background growth	2023
33	3047 Bruckner Boulevard	SCA P.S. 14 Bronx Addition Expansion: 117 incremental seats	Transportation assumptions from SCA P.S. 14 Bronx Addition EAF (2016). Included in background growth	2023
34	1336 Ellison Avenue	Residential: 1 unit	Included in background growth	2023
35	3109 Buhre Avenue	Residential: 18 units	Included in background growth	2023
36	1765 Crosby Avenue	Commercial: 3,185 gsf retail	Included in background growth	2023
37	2564 Yates Avenue	Residential: 2 units	Included in background growth	2023
38	1668 East Gun Hill Road	Mixed commercial/residential: 1,567 gsf retail and 2 residential units	Included in background growth	2023
39	1664 East Gun Hill Road	Mixed commercial/residential: 1,567 gsf retail and 2 residential units	Included in background growth	2023
40	1034 Neill Avenue	Residential: 2 units	Included in background growth	2023
41	2020 Colden Avenue	Residential: 2 units	Included in background growth	2023
42	1604 Williamsbridge Road	Community facility: 4,700 gsf	Included in background growth	2023
43	963 Brady Avenue	Residential: 2 units	Included in background growth	2023
44	2515 Hering Avenue	Residential: 2 units	Included in background growth	2023
45	Baychester Square	Mixed commercial/residential: 395,016 gsf retail and 180 units	Transportation assumptions from Baychester Square DEIS (2016)	2018
46	HMC No-Action ⁵	Mixed commercial/community facility: 65,000 gsf of office; 111,253 gsf medical facility; and 64,554 gsf of college	Based on transportation assumptions from the proposed Bronx Psychiatric Center Redevelopment project	2023
47	HMC Atrium Staff Housing	Residential: 182 units	Included in background growth	2023
48	PSAC II facility	Commercial: 640,000 gsf office and 500 parking spaces	Transportation assumptions from the <i>Public Safety Answering Center II FEIS</i> (2009)	2016
49	NYCDOT's HRP improvement project	Improvements to HRP ramps	Potential geometric improvements would be incorporated into the proposed project's Phase II build year	
50	Morris Park MNR Station	New MNR train station	Completion date of the study and the project are unknown at this time, and therefore, the new station is not assumed to be part of the analysis.	
51	1036 Esplanade	Residential: 2 units	Included in background growth	2023
52	1190 Pierce Avenue	Community facility: 1,140 sf; 2 parking spaces	Included in background growth	2023
53	1500 Williamsbridge Road	Commercial: 1,176 sf retail	Included in background growth	2023
54	1526 Mace Avenue	Residential: 2 units	Included in background growth	2023
55	1530 Mace Avenue	Residential: 2 units	Included in background growth	2023
56	1645 Tomlinson Avenue	Residential: 2 units; 2 parking spaces	Included in background growth	2023
57	1647 Tomlinson Avenue	Residential: 2 units; 2 parking spaces	Included in background growth	2023
58	1846 Muliner Avenue	Residential: 2 units	Included in background growth	2023
59	2061 Narragansett Avenue	Residential: 2 units	Included in background growth	2023
60	2063 Narragansett Avenue	Residential: 2 units	Included in background growth	2023
61	2315 Tiemann Avenue	Residential: 2 car garage	Included in background growth	2023
62	2315 Tiemann Avenue	Residential: 1 unit; 2 parking spaces	Included in background growth	2023
63	2322 Kingsland Avenue	Residential: 1 unit	Included in background growth	2023
64	2441 Young Avenue	Residential: 2 units; 2 parking spaces	Included in background growth	2023
65	2445 Young Avenue	Residential: 2 units; 2 parking spaces	Included in background growth	2023
66	2500 Fish Avenue	P.S. 97 Expansion: 548 seats	Transportation assumptions from <i>CEQR Technical Manual</i> (2014), <i>SCA Webster Avenue P.S./S. EAF</i> (2009), and U.S. Census 2006-2010 ACS Reverse Journey-to-Work (RTW) data.	2023
67	2711 Tiemann Avenue	Residential: 2 units; 2 parking spaces	Included in background growth	2023
68	2717 Tiemann Avenue	Residential: 2 units; 2 parking spaces	Included in background growth	2023
69	695 Thwaites Place	Mixed residential/commercial: 36 units; 1,725 sf community facility; and 5,161 sf retail	Included in background growth	2023
70	840 Morris Park Avenue	Residential: 11 units; 6 parking spaces	Included in background growth	2023
71	909 Pierce Avenue	Residential: 2 units	Included in background growth	2023
72	911 Pierce Avenue	Residential: 2 units	Included in background growth	2023
73	913 Pierce Avenue	Residential: 2 units	Included in background growth	2023
74	2115 Burr Avenue	Mixed residential/community facility: 22 units; 449 sf community facility; and 11 parking spaces	Included in background growth	2023

Bronx Psychiatric Center Land Use Improvement Project

Table 14-20 (cont'd)
No-Action Projects

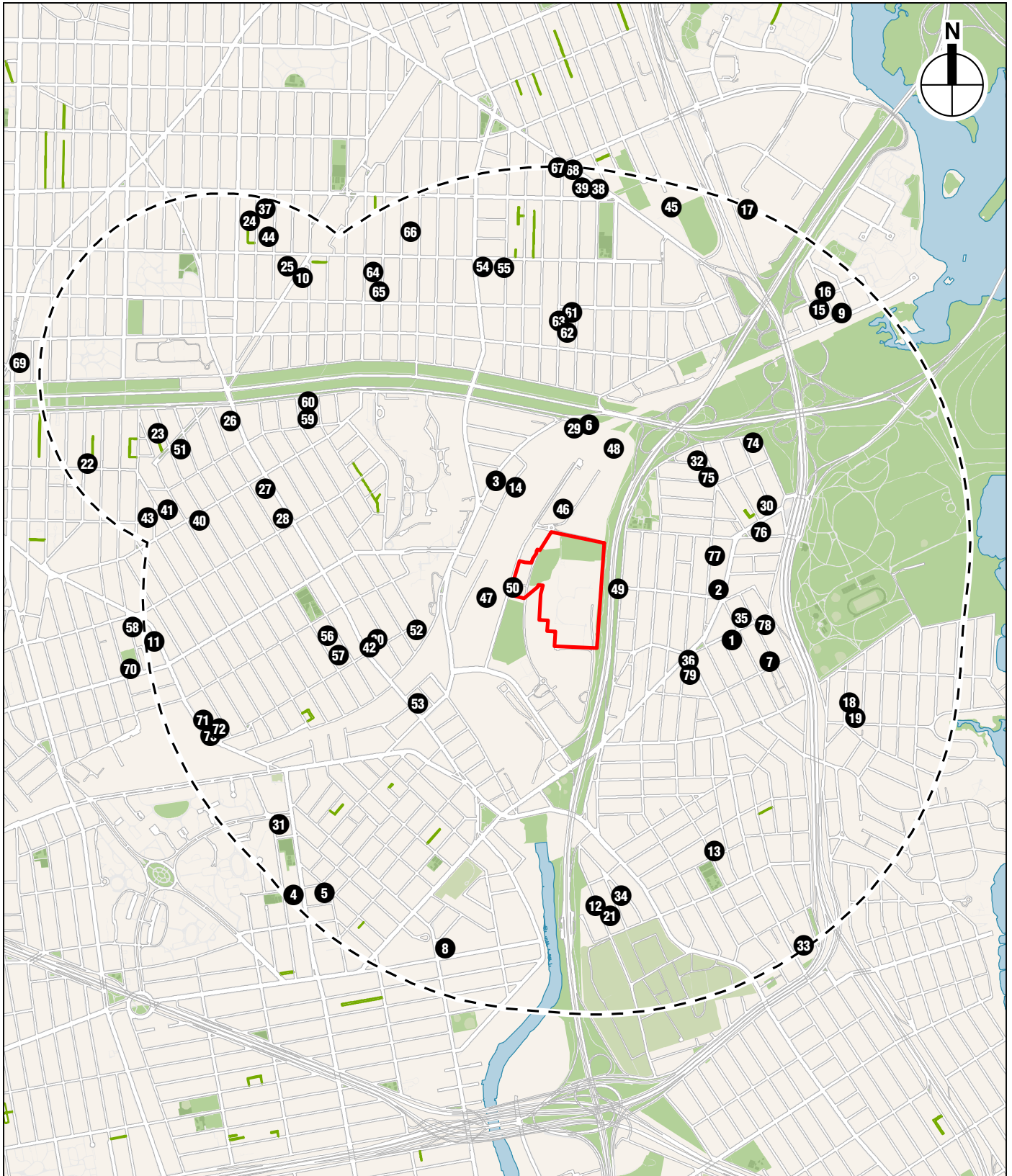
Map Ref. No. ¹	Project Name/ Address	Development Program	Transportation Assumptions	Status/Build Year ²
Development Projects within 1-Mile (cont'd)				
75	2111 Continental Avenue	Residential: 1 unit	Included in background growth	2023
76	3250 Westchester Avenue	Mixed commercial/community facility: 11,405 sf retail; 22,811 sf office; and 77,108 sf ambulatory health diagnostic facility	Transportation assumptions from <i>CEQR Technical Manual</i> (2014), <i>Webster Avenue Rezoning FEIS</i> (2011), U.S. Census 2006-2010 ACS RJTW data, and medical office assumptions provided by NYCDOT.	2023
77	1950 Hobart Avenue	Residential: 9 units	Included in background growth	2023
78	3136 Buhre Avenue	Residential: 8 units	Included in background growth	2023
79	1730 Edison Avenue	Mixed residential/community facility: 8 units and 1,514 sf community facility	Included in background growth	2023
Notes: HMC=Hutchinson Metro Center ¹ See Figure 14-19 . ² Projects for which an expected date of completion date is not available are assumed to be complete by the proposed project's Phase I build year of 2023. ³ Cluster 1 includes No-Action projects 3, 6, 14, and 29. ⁴ Cluster 2 includes No-Action projects 26, 27, and 28. ⁵ The existing Hutchinson Metro Center campus located north of the project site was not fully occupied at the time of the June 2015 travel demand surveys and data collection efforts. Approximately 65,000 gsf of office space at 1200 Waters Place was vacant and 1250 Waters Place (Montefiore Tower Two) was only operating at approximately 60 percent capacity at the time. These uses are assumed to be tenanted or operate at 100 percent capacity in the No-Action conditions. In addition, Mercy College (1200 Waters Place) is expected to expand to its full occupancy of 3,500 students in the No-Action conditions, from its existing 1,700 students. Sources: NYC Dept. of Buildings; AKRF, Inc.				




As summarized in **Table 14-20**, the new MTA MNR Morris Park station is part of the Penn Station Access project that is currently undergoing its own environmental review. Based on previous discussions with the MTA, availability of that project's ridership projections and completion of the MTA environmental review would be beyond the timeframe of this environmental review. Since the new MNR service is expected to shift trip-making away from autos and other transit, some of the proposed project's potential project-related impacts and associated mitigation measures could be reduced with the MNR Morris Park station in place. However, since the ridership projections and completion date for the study are unknown at this time and an analysis of potential impacts from the proposed project without this mode of transportation available would yield more conservative findings, the new MNR Morris Park station was conservatively assumed not to be part of the No-Action condition analysis.

CHANGES TO THE STUDY AREA STREET NETWORK

In addition to the development projects noted above, based on discussions with NYCDOT, below are the anticipated modifications to the traffic study area's street network in the No-Action condition:

- Reconstruction of Pelham Parkway. This project would affect the No-Action analyses including the following:
 - At the intersection of Pelham Parkway North Service Road and Williamsbridge Road, lane configuration for the westbound approach (Pelham Parkway North Service Road) would be revised from one left-turn lane and one shared left-turn, through and right-turn lane to one left-turn lane, one shared left-turn and through lane, and one shared through and right-turn lane.
 - At the intersection of Pelham Parkway North and Williamsbridge Road, a left-turn pocket is proposed on the westbound approach (Pelham Parkway North). Lane configuration for the westbound approach (Pelham Parkway North) would be revised from one shared left-turn/through lane, one through lane, and one right-turn lane to one left-turn lane, three through lanes, and one right-turn lane. In addition, lane configuration for the northbound approach (Williamsbridge Road) would be revised from one left-turn lane, one shared left-turn and through lane, and one through only lane to one left-turn lane and two through only lanes.



-  Project Site
-  Study Area (1-mile boundary)
-  No-Action Project

0 3,000 FEET

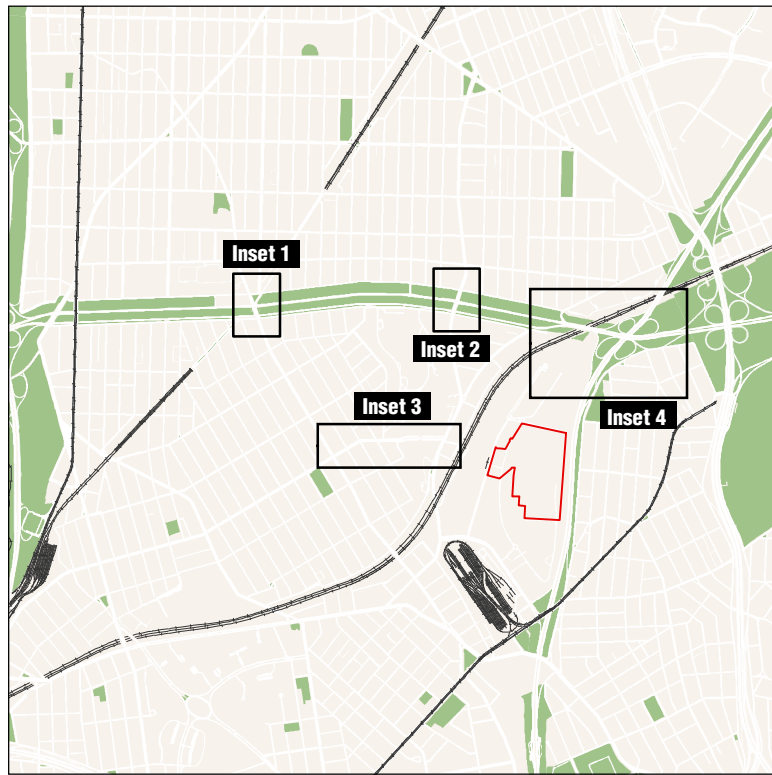
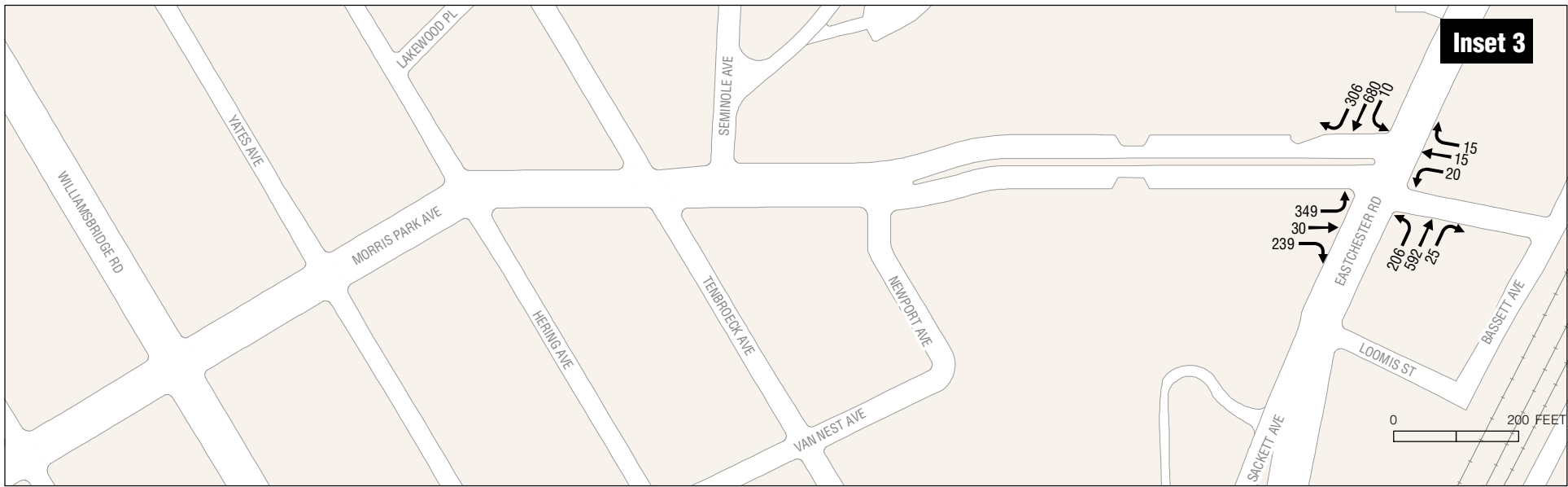
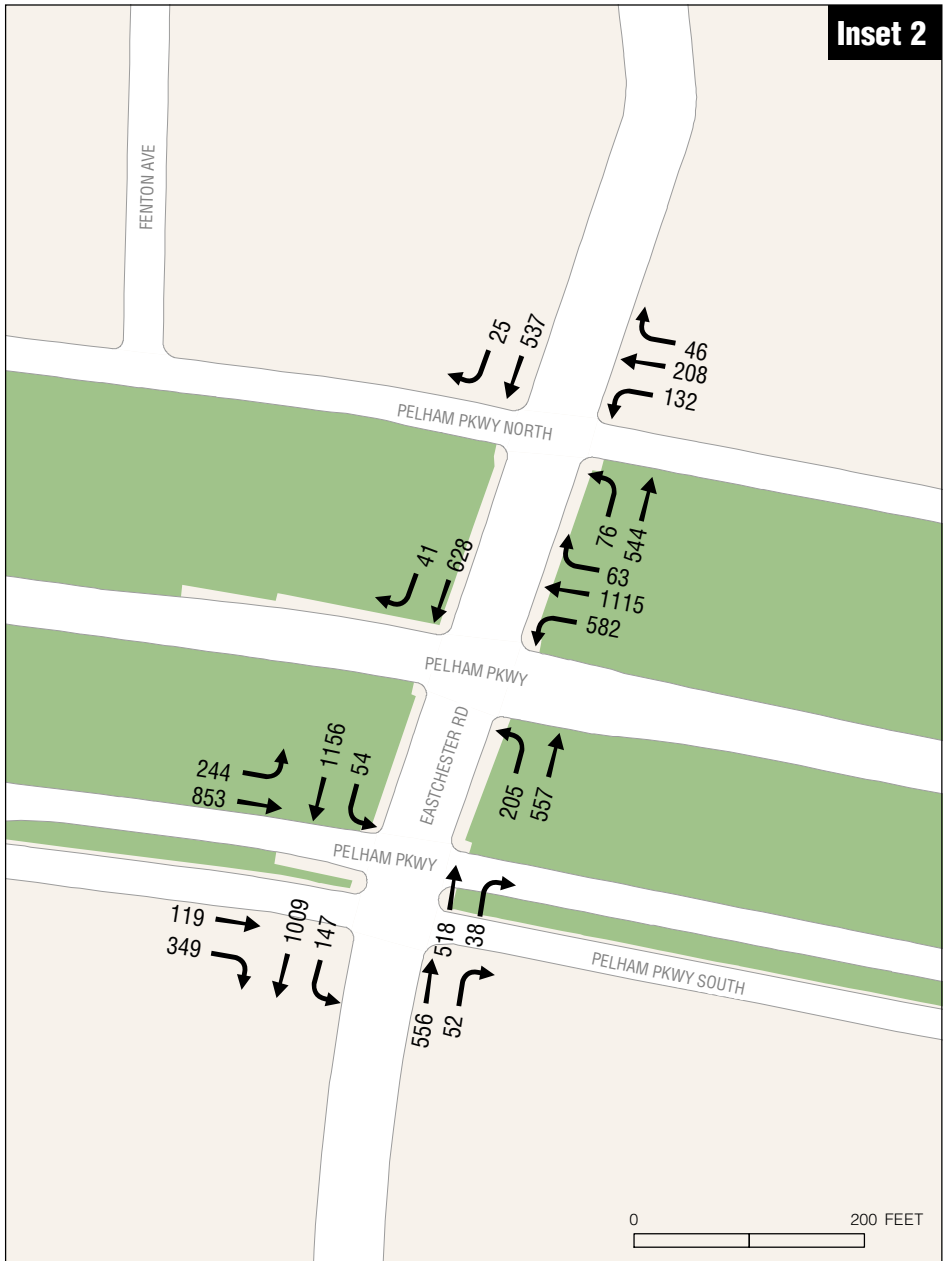
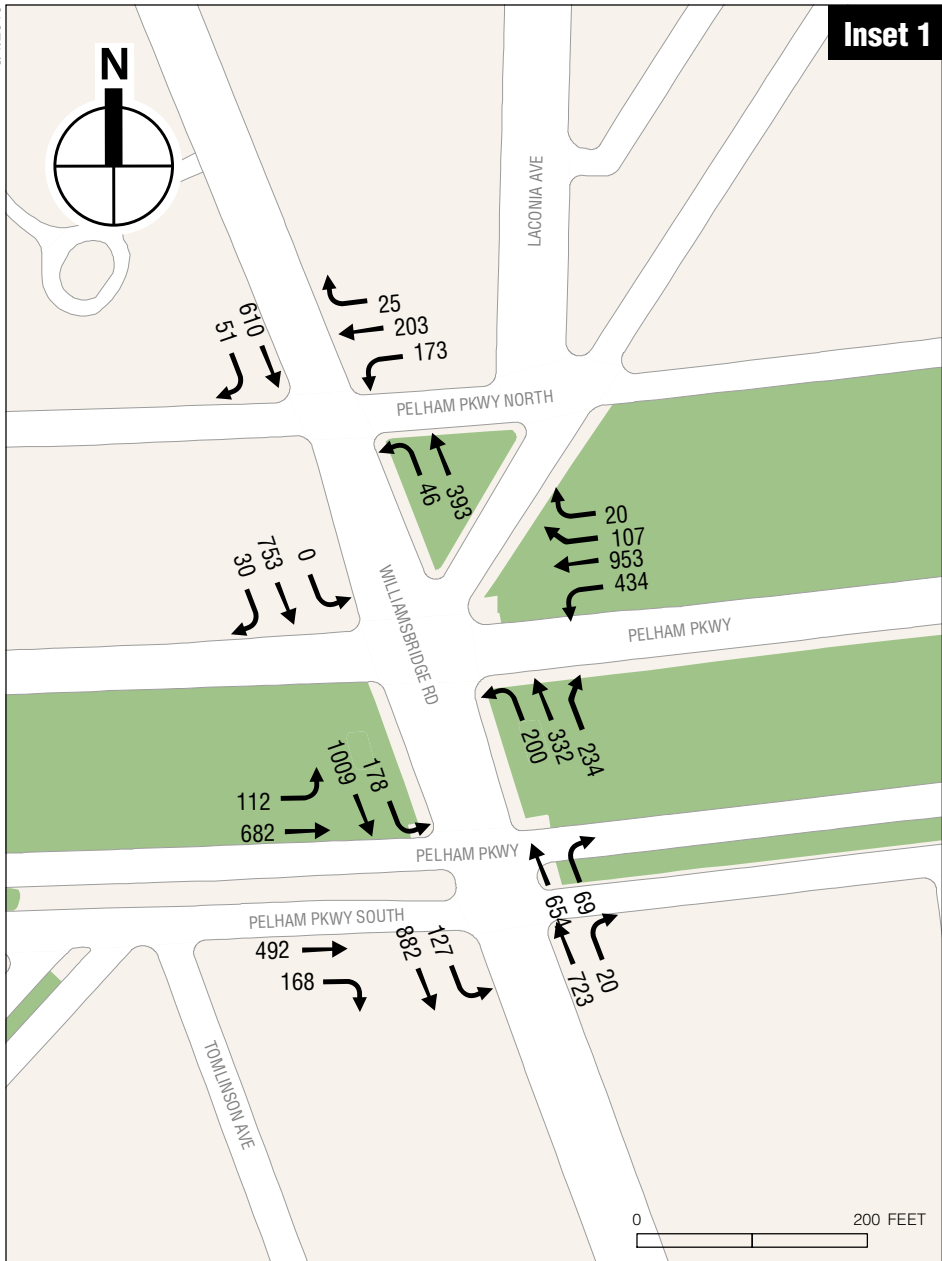
- At the intersection of Pelham Parkway North and Eastchester Road, lane configuration for the northbound approach (Eastchester Road) changes from one left-turn lane, one shared left-turn and through lane, and one through only lane to one left-turn lane and two through only lanes.
- Construction of Safe Routes to Transit Sidewalk Extensions at selected locations in Borough of the Bronx. This project would affect the No-Action analyses including the following:
 - At the intersection of Westchester Avenue and Middletown Road, lane configuration of the southbound approach (Westchester Avenue) would be revised from one shared left-turn and through lane and one through only lane to one shared left-turn and through lane.
- The completion of the Select Bus Service (SBS) Project Phase 2 improvements would affect the No-Action analyses including the following:
 - At the intersection of Pelham Parkway North and Eastchester Road, the lane widths of the northbound approach (Eastchester Road) and the westbound approach (Pelham Parkway) would be revised.
 - At the intersection of Pelham Parkway North and Williamsbridge Road, the lane widths of the northbound approach (Williamsbridge Road) and westbound approach (Pelham Parkway North) would be revised.
- The signal timings at the following intersections have been updated by NYCDOT (after the existing traffic data were collected) and are incorporated into the No-Action analyses:
 - Intersection of East Tremont Avenue at Hutchinson River Parkway East and Ericson Place.
 - Intersection of East Tremont Avenue at Silver Street.
 - Intersection of East Tremont Avenue at Westchester Avenue and Blondell Avenue.
 - Intersection of Westchester Avenue at Commerce Avenue.
 - Intersection of Eastchester Road at Morris Park Avenue.
 - Intersection of Westchester Avenue at Middletown Road and Ericson Place and Hutchinson River Parkway.

Lastly, subsequent to the existing data collection efforts, NYCDOT has independently installed a new traffic signal at the existing unsignalized intersection of Project Driveway and Marconi Street. This traffic signal is currently operational and accounted for in the No-Action condition.

TRAFFIC OPERATIONS

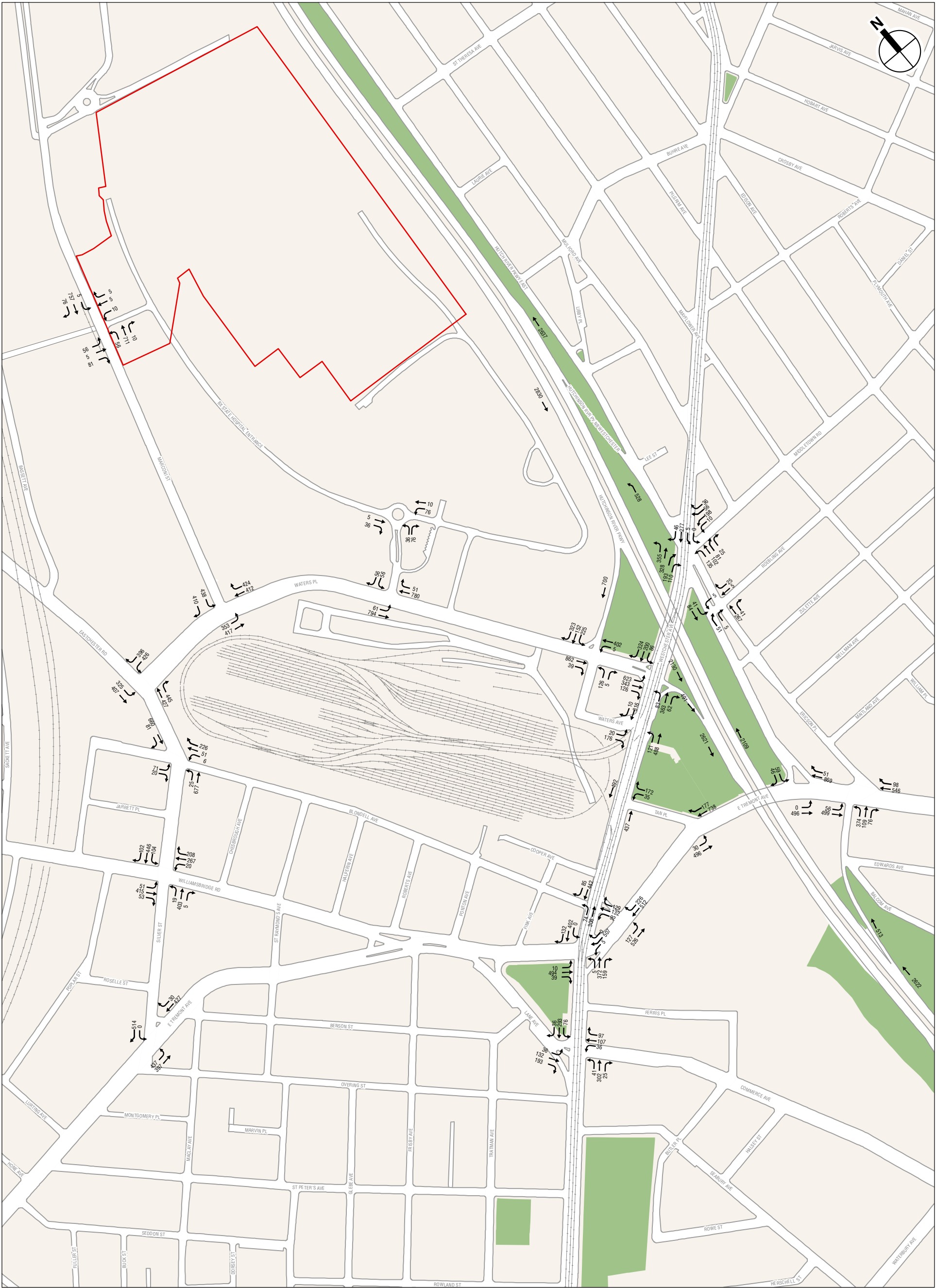
The 2023 No-Action without HRP Improvements condition traffic volumes are shown in **Figures 14-20A through 14-22B** for the weekday AM, midday, and PM peak hours. The 2023 No-Action without HRP Improvements condition traffic volumes were projected by adding the following: background growth and incremental trips generated by No-Action projects not assumed in the background growth in the area. A summary of the 2023 No-Action without HRP Improvements condition traffic analysis results by lane group is presented in **Table 14-21**. Details on LOS, v/c ratios, and average delays are presented in **Tables 14-22 and 14-23**.

2023 No-Action Traffic Volumes (Without HRP Improvements)
Weekday AM Peak Hour
Figure 14-20A

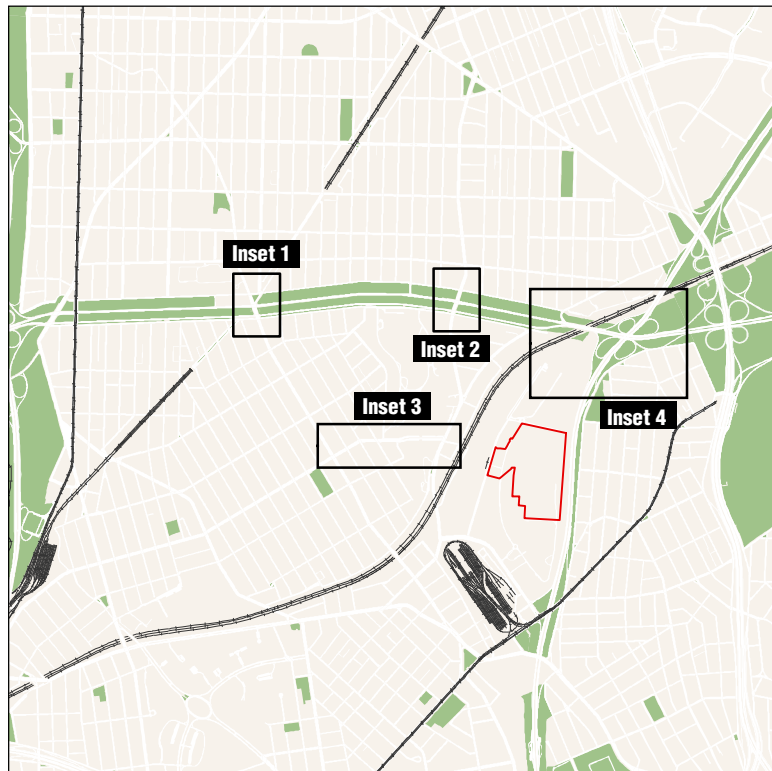
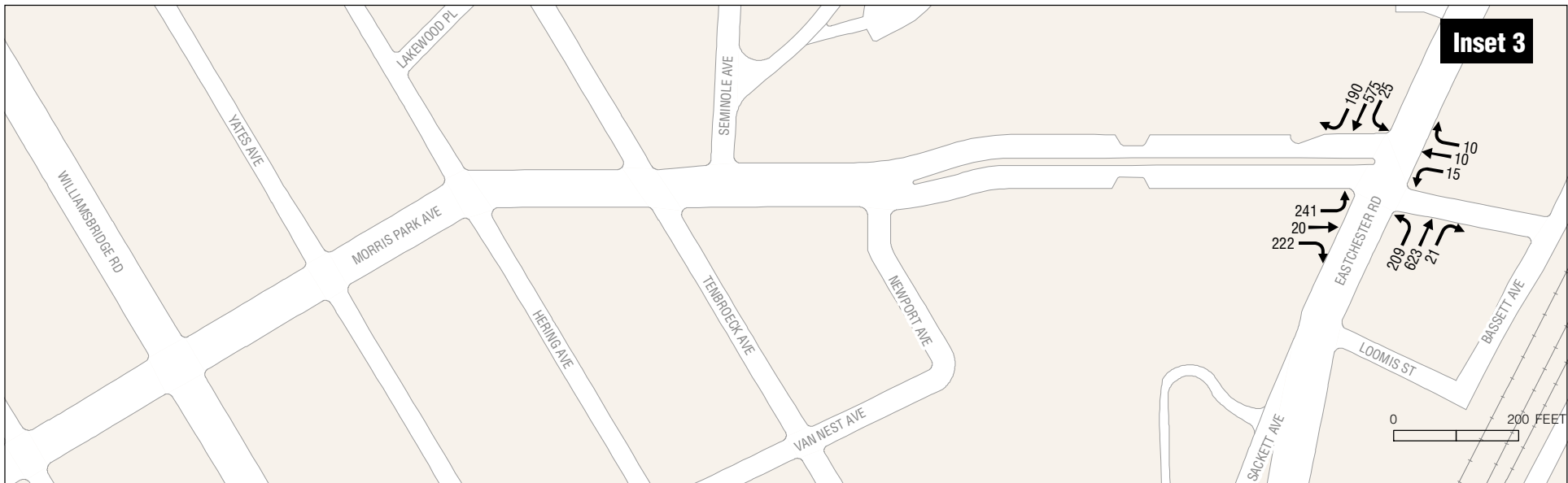
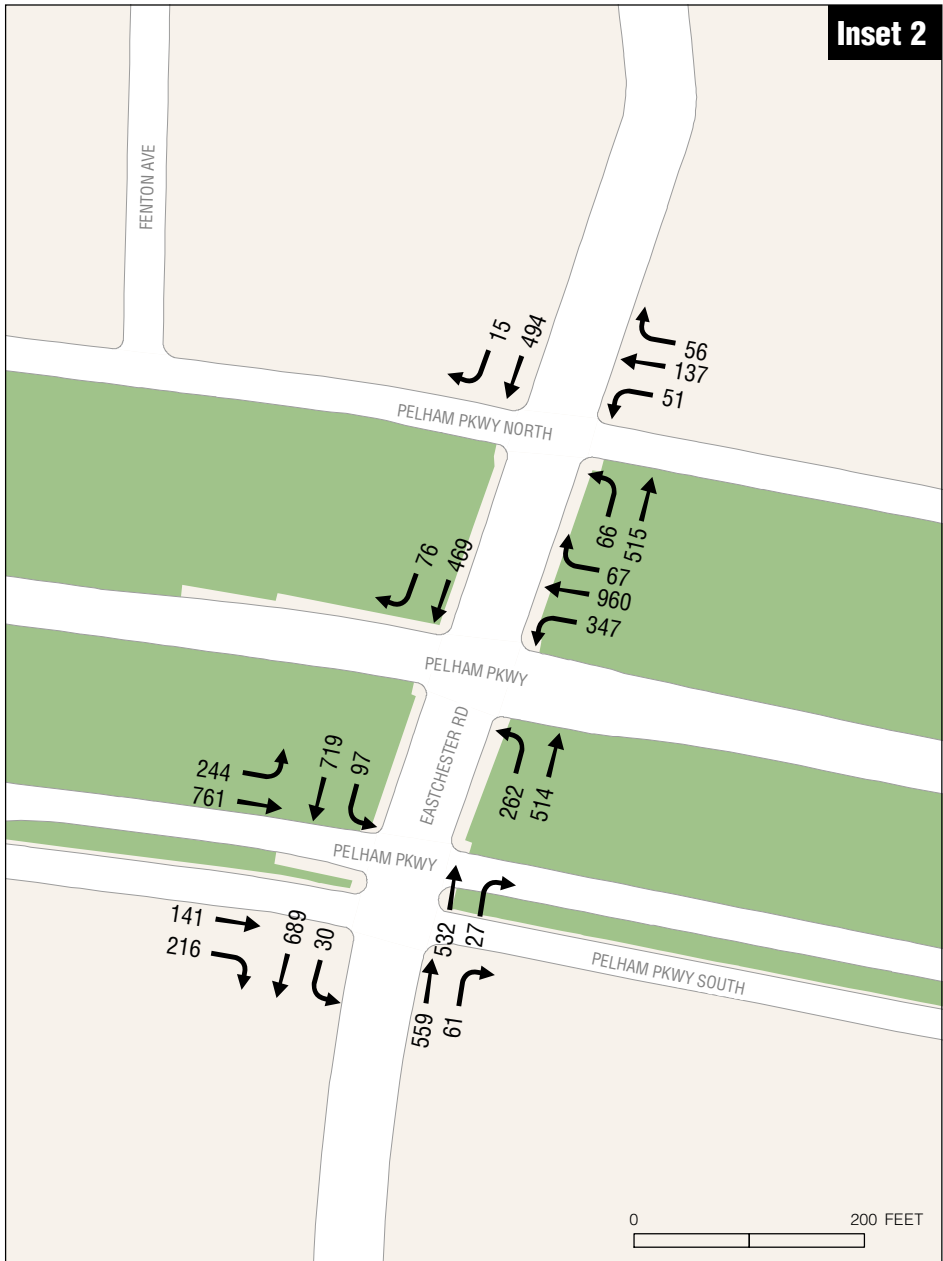
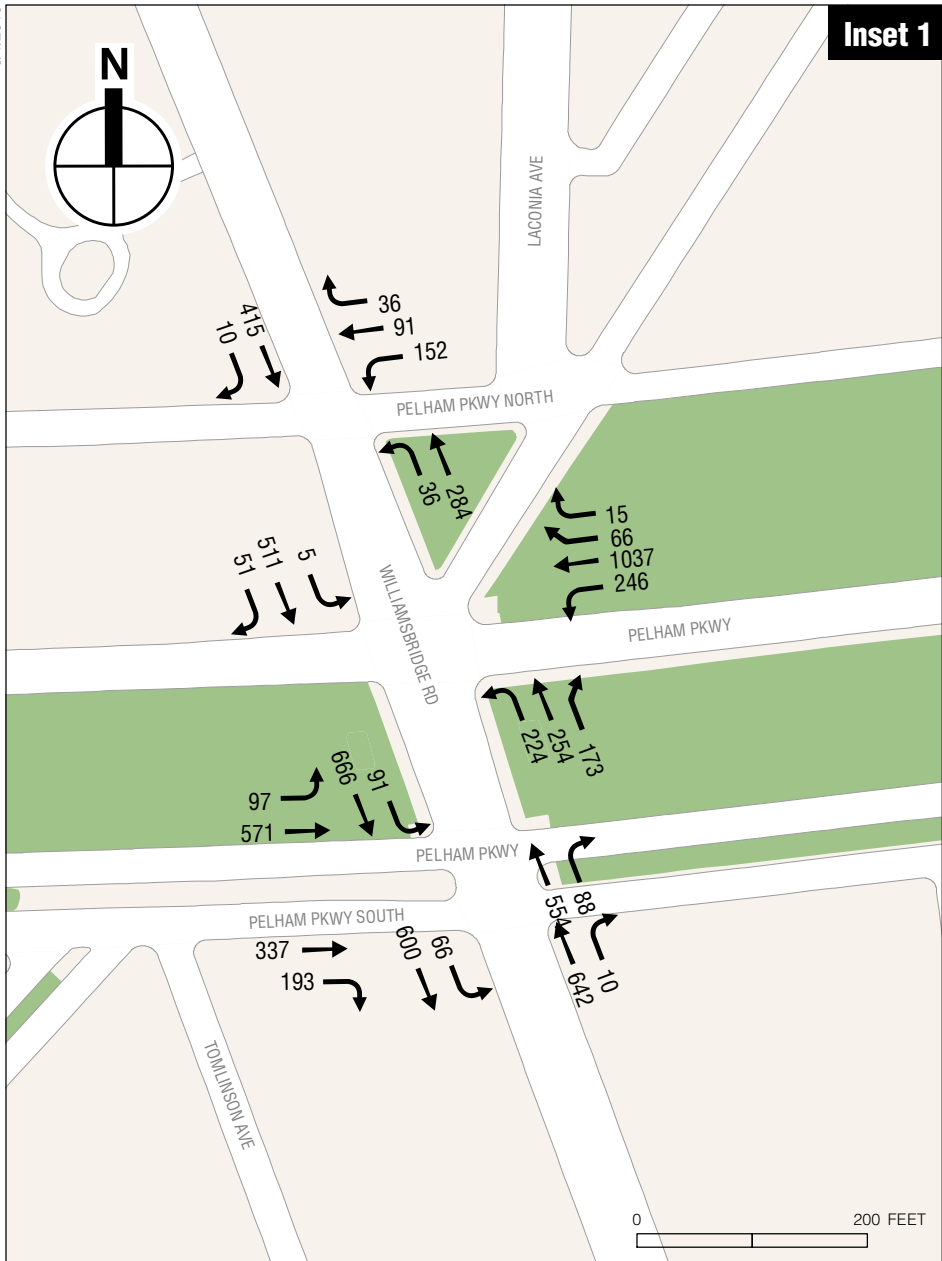


 Project Site

2023 No-Action Traffic Volumes (Without HRP Improvements)
Weekday AM Peak Hour
Figure 14-20B

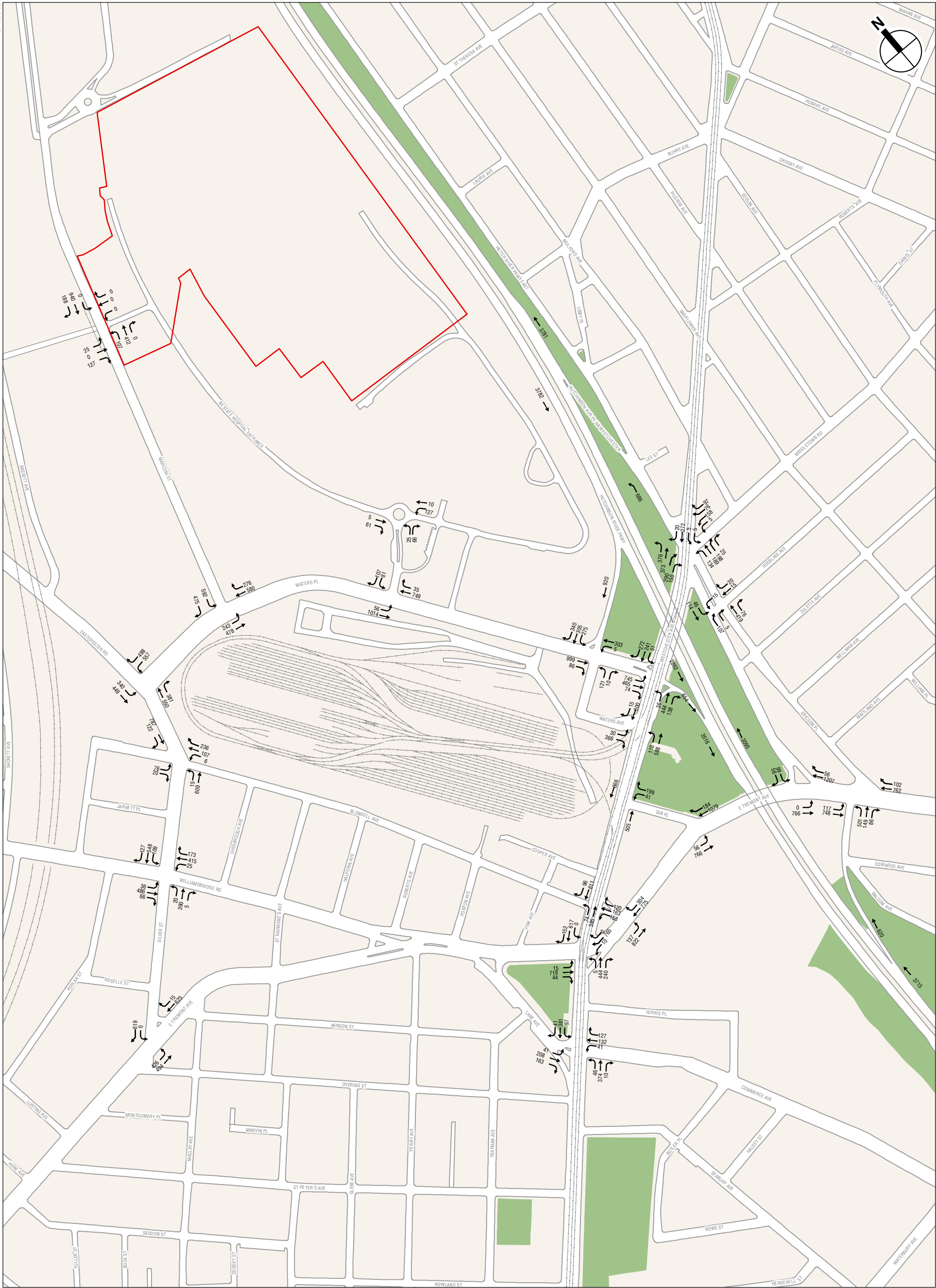


2023 No-Action Traffic Volumes (Without HRP Improvements)
Weekday Midday Peak Hour
Figure 14-21A



 Project Site

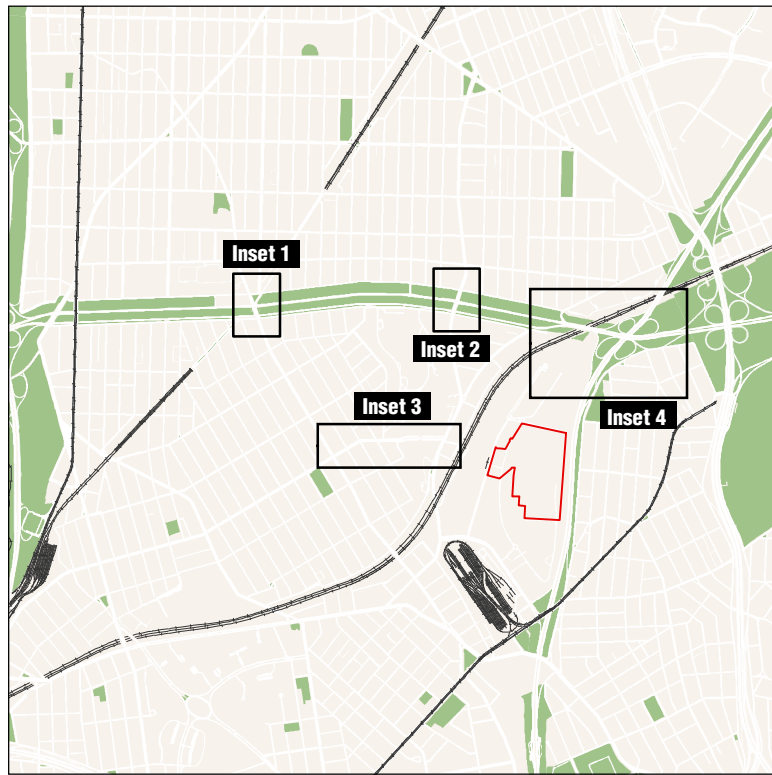
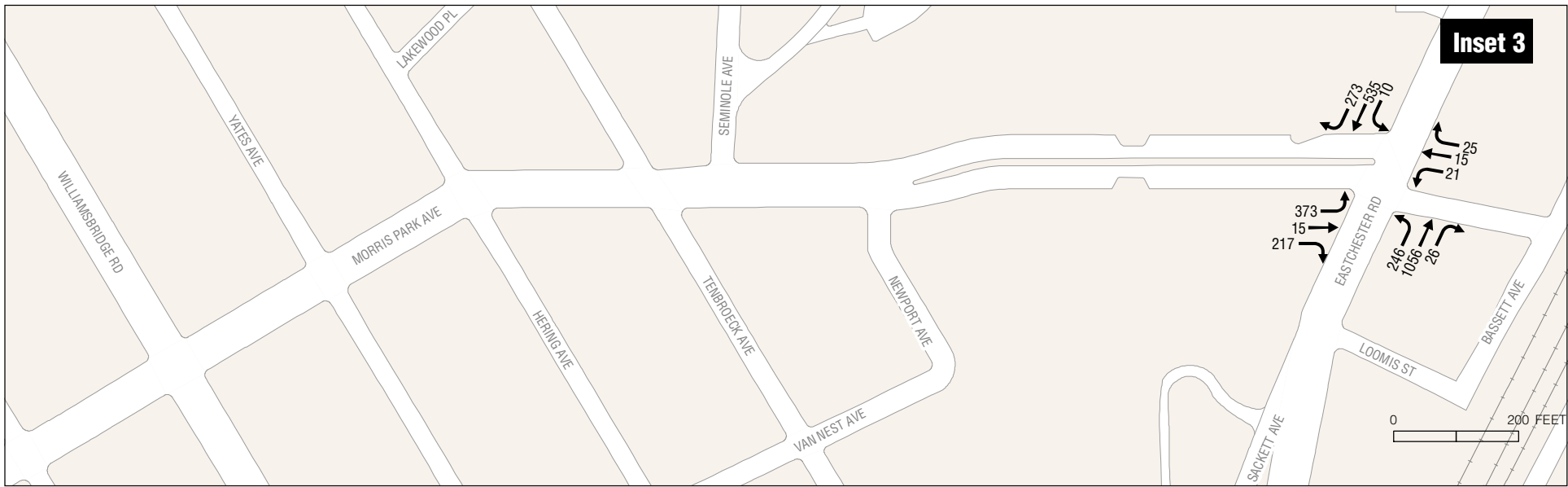
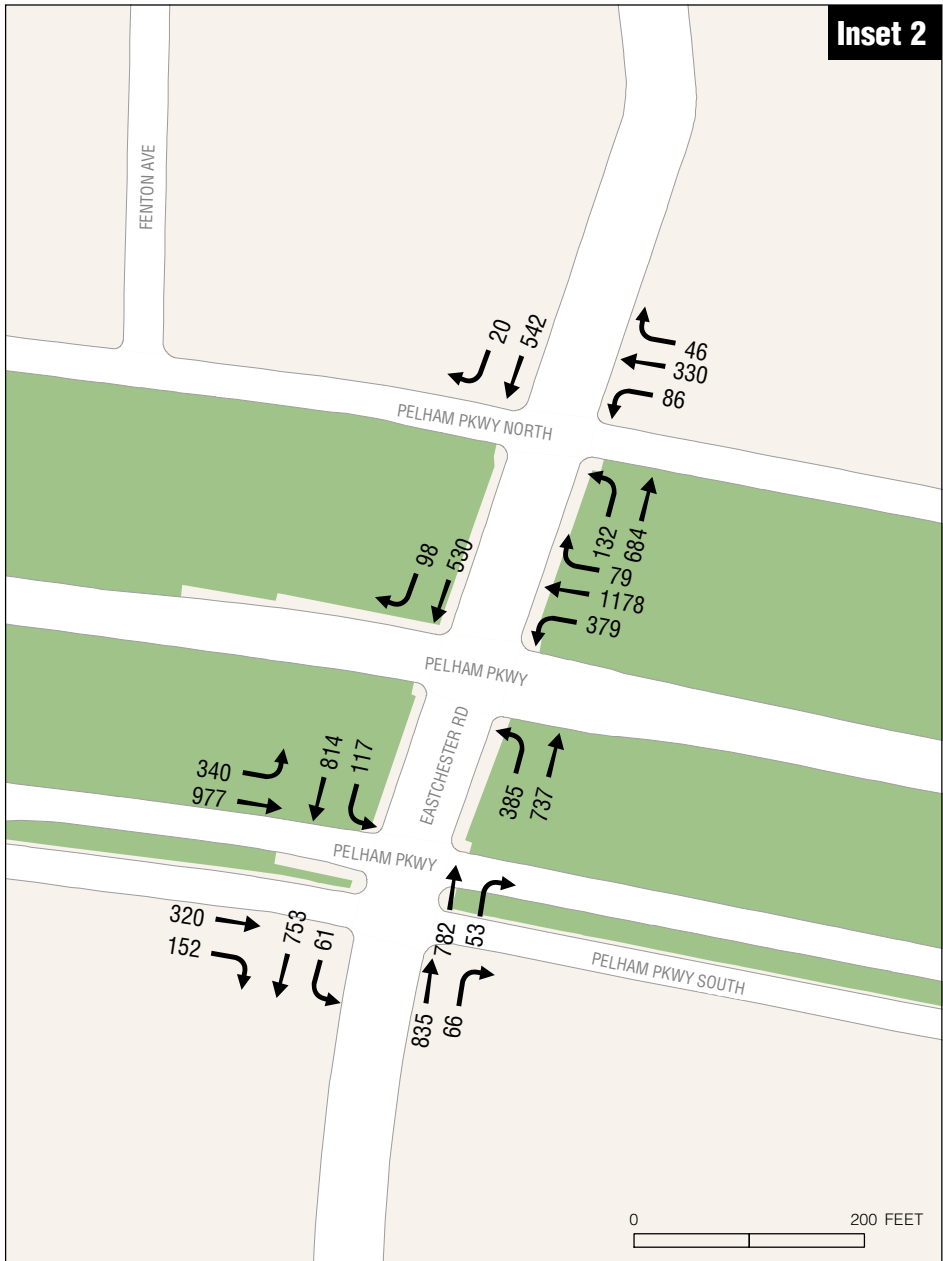
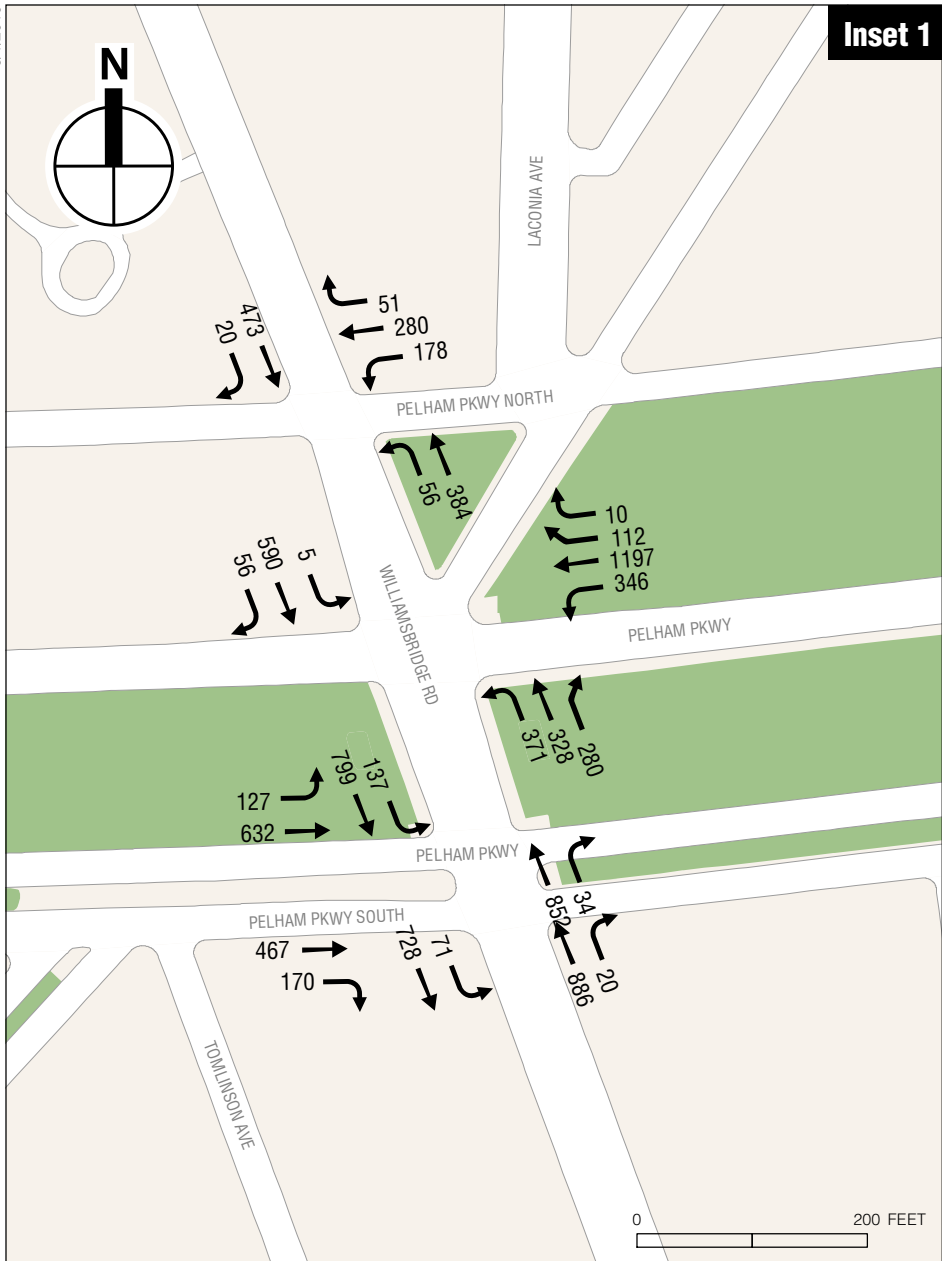
2023 No-Action Traffic Volumes (Without HRP Improvements)
Weekday Midday Peak Hour
Figure 14-21B



 Project Site

0 800 FEET

2023 No-Action Traffic Volumes (Without HRP Improvements)
Weekday PM Peak Hour
Figure 14-22A



 Project Site

2023 No-Action Traffic Volumes (Without HRP Improvements)
Weekday PM Peak Hour
Figure 14-22B

Table 14-21

Summary of 2023 No-Action without HRP Improvements
Traffic Analysis Results

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
<i>Signalized Intersections</i>			
Lane Groups at LOS A/B/C	59	77	55
Lane Groups at LOS D	20	12	22
Lane Groups at LOS E	7	6	4
Lane Groups at LOS F	19	9	23
Total	105	104	104
Lane Groups with v/c \geq 0.90	26	13	27
<i>Unsignalized Intersections</i>			
Lane Groups at LOS A/B/C	10	12	12
Lane Groups at LOS D	0	0	0
Lane Groups at LOS E	1	0	0
Lane Groups at LOS F	1	0	0
Total	12	12	12
Lane Groups with v/c \geq 0.90	1	0	0
Notes: LOS = Level of service; v/c = volume-to-capacity ratio.			

Table 14-22
Existing and 2023 No-Action without HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2023 No-Action				Existing				2023 No-Action				Existing				2023 No-Action			
	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
1. Pelham Parkway North & Williamsbridge Road																								
WB	L	0.23	21.9	C	L	0.27	22.6	C	L	0.25	22.2	C	L	0.29	23.1	C	L	0.26	22.4	C	L	0.32	23.4	C
	LTR	0.48	25.7	C	LTR	0.30	22.3	C	LTR	0.26	22.2	C	LTR	0.16	20.8	C	LTR	0.55	27.2	C	LTR	0.35	22.9	C
NB	LT	0.35	12.3	B	LT	0.36	12.3	B	LT	0.21	10.8	B	LT	0.21	10.9	B	LT	0.30	11.7	B	LT	0.31	11.8	B
SB	TR	0.51	14.2	B	TR	0.51	14.3	B	TR	0.30	11.7	B	TR	0.30	11.7	B	TR	0.37	12.4	B	TR	0.38	12.5	B
	Int.		16.4	B	Int.		15.9	B	Int.		14.4	B	Int.		14.3	B	Int.		16.8	B	Int.		15.8	B
2. Pelham Parkway (Westbound) & Williamsbridge Road & Esplanade																								
WB	LT	0.99	51.4	D	LT	1.04	65.8	E	LT	0.85	35.8	D	LT	0.94	43.5	D	LT	1.00	54.2	D	LT	1.09	83.5	F
	R	0.36	26.9	C	R	0.37	27.0	C	R	0.21	24.1	C	R	0.22	24.2	C	R	0.31	25.7	C	R	0.32	25.8	C
NB	L	0.32	22.7	C	L	0.33	23.0	C	L	0.33	18.1	B	L	0.34	18.6	B	L	0.45	23.3	C	L	0.46	23.9	C
	T	0.34	10.5	B	T	0.35	10.6	B	T	0.24	9.6	A	T	0.25	9.7	A	T	0.47	12.0	B	T	0.48	12.2	B
SB	LTR	0.97	54.7	D	LTR	0.98	58.2	E	LTR	0.70	33.3	C	LTR	0.71	33.8	C	LTR	0.85	40.3	D	LTR	0.87	42.0	D
	Int.		42.1	D	Int.		49.6	D	Int.		28.8	C	Int.		33.0	C	Int.		38.1	D	Int.		52.3	D
3. & 4. Pelham Parkway (Eastbound) & Williamsbridge Road																								
EB (ML)	LT	1.05	80.6	F	LT	1.16	121.3	F	LT	0.98	62.9	E	LT	1.00	69.2	E	LT	1.05	83.0	F	LT	1.08	92.2	F
EB (SR)	TR	0.68	36.4	D	TR	0.84	44.4	D	TR	0.38	30.5	C	TR	0.48	32.1	C	TR	0.61	34.7	C	TR	0.73	38.4	D
	R	0.75	49.3	D	R	0.77	51.2	D	R	0.85	62.6	E	R	0.87	65.7	E	R	0.88	71.6	E	R	0.92	79.1	E
NB	T	0.82	38.8	D	T	0.84	39.9	D	T	0.66	32.0	C	T	0.67	32.5	C	T	1.03	70.2	E	T	1.05	76.5	E
	R	0.28	27.2	C	R	0.32	27.9	C	R	0.31	27.6	C	R	0.32	27.8	C	R	0.17	25.1	C	R	0.18	25.3	C
SB	L	0.45	11.2	B	L	0.46	11.6	B	L	0.23	7.8	A	L	0.23	7.9	A	L	0.31	10.9	B	L	0.31	11.1	B
	LT	0.56	9.7	A	LT	0.57	9.9	A	LT	0.35	7.4	A	LT	0.36	7.5	A	LT	0.48	8.8	A	LT	0.50	9.1	A
	Int.		37.8	D	Int.		49.5	D	Int.		35.1	D	Int.		37.3	D	Int.		50.0	D	Int.		54.4	D
5. Pelham Parkway North & Eastchester Road																								
WB	LTR	0.60	33.2	C	LTR	0.61	33.4	C	LTR	0.36	28.9	C	LTR	0.37	29.0	C	LTR	0.64	42.0	D	LTR	0.64	42.2	D
NB	LT	0.33	8.1	A	LT	0.36	8.4	A	LT	0.28	7.7	A	LT	0.34	8.1	A	LT	0.42	11.1	B	LT	0.46	11.8	B
SB	TR	0.60	29.8	C	TR	0.66	31.3	C	TR	0.57	29.3	C	TR	0.67	31.6	C	TR	0.55	36.9	D	TR	0.65	39.4	D
	Int.		22.2	C	Int.		22.7	C	Int.		20.1	C	Int.		21.0	C	Int.		26.9	C	Int.		27.9	C
6. Pelham Parkway (Westbound) & Eastchester Road																								
WB	L	0.53	24.6	C	L	0.60	26.9	C	L	0.47	23.6	C	L	0.59	26.6	C	L	0.76	54.2	D	L	0.99	88.6	F
	LT	0.74	26.9	C	LT	0.83	30.1	C	LT	0.52	22.8	C	LT	0.64	24.8	C	LT	1.02	78.2	E	LT	1.23	156.6	F
NB	R	0.13	18.9	B	R	0.13	18.8	B	R	0.10	18.5	B	R	0.14	18.9	B	R	0.25	38.7	D	R	0.28	39.3	D
	L	0.37	24.4	C	L	0.48	28.9	C	L	0.52	25.7	C	L	0.65	32.4	C	L	0.39	20.6	C	L	0.54	25.9	C
SB	T	0.38	14.6	B	T	0.39	14.7	B	T	0.38	14.6	B	T	0.39	14.7	B	T	0.43	10.1	B	T	0.36	9.3	A
	TR	0.75	34.8	C	TR	0.70	32.6	C	TR	0.53	28.8	C	TR	0.61	30.3	C	TR	0.73	46.9	D	TR	0.86	53.9	D
	Int.		25.8	C	Int.		27.3	C	Int.		22.6	C	Int.		24.8	C	Int.		47.6	D	Int.		82.1	F
7. & 8. Pelham Parkway (Eastbound) & Eastchester Road																								
EB (ML)	LT	0.91	37.9	D	LT	0.99	51.7	D	LT	0.85	32.3	C	LT	0.87	33.8	C	LT	1.05	75.1	E	LT	1.07	83.6	F
EB (SR)	TR	0.90	48.4	D	TR	1.14	112.2	F	TR	0.67	29.6	C	TR	0.83	39.1	D	TR	0.98	71.7	E	TR	1.16	129.4	F
NB	TR	0.76	32.8	C	TR	0.87	39.4	D	TR	0.61	28.2	C	TR	0.74	32.0	C	TR	0.50	26.7	C	TR	0.56	27.9	C
SB	L	0.47	27.1	C	L	0.54	31.9	C	L	0.24	18.7	B	L	0.32	22.6	C	L	0.45	31.4	C	L	0.56	40.2	D
	LT	0.72	20.6	C	LT	0.77	22.2	C	LT	0.45	15.5	B	LT	0.52	16.6	B	LT	0.47	17.9	B	LT	0.56	19.6	B
	Int.		32.3	C	Int.		47.9	D	Int.		26.5	C	Int.		29.3	C	Int.		49.4	D	Int.		60.6	E

Bronx Psychiatric Center Land Use Improvement Project

Table 14-22 (cont'd)
Existing and 2023 No-Action without HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2023 No-Action				Existing				2023 No-Action				Existing				2023 No-Action			
	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
9. Morris Park Avenue & Eastchester Road																								
EB	L	0.91	63.4	E	L	0.93	78.2	E	L	0.75	47.0	D	L	0.79	61.8	E	L	0.97	76.8	E	L	1.02	100.3	F
	LT	0.47	32.1	C	LT	0.48	41.5	D	LT	0.23	26.7	C	LT	0.24	35.7	D	LT	0.52	33.7	C	LT	0.54	43.9	D
	R	0.67	37.9	D	R	0.71	49.7	D	R	0.62	36.2	D	R	0.67	48.1	D	R	0.65	36.9	D	R	0.69	49.0	D
WB	LTR	0.23	27.1	C	LTR	0.24	35.8	D	LTR	0.14	25.3	C	LTR	0.14	33.7	C	LTR	0.23	26.8	C	LTR	0.24	35.6	D
NB	L	0.78	56.1	E	L	0.81	70.4	E	L	0.74	51.7	D	L	0.79	68.2	E	L	0.89	68.9	E	L	0.95	92.6	F
	TR	0.39	13.1	B	TR	0.45	18.7	B	TR	0.39	13.2	B	TR	0.47	19.0	B	TR	0.69	17.9	B	TR	0.76	26.3	C
SB	LTR	1.05	74.7	E	LTR	1.20	142.7	F	LTR	1.02	68.2	E	LTR	1.13	114.8	F	LTR	0.99	60.5	E	LTR	1.15	124.3	F
	Int.		49.9	D	Int.		83.3	F	Int.		43.6	D	Int.		67.0	E	Int.		42.4	D	Int.		68.9	E
10. Waters Place & Eastchester Road																								
WB	L	1.05	90.9	F	L	1.05	92.3	F	L	0.68	31.6	C	L	0.81	38.1	D	L	1.05	87.2	F	L	1.25	159.5	F
	R	0.84	34.0	C	R	0.92	42.6	D	R	0.53	19.9	B	R	0.62	22.1	C	R	0.73	27.3	C	R	0.81	31.8	C
NB	TR	0.87	31.7	C	TR	0.98	45.9	D	TR	0.78	28.0	C	TR	0.89	35.1	D	TR	0.75	25.3	C	TR	0.83	29.1	C
SB	DefL	0.58	29.6	C	DefL	0.84	48.1	D	DefL	0.83	48.9	D	DefL	1.08	105.0	F	DefL	0.71	32.6	C	DefL	0.83	43.9	D
	T	0.41	9.6	A	T	0.49	10.8	B	T	0.52	15.7	B	T	0.59	17.3	B	T	0.49	10.7	B	T	0.58	12.3	B
	Int.		39.3	D	Int.		47.7	D	Int.		28.0	C	Int.		39.6	D	Int.		36.5	D	Int.		55.4	E
11. Blondell Avenue & Eastchester Road																								
EB	LR	0.24	18.8	B	LR	0.41	27.3	C	LR	0.28	19.3	B	LR	0.43	27.1	C	LR	0.33	20.5	C	LR	0.52	30.9	C
WB	LTR	0.61	25.1	C	LTR	0.72	33.3	C	LTR	0.49	22.3	C	LTR	0.59	28.2	C	LTR	0.59	24.8	C	LTR	0.71	32.7	C
NB	LT	0.54	18.2	B	LT	0.66	21.8	C	LT	0.49	17.4	B	LT	0.61	20.7	C	LT	0.43	16.5	B	LT	0.52	19.1	B
SB	TR	0.53	17.9	B	TR	0.61	20.6	C	TR	0.50	17.4	B	TR	0.62	20.7	C	TR	0.53	17.9	B	TR	0.67	21.8	C
	Int.		19.5	B	Int.		23.7	C	Int.		18.4	B	Int.		22.2	C	Int.		19.0	B	Int.		23.5	C
12. Williamsbridge Road & Eastchester Road																								
EB	LTR	0.55	20.2	C	LTR	0.56	20.6	C	LTR	0.51	19.8	B	LTR	0.54	20.2	C	LTR	0.55	20.4	C	LTR	0.57	20.8	C
WB	LTR	0.44	18.6	B	LTR	0.45	18.7	B	LTR	0.55	20.3	C	LTR	0.56	20.6	C	LTR	0.59	21.0	C	LTR	0.60	21.3	C
NB	LTR	0.64	23.8	C	LTR	0.79	30.7	C	LTR	0.55	21.5	C	LTR	0.74	28.2	C	LTR	0.51	20.7	C	LTR	0.67	25.2	C
SB	L	0.24	17.3	B	L	0.31	18.9	B	L	0.32	18.5	B	L	0.41	21.0	C	L	0.29	17.8	B	L	0.35	19.3	B
	TR	0.79	31.2	C	TR	0.89	40.0	D	TR	0.84	34.9	C	TR	1.04	70.7	E	TR	0.86	37.0	D	TR	1.10	90.5	F
	Int.		23.1	C	Int.		27.2	C	Int.		23.8	C	Int.		35.4	D	Int.		24.5	C	Int.		40.7	D
13. East Tremont Avenue & Silver Street																								
EB	L	0.61	24.6	C	L	0.76	31.4	C	L	0.44	14.9	B	L	0.59	18.4	B	L	0.52	23.7	C	L	0.65	28.5	C
	T	0.40	8.5	A	T	0.41	8.6	A	T	0.46	9.8	A	T	0.47	9.9	A	T	0.51	9.9	A	T	0.52	10.0	A
WB	TR	0.64	35.8	D	TR	0.65	36.1	D	TR	0.65	34.5	C	TR	0.66	34.7	C	TR	0.72	38.3	D	TR	0.73	38.7	D
SB	R	1.05	94.2	F	R	1.19	146.2	F	R	0.92	55.1	E	R	1.19	133.7	F	R	1.05	93.5	F	R	1.39	229.3	F
	Int.		43.4	D	Int.		60.1	E	Int.		29.6	C	Int.		54.2	D	Int.		42.4	D	Int.		85.4	F
14. Project Driveway & Marconi Street																								
EB					LTR	0.67	45.5	D					LTR	0.60	41.9	D					LTR	0.63	42.6	D
WB					LTR	0.02	29.0	C					LTR	0.08	29.8	C					LTR	0.00	28.8	C
NB					LTR	1.25	142.6	F					LTR	0.80	27.4	C					DefL	1.37	252.0	F
																					TR	0.57	21.8	C
SB					LTR	0.30	16.6	B					LTR	0.65	22.0	C					LTR	0.96	40.4	D
					Int.		109.6	F					Int.		26.3	C					Int.		47.8	D
15. Waters Place & Marconi Street																								
EB	L	1.05	94.5	F	L	1.60	313.5	F	DefL	0.82	40.3	D	DefL	1.29	184.8	F	DefL	0.64	19.9	B	DefL	0.88	54.9	D
	LT	0.44	10.6	B	LT	0.65	16.4	B	LT	0.43	11.0	B	T	0.44	11.1	B	LT	0.46	11.4	B	T	0.47	11.5	B
WB	TR	0.85	27.5	C	TR	1.04	59.6	E	TR	0.53	18.5	B	TR	0.65	20.7	C	TR	0.54	18.5	B	TR	0.60	19.5	B
SB	L	0.28	26.4	C	L	0.44	29.3	C	L	0.68	35.8	D	L	0.99	70.2	E	L	1.01	374.0	F	L	1.35	503.6	F
	R	0.46	30.0	C	R	0.64	35.7	D	R	0.78	43.6	D	R	1.09	104.4	F	R	0.91	358.2	F	R	1.24	500.8	F
	Int.		33.2	C	Int.		87.1	F	Int.		26.2	C	Int.		65.6	E	Int.		143.0	F	Int.		220.2	F

Table 14-22 (cont'd)
Existing and 2023 No-Action without HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM												
	Existing				2023 No-Action				Existing				2023 No-Action				Existing				2023 No-Action								
	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					
16. Waters Place & BPC Driveway																													
EB WB SB	LT	0.55	18.1	B	LT	0.67	21.3	C	LT	0.61	18.5	B	LT	0.76	22.8	C	LT	0.81	24.4	C	LT	0.97	40.7	D					
	TR	1.02	50.7	D	TR	1.18	108.7	F	TR	0.51	16.4	B	TR	0.60	17.9	B	TR	0.56	17.1	B	TR	0.61	18.0	B					
	L	0.09	17.7	B	L	0.09	17.7	B	L	0.11	18.0	B	L	0.11	18.0	B	L	0.13	18.1	B	L	0.13	18.2	B					
	LR	0.13	18.2	B	LR	0.13	18.2	B	LR	0.14	18.3	B	LR	0.14	18.4	B	LR	0.21	19.2	B	LR	0.21	19.2	B					
Int.		41.7		D	Int.		84.9		F	Int.		17.5		B	Int.		20.2		C	Int.		20.9		C					
17. Waters Place & Fink Avenue/HRP Southbound Off-Ramp																													
EB WB NB SB	TR	0.38	17.6	B	TR	0.44	18.4	B	TR	0.63	21.6	C	TR	0.77	25.6	C	TR	0.78	119.0	F	TR	0.91	186.2	F					
	LT	0.45	18.6	B	LT	0.54	19.9	B	LT	0.31	16.7	B	LT	0.34	17.0	B	LT	0.25	16.1	B	LT	0.27	16.3	B					
	LR	1.05	93.6	F	LR	1.30	182.1	F	LR	0.33	18.5	B	LR	0.41	20.2	C	LR	0.48	23.8	C	LR	0.55	26.7	C					
	L	0.59	22.2	C	L	0.55	21.3	C	L	0.32	17.3	B	L	0.33	17.5	B	L	0.43	19.0	B	L	0.44	19.1	B					
T		0.61		C	T		0.57		C	T		0.29		B	T		0.20		B	T		0.65		C					
Int.		30.0		C	Int.		45.6		D	Int.		19.3		B	Int.		21.5		C	Int.		67.0		E					
18. Westchester Avenue & Ericson Place/Middletown Road																													
EB WB NB SB	LTR	0.88	132.3	F	DefL	1.45	594.0	F	LTR	1.05	223.9	F	DefL	1.59	602.7	F	LTR	1.05	198.1	F	DefL	1.52	555.2	F					
	TR				TR	0.88	99.3	F	TR	1.07	195.6	F	TR	1.07	195.6	F	TR	1.05	145.9	F	TR	1.15	209.5	F					
	LT	0.47	44.2	D	LT	1.34	459.6	F	LT	0.50	48.9	D	LT	1.17	418.5	F	LT	0.49	45.8	D	LT	1.13	383.8	F					
	LTR	1.05	153.3	F	LTR	0.98	115.6	F	LTR	0.70	52.2	D	LTR	0.65	45.2	D	LTR	1.05	145.9	F	LTR	0.96	94.3	F					
SB		LTR		1.05		134.4		F	LTR		1.01		138.2		F	LTR		1.05		140.0		F	LTR		1.13		169.7		F
Int.		126.3		F	Int.		237.4		F	Int.		151.7		F	Int.		268.5		F	Int.		156.7		F					
19. Waters Place & Westchester Avenue																													
EB NB SB	LT	0.51	19.4	B	LT	0.54	19.9	B	LT	0.68	22.8	C	LT	0.79	26.2	C	LT	0.84	199.1	F	LT	0.95	258.9	F					
	LTR	1.01	191.9	F	DefL	1.57	322.8	F	LTR	0.77	29.4	C	LTR	0.90	42.6	D	LTR	0.63	53.9	D	LTR	0.67	59.7	E					
					TR	1.14	278.4	F																					
	LTR	1.01	146.8	F	LTR	1.06	153.6	F	LTR	0.75	26.8	C	LTR	0.81	29.9	C	LTR	0.65	23.1	C	LTR	0.68	24.0	C					
Int.		119.5		F	Int.		152.8		F	Int.		25.7		C	Int.		31.2		C	Int.		114.6		F					
21. Tan Place & Westchester Avenue																													
WB NB SB	L	0.14	18.4	B	L	0.15	18.5	B	L	0.08	17.6	B	L	0.08	17.6	B	L	0.07	17.5	B	L	0.07	17.5	B					
	R	0.56	25.8	C	R	0.68	29.7	C	R	0.34	21.2	C	R	0.38	21.9	C	R	0.38	21.7	C	R	0.39	22.0	C					
	T	0.57	55.4	E	T	0.68	69.9	E	T	0.49	16.8	B	T	0.54	17.8	B	T	0.50	22.7	C	T	0.53	23.5	C					
	T	0.54	20.7	C	T	0.56	21.1	C	T	0.53	17.5	B	T	0.57	18.3	B	T	0.56	17.2	B	T	0.59	17.8	B					
Int.		32.1		C	Int.		38.6		D	Int.		17.8		B	Int.		18.6		B	Int.		19.7		B					
22. Blondell Avenue & Westchester Avenue																													
WB NB SB	L	0.17	21.9	C	L	0.18	22.0	C	L	0.16	17.9	B	L	0.16	21.8	C	L	0.27	23.4	C	L	0.27	23.5	C					
	T	0.34	24.3	C	T	0.34	24.4	C	T	0.20	18.2	B	T	0.19	22.2	C	T	0.25	23.0	C	T	0.25	23.1	C					
	LT	0.53	32.0	C	LT	0.72	53.0	D	LT	0.56	19.1	B	LT	0.73	35.9	D	LT	0.53	32.2	C	LT	0.68	50.1	D					
	TR	0.66	28.3	C	TR	0.78	38.6	D	TR	0.42	15.8	B	TR	0.50	26.2	C	TR	0.55	25.0	C	TR	0.66	32.9	C					
Int.		28.3		C	Int.		39.7		D	Int.		17.4		B	Int.		23.1		C	Int.		26.8		C					

Table 14-22 (cont'd)
Existing and 2023 No-Action without HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2023 No-Action				Existing				2023 No-Action				Existing				2023 No-Action			
	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
23. East Tremont Avenue & Westchester Avenue																								
EB	LTR	0.40	24.9	C	LTR	0.41	25.2	C	LTR	0.52	22.2	C	LTR	0.51	26.9	C	LTR	0.64	29.8	C	LTR	0.66	30.4	C
WB	LTR	0.58	28.0	C	LTR	0.59	28.2	C	LTR	0.43	20.6	C	LTR	0.41	25.0	C	LTR	0.56	27.5	C	LTR	0.57	27.8	C
NB	LT	0.91	80.2	F	LT	1.16	206.2	F	LT	0.65	22.8	C	LT	0.79	40.9	D	LT	0.72	38.5	D	LT	0.86	64.9	E
SB	TR	0.49	24.9	C	TR	0.58	32.1	C	TR	0.42	15.7	B	TR	0.49	26.0	C	TR	0.55	26.5	C	TR	0.65	35.1	D
	Int.		36.6	D	Int.		65.1	E	Int.		20.2	C	Int.		29.0	C	Int.		29.6	C	Int.		36.7	D
24. Commerce Avenue & Westchester Avenue																								
EB	LT	0.43	19.2	B	LT	0.46	27.2	C	LT	0.28	16.9	B	LT	0.30	23.9	C	LT	0.44	19.4	B	LT	0.47	27.4	C
WB	LT	0.32	17.6	B	LT	0.34	24.8	C	LT	0.26	16.8	B	LT	0.28	23.8	C	LT	0.31	17.4	B	LT	0.34	24.7	C
	R	0.33	18.3	B	R	0.36	25.6	C	R	0.21	16.3	B	R	0.23	23.1	C	R	0.29	17.4	B	R	0.31	24.6	C
NB	LTR	0.58	39.1	D	LTR	0.60	41.1	D	LTR	0.54	21.2	C	LTR	0.53	23.7	C	LTR	0.61	36.4	D	LTR	0.61	38.1	D
SB	LTR	0.68	47.4	D	LTR	0.69	50.1	D	LTR	0.64	24.4	C	LTR	0.66	27.8	C	LTR	0.74	52.0	D	LTR	0.74	53.2	D
	Int.		33.1	C	Int.		38.2	D	Int.		20.7	C	Int.		25.1	C	Int.		34.4	C	Int.		38.5	D
26. East Tremont Avenue & HRP East																								
EB	T	0.49	29.3	C	T	0.22	7.3	A	T	0.59	31.0	C	T	0.27	7.6	A	T	0.98	57.6	E	T	0.44	9.1	A
WB	T	0.67	12.3	B	T	0.72	13.5	B	T	0.45	9.2	A	T	0.48	9.5	A	T	0.64	11.8	B	T	0.66	12.1	B
SB	LR	0.61	38.5	D	LR	0.64	39.4	D	LR	0.35	31.8	C	LR	0.39	32.5	C	LR	0.49	34.4	C	LR	0.52	35.3	D
	Int.		18.8	B	Int.		15.3	B	Int.		18.3	B	Int.		10.8	B	Int.		30.5	C	Int.		12.9	B
27. East Tremont Avenue & Ericson Place																								
EB	LT	0.38	14.2	B	LT	0.39	14.4	B	LT	0.42	14.6	B	LT	0.45	14.9	B	LT	0.69	19.7	B	LT	0.72	20.6	C
WB	T	0.98	58.3	E	T	1.02	67.6	E	T	0.69	33.7	C	T	0.71	34.6	C	T	0.88	43.3	D	T	0.90	46.1	D
NB	LTR	0.96	54.3	D	LTR	1.07	84.8	F	LTR	0.73	34.2	C	LTR	0.78	36.8	D	LTR	1.02	70.2	E	LTR	1.06	80.8	F
	Int.		46.9	D	Int.		62.9	E	Int.		27.2	C	Int.		28.5	C	Int.		43.2	D	Int.		47.7	D
Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity; Def = De Facto.																								

Table 14-23
Existing and 2023 No-Action without HRP Improvements Conditions
Level of Service Analysis
Unsignalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2023 No-Action				Existing				2023 No-Action				Existing				2023 No-Action			
	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
14. Project Driveway & Marconi Street																								
EB	LTR	0.85	74.5	F					LTR	0.71	49.2	E					LTR	0.68	42.6	E				
WB	LTR	0.10	68.1	F					LTR	0.20	42.3	E					LTR	0.00	0.0	A				
NB	LT	0.11	8.3	A					LT	0.07	9.4	A					LT	0.17	11.7	B				
SB	LT	0.00	10.6	B					LT	0.01	13.3	B					LT	0.00	8.3	A				
17. Waters Place & HRP Southbound Off-Ramp *																								
SB	R	0.99	49.6	E	R	1.24	138.3	F	R	0.26	9.5	A	R	0.36	10.8	B	R	0.47	13.4	B	R	0.58	16.4	C
19. Waters Place & Westchester Avenue *																								
EB	R	0.18	8.1	A	R	0.19	8.3	A	R	0.10	8.1	A	R	0.12	8.2	A	R	0.06	8.0	A	R	0.07	8.1	A
20. Westchester Avenue & Waters Avenue																								
EB	LR	0.66	21.6	C	LR	0.85	44.4	E	LR	0.27	11.4	B	LR	0.30	12.1	B	LR	0.51	12.9	B	LR	0.56	14.0	B
NB	LT	0.31	10.8	B	LT	0.41	12.2	B	LT	0.11	9.2	A	LT	0.14	9.4	A	LT	0.10	8.8	A	LT	0.12	9.0	A
22. Blondell Avenue & Westchester Avenue *																								
WB	R	0.07	8.3	A	R	0.11	8.6	A	R	0.12	8.6	A	R	0.14	8.8	A	R	0.11	8.6	A	R	0.12	8.7	A
24. Commerce Avenue & Westchester Avenue *																								
EB	R	0.24	12.6	B	R	0.26	13.1	B	R	0.33	13.8	B	R	0.36	14.7	B	R	0.29	12.9	B	R	0.31	13.7	B
25. East Tremont Avenue & Tan Place **																								
28. Roebling Avenue and Ericson Place/HRP East																								
WB	LR	0.14	9.2	A	LR	0.14	9.3	A	LR	0.05	7.9	A	LR	0.05	8.0	A	LR	0.07	9.3	A	LR	0.07	9.4	A
NB	TR	0.56	13.3	B	TR	0.59	14.2	B	TR	0.39	10.1	B	TR	0.41	10.4	B	TR	0.69	17.6	C	TR	0.71	18.6	C
SB	LT	0.22	9.4	A	LT	0.23	9.5	A	LT	0.18	8.7	A	LT	0.19	8.9	A	LT	0.25	10.0	B	LT	0.27	10.3	B
30. BPC Roundabout																								
EB	TR	0.04	4.3	A	TR	0.04	4.3	A	TR	0.05	4.8	A	TR	0.06	4.8	A	TR	0.08	4.8	A	TR	0.08	4.8	A
WB	LT	0.09	4.5	A	LT	0.09	4.6	A	LT	0.11	5.1	A	LT	0.11	5.1	A	LT	0.15	4.9	A	LT	0.15	5.0	A
NB	LR	0.17	4.8	A	LR	0.17	4.9	A	LR	0.13	4.9	A	LR	0.13	5.0	A	LR	0.10	4.6	A	LR	0.10	4.6	A
Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity. * Channelized Right Turn analyzed as Stop Controlled. ** No traffic control.																								

Bronx Psychiatric Center Land Use Improvement Project

Based on the analysis results presented in **Tables 14-22 and 14-23**, the majority of the approaches/lane-groups are projected to operate at the same LOS as in existing conditions. The following approaches/lane-groups are expected to operate at deteriorated LOS when compared to existing conditions:

2. Pelham Parkway (Westbound) and Williamsbridge Road

- Westbound left-turn/through will deteriorate to LOS E with a v/c ratio of 1.04 and a delay of 65.8 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.09 and a delay of 83.5 spv during the weekday PM peak hour.
- Southbound left-turn/through/right-turn will deteriorate to LOS E with a v/c ratio of 0.98 and a delay of 58.2 spv during the weekday AM peak hour.

6. Pelham Parkway (Westbound) and Eastchester Road

- Westbound left-turn would deteriorate to LOS F with a v/c ratio of 0.99 and a delay of 88.6 spv during the weekday PM peak hour.
- Westbound left-turn/through would deteriorate to LOS F with a v/c ratio of 1.23 and a delay of 156.6 spv during the weekday PM peak hour.

7. & 8. Pelham Parkway (Eastbound) and Eastchester Road

- Eastbound mainline left-turn/through would deteriorate to LOS D with a v/c ratio of 0.99 and a delay of 51.7 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.07 and a delay of 83.6 spv during the weekday PM peak hour.
- Eastbound service road through/right-turn would deteriorate to LOS F with a v/c ratio of 1.14 and a delay of 112.2 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.16 and a delay of 129.4 spv during the weekday PM peak hour.

9. Morris Park Avenue and Eastchester Road

- Eastbound left-turn would deteriorate to LOS E with a v/c ratio of 0.79 and a delay of 61.8 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 1.02 and a delay of 100.3 spv during the weekday PM peak hour.
- Eastbound right-turn would deteriorate to LOS D with a v/c ratio of 0.71 and a delay of 49.7 spv during the weekday AM peak hour; to LOS D with a v/c ratio of 0.67 and a delay of 48.1 spv during the weekday midday peak hour; and to LOS D with a v/c ratio of 0.69 and a delay of 49.0 spv during the weekday PM peak hour.
- Northbound left-turn would deteriorate to LOS E with a v/c ratio of 0.79 and a delay of 68.2 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 0.95 and a delay of 92.6 during the weekday PM peak hour.
- Southbound left-turn/through/right-turn would deteriorate to LOS F with a v/c ratio of 1.20 and a delay of 142.7 spv during the weekday AM peak hour; to LOS F with a v/c ratio of 1.13 and a delay of 114.8 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 1.15 and a delay of 124.3 spv during the weekday PM peak hour.

10. Waters Place and Eastchester Road

- Southbound de facto left-turn would deteriorate to LOS D with a v/c ratio of 0.84 and a delay of 48.1 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.08 and a delay of 105.0 spv during the weekday midday peak hour.

- Northbound through/right-turn would deteriorate to LOS D with a v/c ratio of 0.98 and a delay of 45.9 spv during the weekday AM peak hour.

12. Williamsbridge Road and Eastchester Road

- Southbound through/right-turn would deteriorate to LOS E with a v/c ratio of 1.04 and a delay of 70.7 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 1.10 and a delay of 90.5 spv during the weekday PM peak hour.

13. East Tremont Avenue and Silver Street

- Southbound right-turn would deteriorate to LOS F with a v/c ratio of 1.19 and a delay of 133.7 spv during the weekday midday peak hour.

14. Project Driveway and Marconi Street (Signalized)

- Eastbound left-turn/through/right-turn would operate at LOS D with a v/c ratio of 0.67 and a delay of 45.5 spv during the weekday AM peak hour.
- Northbound left-turn/through/right-turn would at LOS F with a v/c ratio of 1.25 and a delay of 142.6 spv during the weekday AM peak hour.
- Northbound de facto left-turn would operate a LOS F with a v/c ratio of 1.37 and a delay of 252.0 spv during the weekday PM peak hour.

15. Waters Place and Marconi Street

- Eastbound de facto left-turn would deteriorate to LOS F with a v/c ratio of 1.29 and a delay of 184.8 spv during the weekday midday peak hour; and to LOS D with a v/c ratio of 0.88 and a delay of 54.9 spv during the weekday PM peak hour.
- Westbound through/right-turn would deteriorate to LOS E with a v/c ratio of 1.04 and a delay of 59.6 spv during the weekday AM peak hour.
- Southbound left-turn would deteriorate to LOS E with a v/c ratio of 0.99 and a delay of 70.2 spv during the weekday midday peak hour.
- Southbound right-turn would deteriorate to LOS F with a v/c ratio of 1.09 and a delay of 104.4 spv during the weekday midday peak hour.

16. Waters Place and BPC Driveway

- Westbound through/right-turn would deteriorate to LOS F with a v/c ratio of 1.18 and a delay of 108.7 spv during the weekday AM peak hour.

17. Waters Place, Fink Avenue, and Hutchinson River Parkway Southbound Off-Ramp

- Southbound channelized right-turn (unsignalized) would deteriorate to LOS F with a v/c ratio of 1.24 and a delay of 138.3 spv during the weekday AM peak hour.

18. Westchester Avenue, Ericson Place, and Middletown Road

- Westbound left-turn/through would deteriorate to LOS F with a v/c ratio of 1.34 and a delay of 459.6 spv during the weekday AM peak hour; to LOS F with a v/c ratio of 1.17 and a delay of 418.5 spv during the weekday midday peak hour; to LOS F with a v/c ratio of 1.13 and a delay of 383.8 spv during the weekday PM peak hour.

Bronx Psychiatric Center Land Use Improvement Project

19. Waters Place and Westchester Avenue

- Northbound left-turn/through/right-turn would deteriorate to LOS E with a v/c ratio of 0.67 and a delay of 59.7 spv during the weekday PM peak hour.

20. Waters Avenue and Westchester Avenue

- Eastbound left-turn/right-turn would deteriorate to LOS E with a v/c ratio of 0.85 and a delay of 44.4 spv during the weekday AM peak hour.

22. Blondell Avenue and Westchester Avenue

- Northbound left-turn/through would deteriorate to LOS D with a v/c ratio of 0.72 and a delay of 53.0 spv during the weekday AM peak hour; and to LOS D with a v/c ratio of 0.68 and a delay of 50.1 spv during the weekday PM peak hour.

23. East Tremont Avenue and Westchester Avenue

- Northbound left-turn/through would deteriorate to LOS E with a v/c ratio of 0.86 and a delay of 64.9 spv during the weekday PM peak hour.

27. East Tremont Avenue and Ericson Place

- Westbound through would deteriorate to LOS D with a v/c ratio of 0.90 and a delay of 46.1 spv during the weekday PM peak hour.
- Northbound left-turn/through/right-turn would deteriorate to LOS F with a v/c ratio of 1.07 and a delay of 84.8 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.06 and a delay of 80.8 spv during the weekday PM peak hour.

THE FUTURE WITH THE PROPOSED PROJECT (WITHOUT HRP IMPROVEMENTS)

2023 WITH-ACTION

As discussed above in Section B, “Preliminary Analysis Methodology and Screening Assessment,” the BPC west access road would provide a secondary access and egress point at the intersection of Waters Place and BPC Driveway for the future proposed project traffic demands. The proposed project incremental vehicle trips shown in **Figures 14-2A through 14-4B** account for this secondary access and egress point. In general, the majority of proposed project inbound trips originating from west of the project site (i.e., traveling eastbound on Waters Place) would utilize Marconi Street to access the proposed project, but some would divert to the BPC west access road and their connections to access the proposed project. For proposed project inbound trips originating from north and south of the project site traveling on the HRP and for trips originating from east of the project site (i.e., traveling westbound on Waters Place), the majority of these trips would utilize the BPC west access road to access the proposed project. For proposed project outbound trips departing from the project site, the majority of westbound trips would continue to use Marconi Street, while most eastbound trips and northbound and southbound trips utilizing the HRP would have a shorter path to Waters Place via the BPC west access road. The proposed project incremental vehicle trips would utilize both Marconi Street and the BPC west access road to access the proposed project, while the existing Hutchinson Metro Center campus traffic volumes would continue to use Marconi Street only. Therefore, the overall majority of trips to and from the existing Center and the future proposed project would continue to use Marconi Street as compared with the BPC west access road.

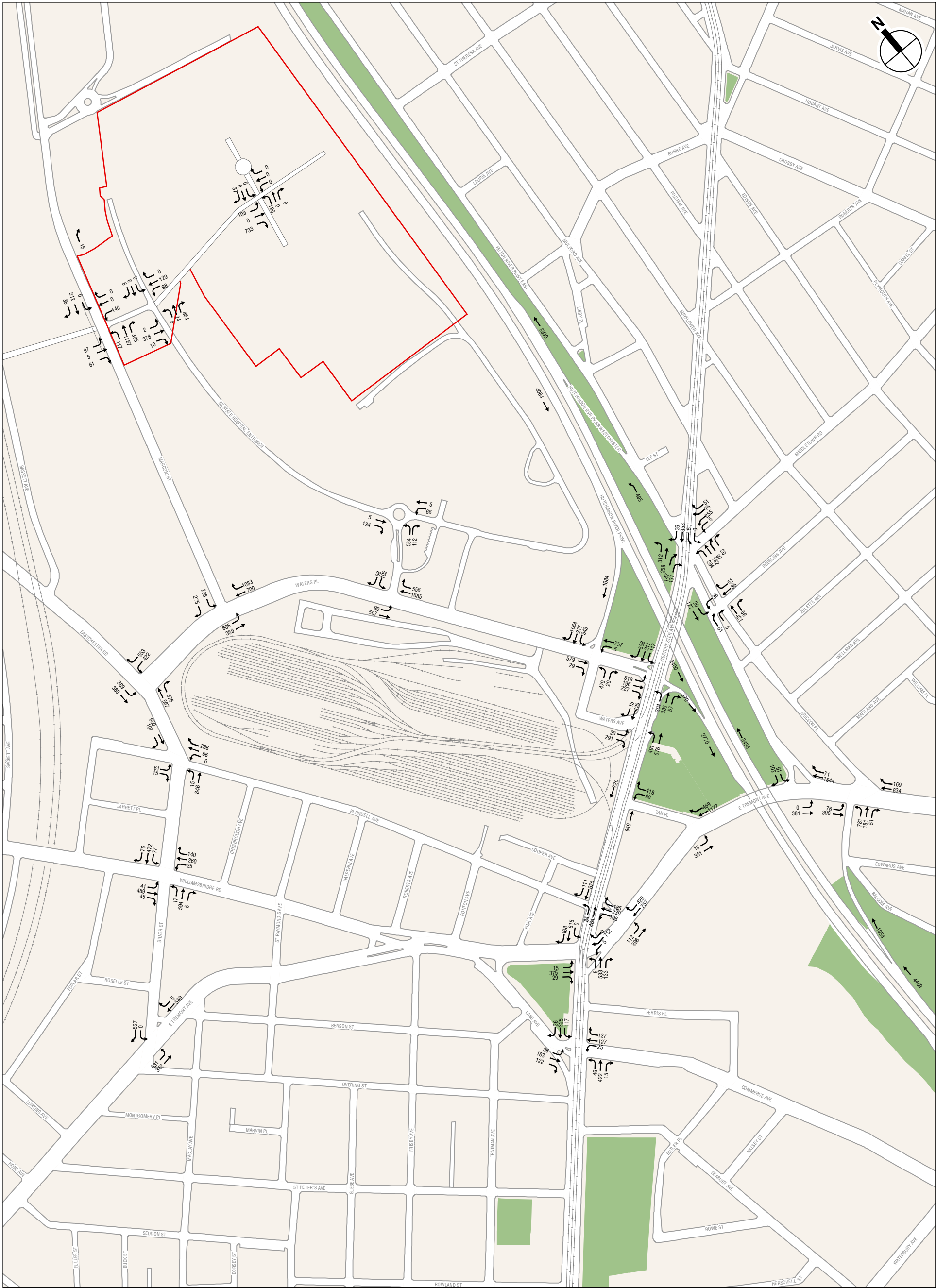
The 2023 With-Action without HRP Improvements condition traffic volumes are shown in **Figures 14-23A through 14-25B** for the weekday AM, midday, and PM peak hours. The 2023 With-Action without HRP Improvements traffic volumes were constructed by adding the incremental vehicle trips shown in **Figures 14-2A through 14-4B**. A summary of the 2023 With-Action without HRP Improvements condition traffic analysis results by lane group is presented in **Table 14-24**.

Table 14-24

**Summary of 2023 With-Action without HRP Improvements
Traffic Analysis Results**

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
Signalized Intersections			
Lane Groups at LOS A/B/C	55	70	51
Lane Groups at LOS D	16	16	19
Lane Groups at LOS E	11	7	8
Lane Groups at LOS F	26	13	28
Total	108	106	106
Lane Groups with v/c \geq 0.90	34	21	36
Unsignalized Intersections			
Lane Groups at LOS A/B/C	10	11	11
Lane Groups at LOS D	0	1	0
Lane Groups at LOS E	0	0	0
Lane Groups at LOS F	2	0	1
Total	12	12	12
Lane Groups with v/c \geq 0.90	2	0	1
Notes: LOS = Level of service; v/c = volume-to-capacity ratio.			

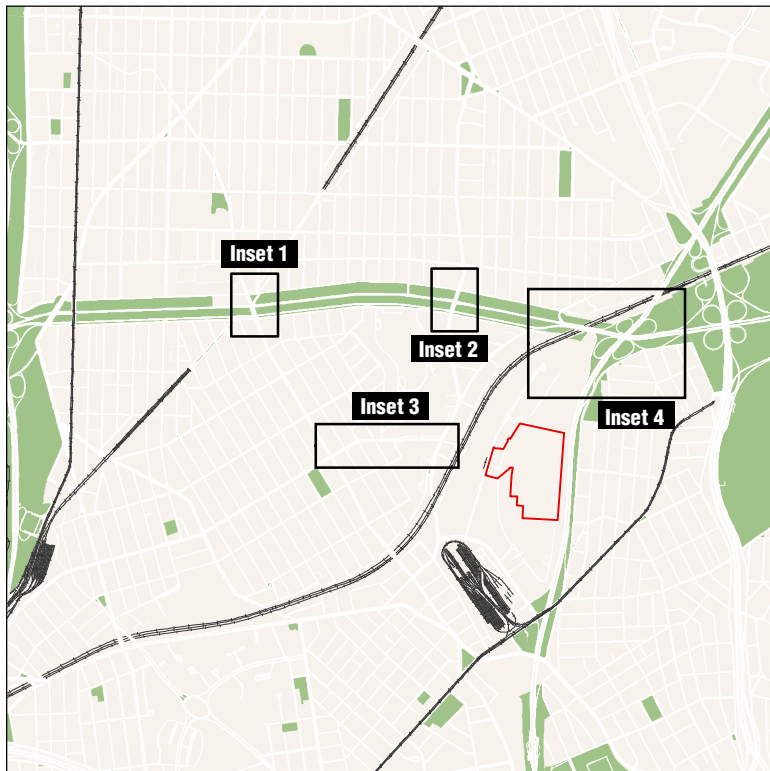
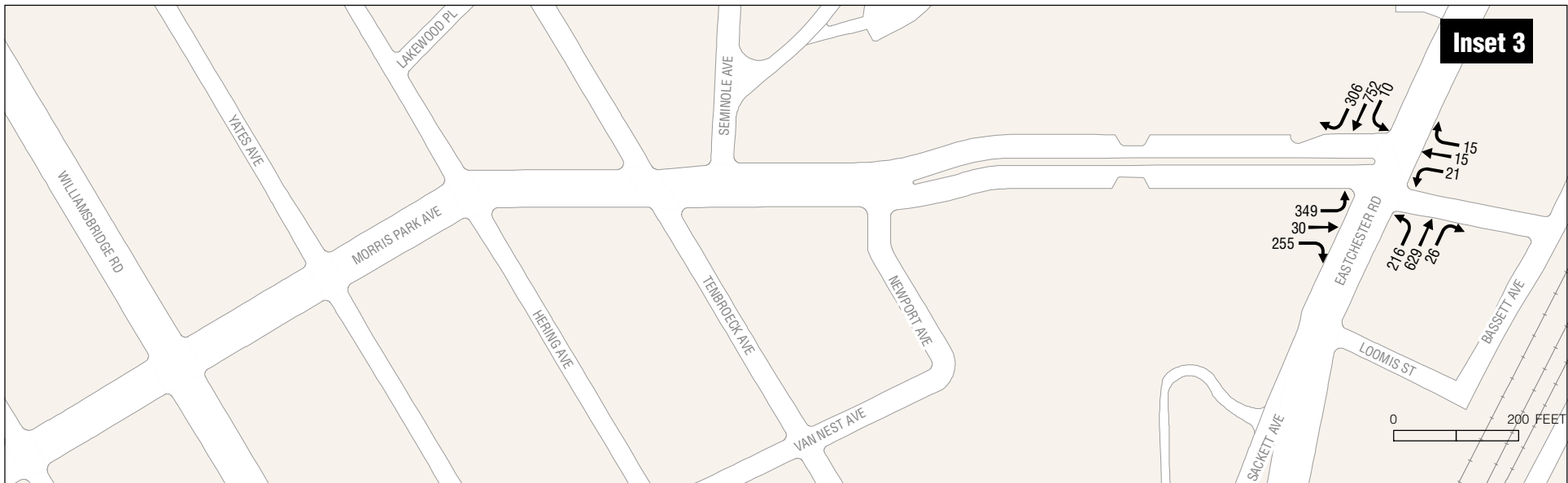
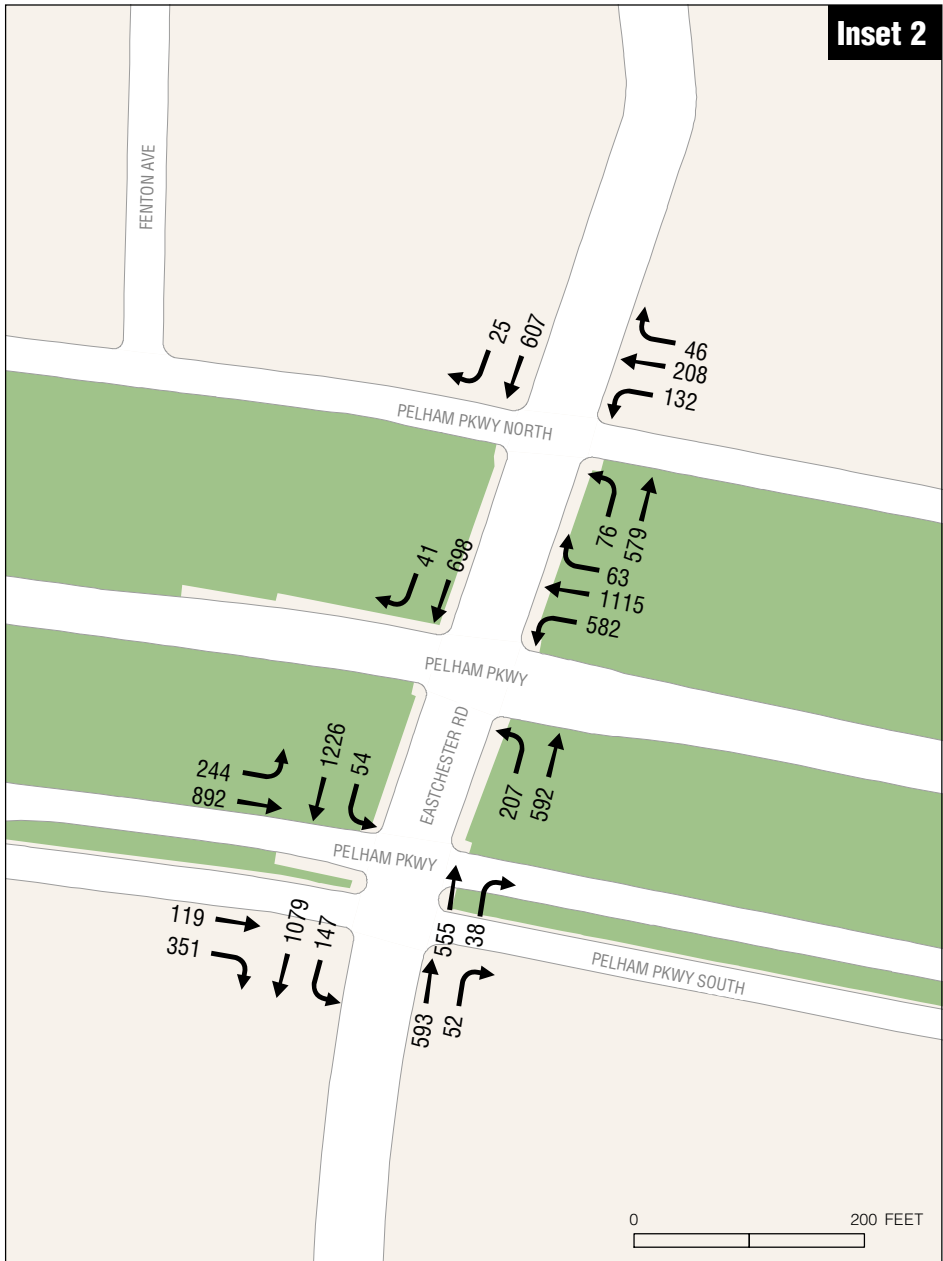
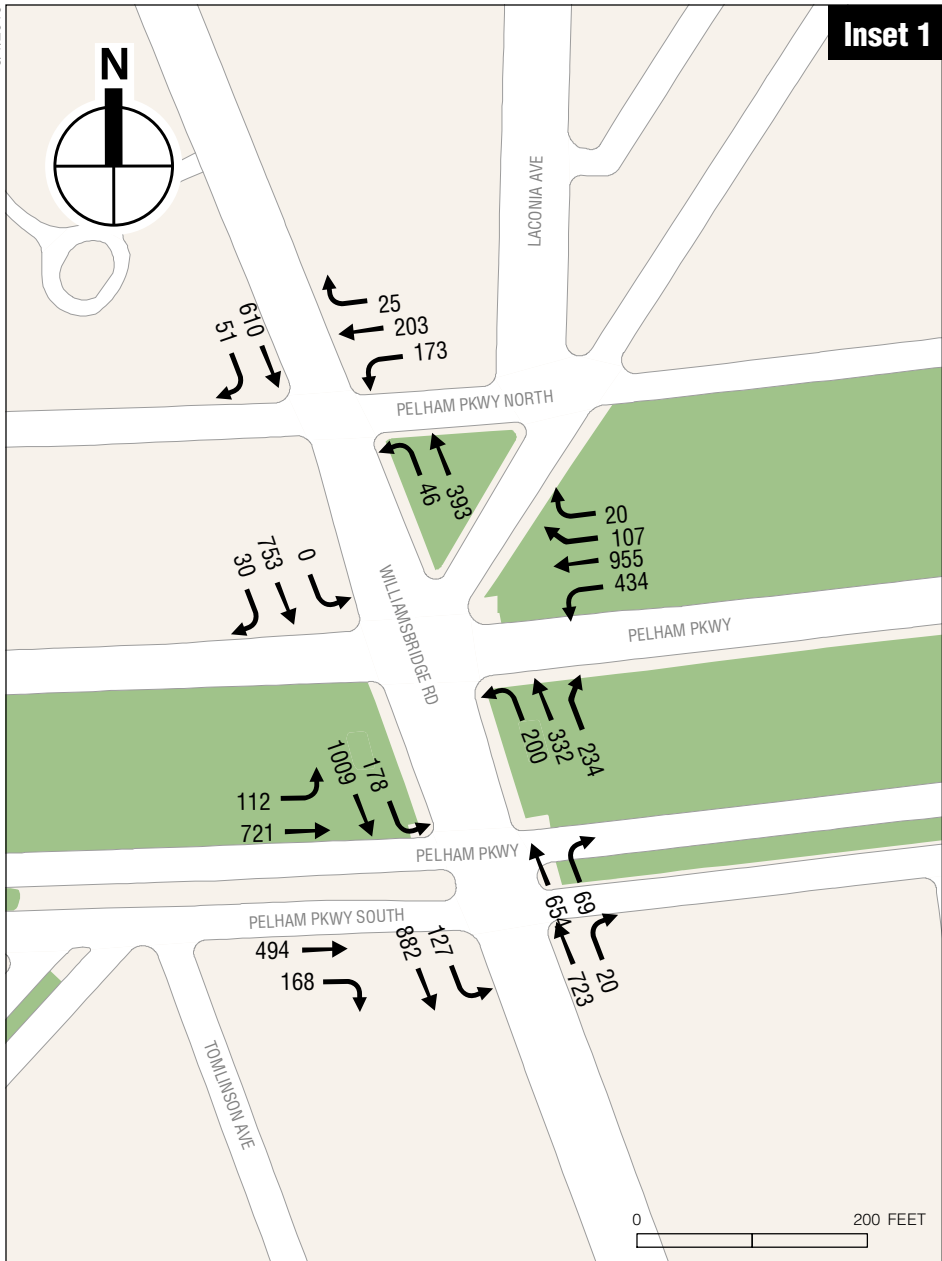
The proposed project would also reconfigure the intersection of the Project Driveway and Marconi Street. Specifically, the westbound approach would be restriped to provide two left-turn lanes and one shared through/right-turn lane. The northbound approach would be reconstructed to provide two shared left-turn/through and an exclusive right-turn lane. In order to accommodate the northbound exclusive right-turn lane, the Marconi Street roadbed would be widened to the east. The construction of this lane will require a future action to map private land. In addition, the existing bus stop located just south of this intersection on the east side of Marconi Street would be relocated to north of the intersection. NYCT has determined, based on its review of the conceptual intersection design schematic, the proposed bus stop relocation to be preliminarily feasible. The eastbound receiving lanes will also be restriped to provide two receiving lanes. Lastly, high-visibility crosswalks would be provided at all four approaches of this intersection. The proposed conceptual intersection design is presented in **Figure 14-26**. The signal timing/phasing would also be modified to provide a three phase signal including a westbound leading phase, an eastbound/westbound phase, and a northbound/southbound phase, summarized in **Table 14-25**.



 Project Site

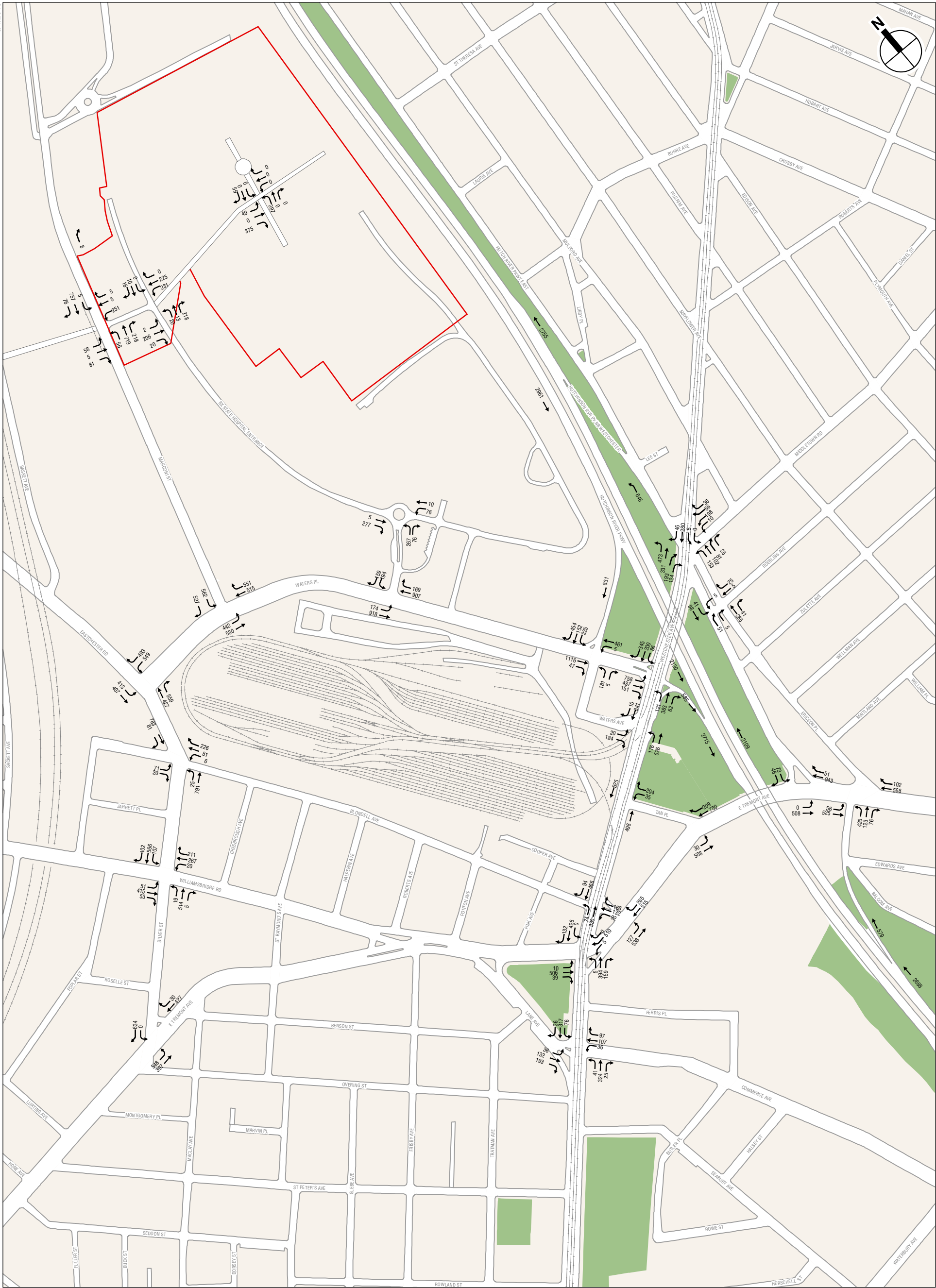
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2023 With-Action Traffic Volumes (Without HRP Improvements)
Weekday AM Peak Hour
Figure 14-23A



 Project Site

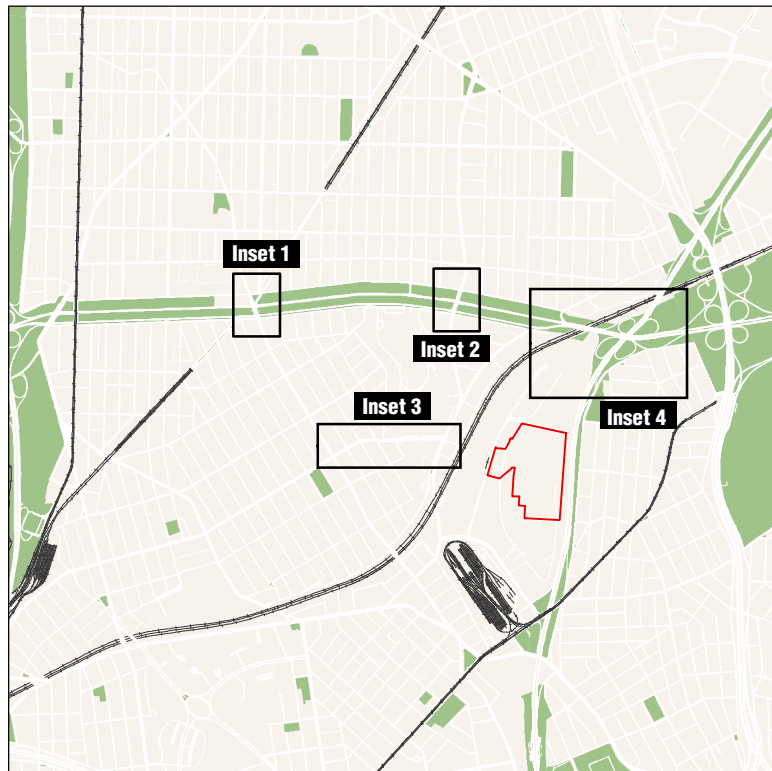
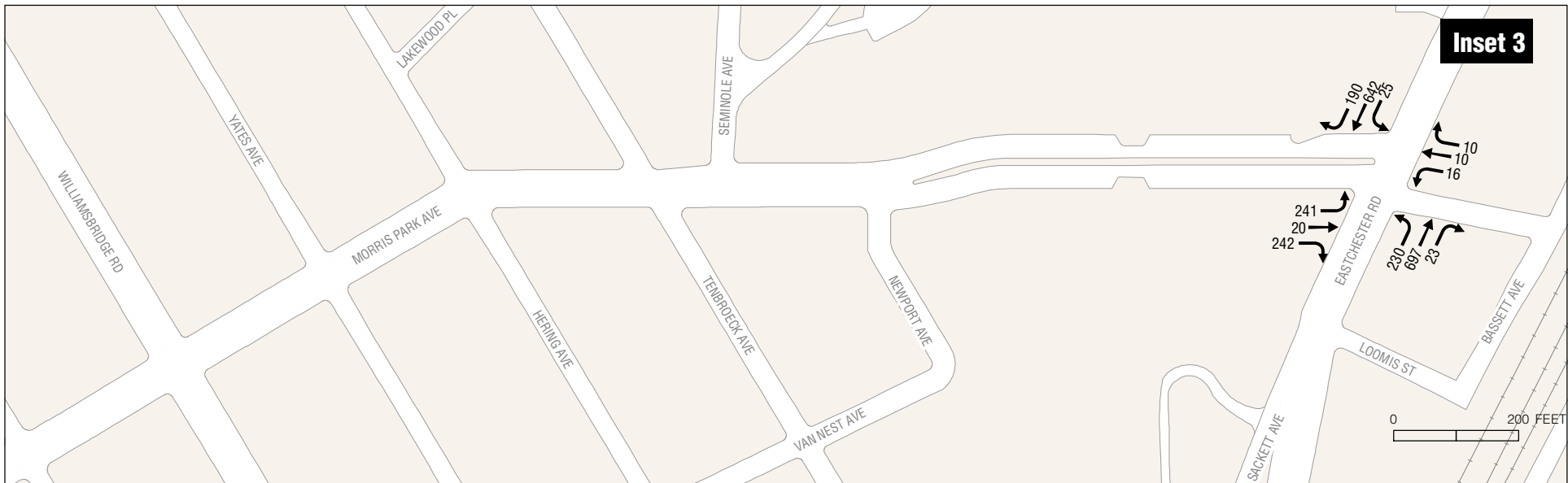
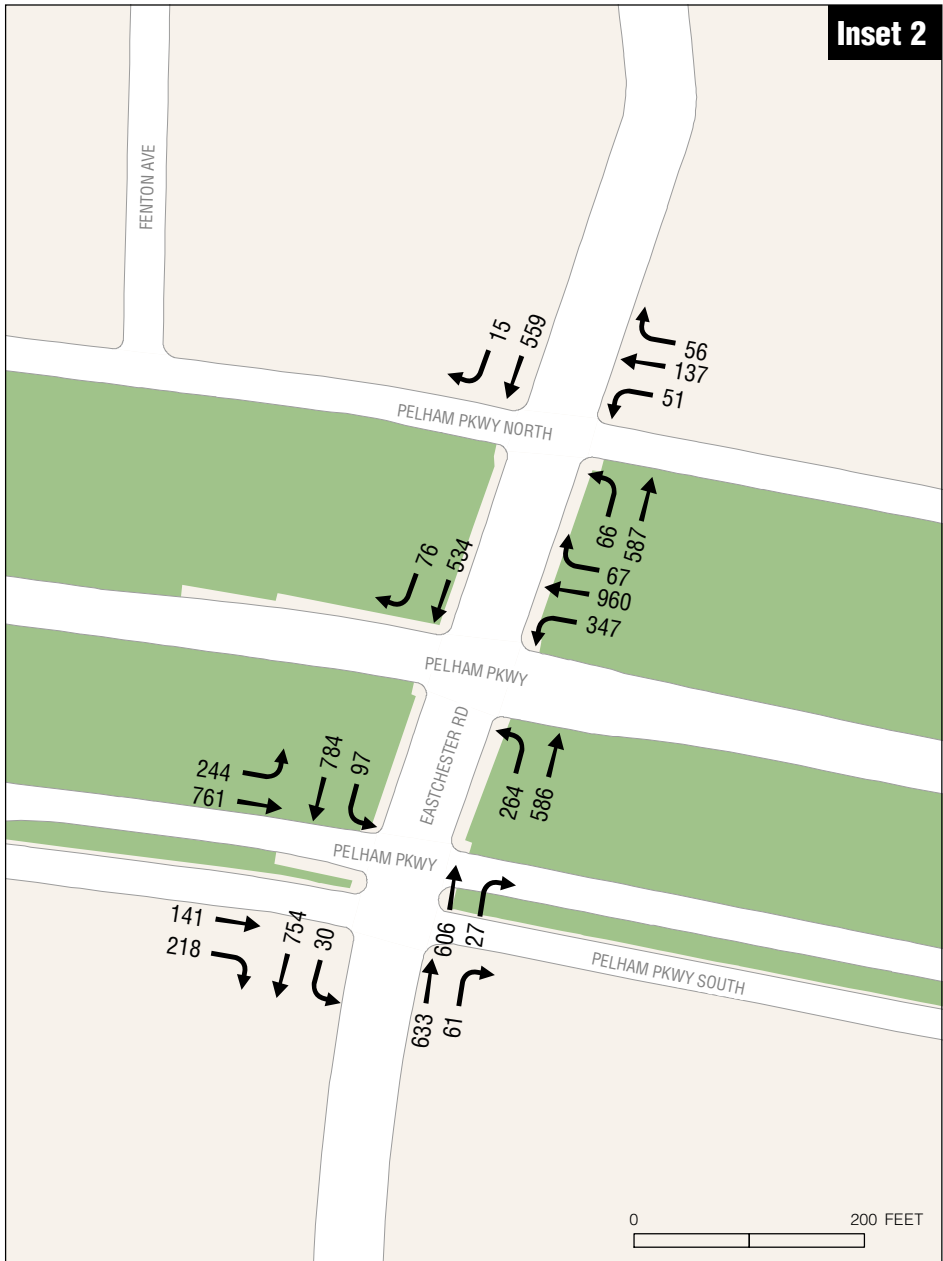
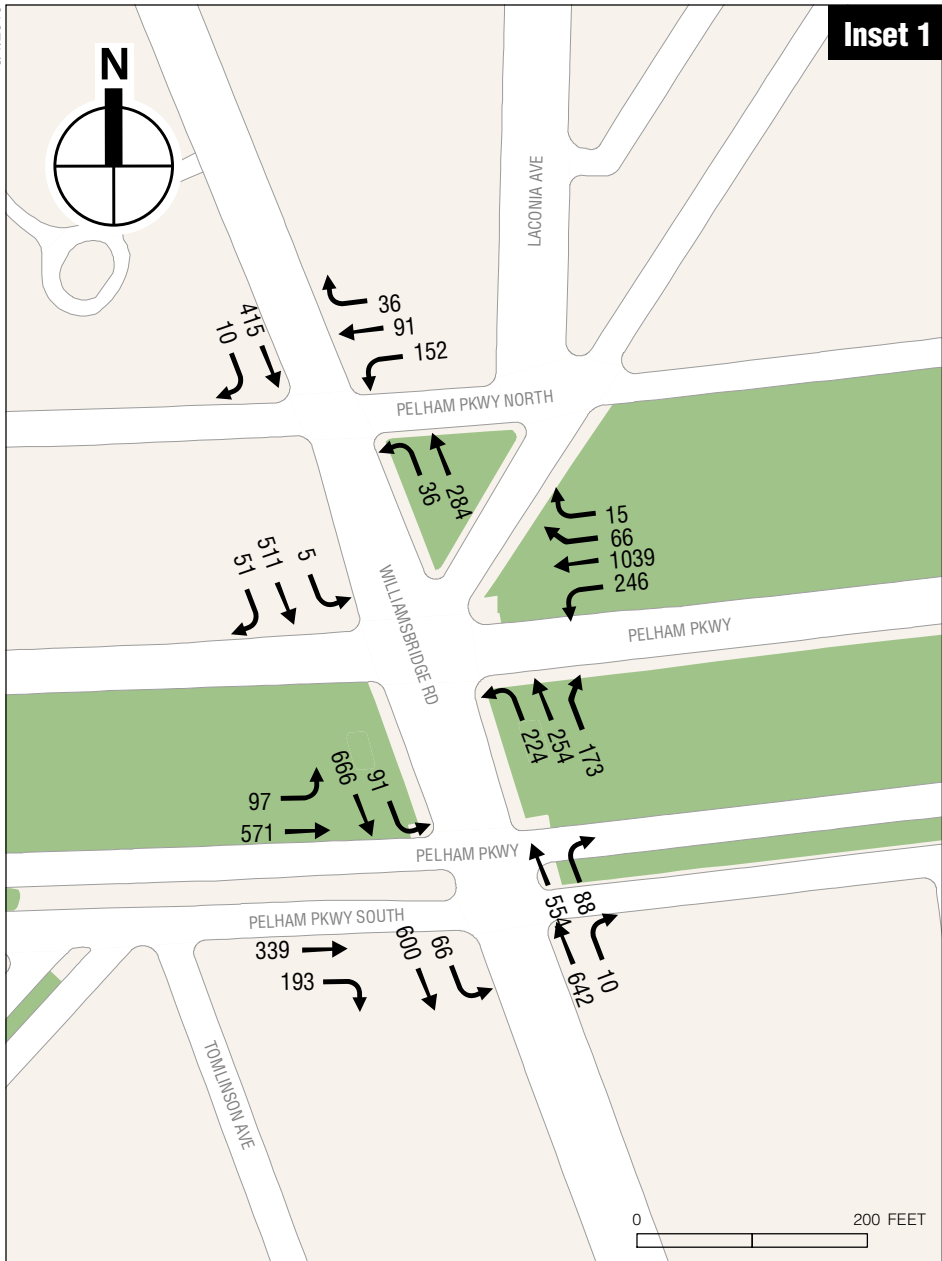
2023 With-Action Traffic Volumes (Without HRP Improvements)
Weekday AM Peak Hour
Figure 14-23B



 Project Site

0 800 FEET

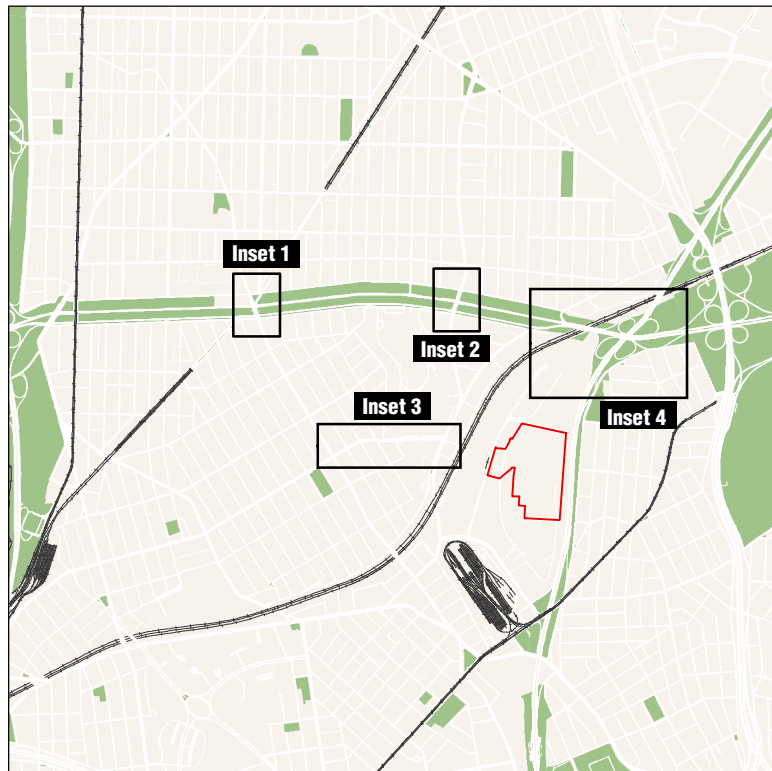
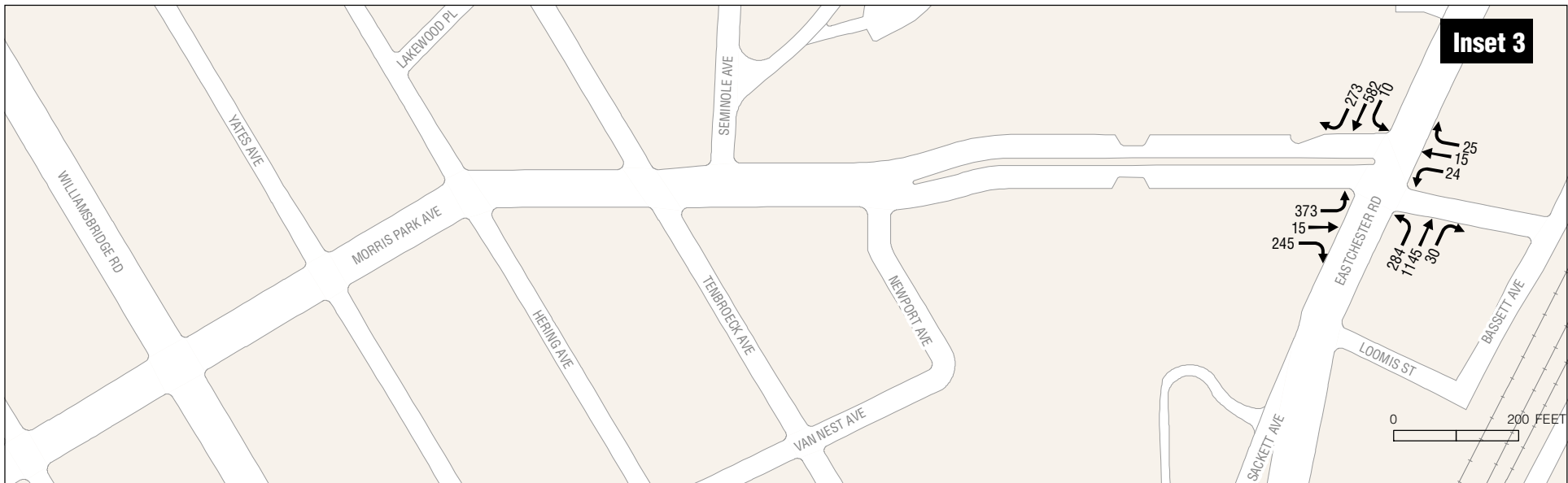
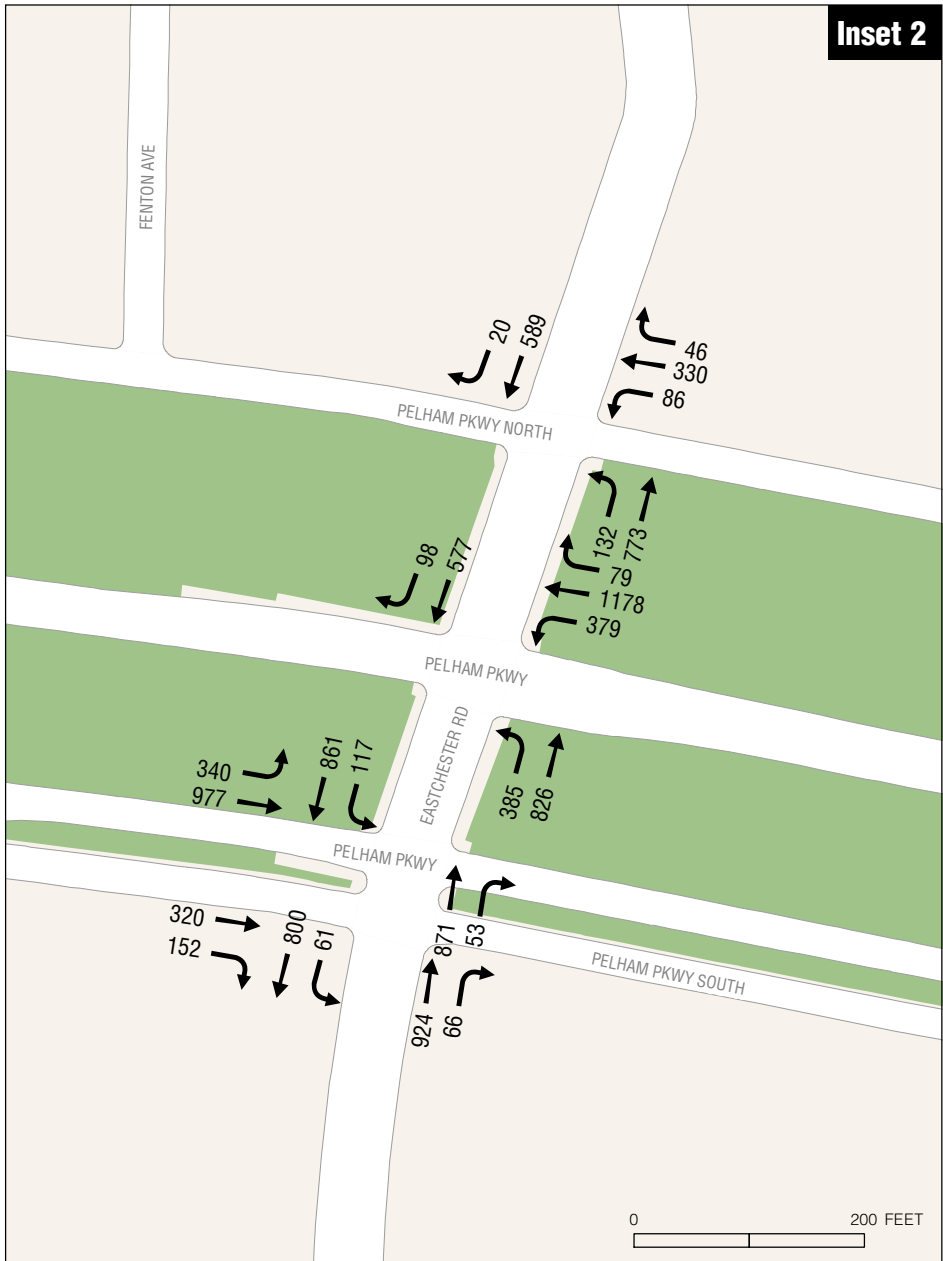
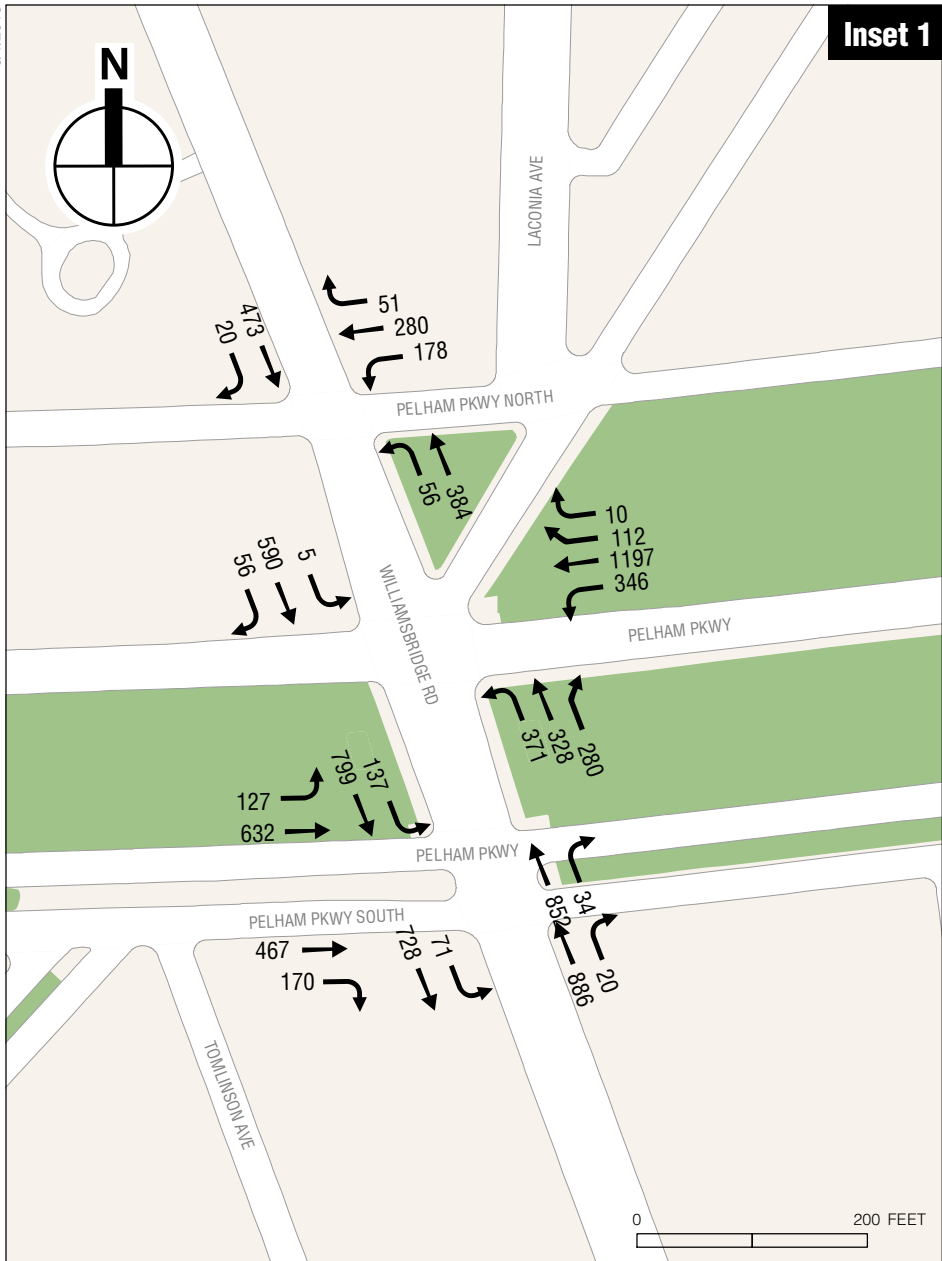
2023 With-Action Traffic Volumes (Without HRP Improvements)
Weekday Midday Peak Hour
BRONX PSYCHIATRIC CENTER LAND USE IMPROVEMENT PROJECT
Figure 14-24A



 *Project Site*

2023 With-Action Traffic Volumes (Without HRP Improvements)
Weekday Midday Peak Hour
Figure 14-24B

2023 With-Action Traffic Volumes (Without HRP Improvements)
Weekday PM Peak Hour
Figure 14-25A



 Project Site

2023 With-Action Traffic Volumes (Without HRP Improvements)
Weekday PM Peak Hour
Figure 14-25B

Table 14-25
Marconi Street and Project Driveway—
2023 With-Action Signal Timing/Phasing Plan

2025 Winter Action Signal Timing Phasing Plan												
Intersection	Signal Timing and Phasing Plan											
Marconi Street and Project Driveway	Weekday AM				Weekday Midday				Weekday PM			
	Phase	Green	Amber	Red	Phase	Green	Amber	Red	Phase	Green	Amber	Red
	WB/NB-R	9	3	2	WB/NB-R	18	3	2	WB/NB-R	14	3	2
	EB/WB-TR	21	3	2	EB/WB-TR	21	3	2	EB/WB-TR	21	3	2
	NB/SB	45	3	2	NB/SB	36	3	2	NB/SB	40	3	2
	Cycle Length = 90 Seconds				Cycle Length = 90 Seconds				Cycle Length = 90 Seconds			
Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left-turn; T = Through; R = Right-turn												

These geometric and signal timing/phasing changes have been incorporated into the traffic analysis presented below. Also as described above, the proposed project, at the request of OMH, would relocate the existing Bx21 bus stop within the BPC campus to the intersection of Waters Place and BPC Driveway. NYCT has determined the proposed bus stop relocation to be preliminarily feasible and this change has been incorporated into the traffic analysis presented below. Furthermore, the new East-West Road would be constructed through the project site and connect to the existing street network at Marconi Street. Under the With-Action without HRP Improvements conditions, the East-West Road would terminate within the project site and would not be mapped as a public street. Therefore, the two new signalized intersections created by the East-West Road at the BPC west access road and at the North-South Spine Road would remain private intersections and were not included in the With-Action without HRP Improvements traffic analysis presented below.

SIGNIFICANT ADVERSE IMPACTS

Details on LOS, v/c ratios, and average delays are presented in **Tables 14-26 and 14-27**. As discussed below, significant adverse traffic impacts were identified for 34 approaches/lane groups (at 17 different intersections), 18 approaches/lane groups (at 9 different intersections), and 29 approaches/lane groups (at 16 different intersections) during the weekday AM, midday, and PM peak hours, respectively. Potential measures that could be implemented to mitigate these significant adverse traffic impacts are discussed in Chapter 22, “Mitigation.”

Table 14-26
2023 No-Action and With-Action without HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action			
	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
1. Pelham Parkway North & Williamsbridge Road																								
WB	L	0.27	22.6	C	L	0.27	22.6	C	L	0.29	23.1	C	L	0.29	23.1	C	L	0.32	23.4	C	L	0.32	23.4	C
	LTR	0.30	22.3	C	LTR	0.30	22.3	C	LTR	0.16	20.8	C	LTR	0.16	20.8	C	LTR	0.35	22.9	C	LTR	0.35	22.9	C
NB	LT	0.36	12.3	B	LT	0.36	12.3	B	LT	0.21	10.9	B	LT	0.21	10.9	B	LT	0.31	11.8	B	LT	0.31	11.8	B
SB	TR	0.51	14.3	B	TR	0.51	14.3	B	TR	0.30	11.7	B	TR	0.30	11.7	B	TR	0.38	12.5	B	TR	0.38	12.5	B
	Int.		15.9	B	Int.		15.9	B	Int.		14.3	B	Int.		14.3	B	Int.		15.8	B	Int.		15.8	B
2. Pelham Parkway (Westbound) & Williamsbridge Road & Esplanade																								
WB	LT	1.04	65.8	E	LT	1.04	66.2	E	LT	0.94	43.5	D	LT	0.94	43.7	D	LT	1.09	83.5	F	LT	1.09	83.5	F
	R	0.37	27.0	C	R	0.37	27.0	C	R	0.22	24.2	C	R	0.22	24.2	C	R	0.32	25.8	C	R	0.32	25.8	C
NB	L	0.33	23.0	C	L	0.33	23.0	C	L	0.34	18.6	B	L	0.34	18.6	B	L	0.46	23.9	C	L	0.46	23.9	C
	T	0.35	10.6	B	T	0.35	10.6	B	T	0.25	9.7	A	T	0.25	9.7	A	T	0.48	12.2	B	T	0.18	12.2	B
SB	LTR	0.98	58.2	E	LTR	0.98	58.2	E	LTR	0.71	33.8	C	LTR	0.71	33.8	C	LTR	0.87	42.0	D	LTR	0.87	41.9	D
	Int.		49.6	D	Int.		49.8	D	Int.		33.0	C	Int.		33.1	C	Int.		52.3	D	Int.		52.3	D
3. & 4. Pelham Parkway (Eastbound) & Williamsbridge Road																								
EB (ML)	LT	1.16	121.3	F	LT	1.22	144.3	F+	LT	1.00	69.2	E	LT	1.00	69.2	E	LT	1.08	92.2	F	LT	1.08	92.2	F
EB (SR)	TR	0.84	44.4	D	TR	0.85	44.6	D	TR	0.48	32.1	C	TR	0.49	32.1	C	TR	0.73	38.4	D	TR	0.73	38.4	D
	R	0.77	51.2	D	R	0.77	51.2	D	R	0.87	65.7	E	R	0.87	65.7	E	R	0.92	79.1	E	R	0.92	79.1	E
NB	T	0.84	39.9	D	T	0.84	39.9	D	T	0.67	32.5	C	T	0.67	32.5	C	T	1.05	76.5	E	T	1.05	76.5	E
	R	0.32	27.9	C	R	0.32	27.9	C	R	0.32	27.8	C	R	0.32	27.8	C	R	0.18	25.3	C	R	0.18	25.3	C
SB	L	0.46	11.6	B	L	0.46	11.6	B	L	0.23	7.9	A	L	0.23	7.9	A	L	0.31	11.1	B	L	0.31	11.1	B
	LT	0.57	9.9	A	LT	0.57	9.9	A	LT	0.36	7.5	A	LT	0.36	7.5	A	LT	0.50	9.1	A	LT	0.50	9.1	A
	Int.		49.5	D	Int.		55.8	E	Int.		37.3	D	Int.		37.3	D	Int.		54.4	D	Int.		54.4	D
5. Pelham Parkway North & Eastchester Road																								
WB	LTR	0.61	33.4	C	LTR	0.61	33.4	C	LTR	0.37	29.0	C	LTR	0.37	29.0	C	LTR	0.64	42.2	D	LTR	0.64	42.2	D
NB	LT	0.36	8.4	A	LT	0.39	8.6	A	LT	0.34	8.1	A	LT	0.38	8.6	A	LT	0.46	11.8	B	LT	0.52	12.6	B
SB	TR	0.66	31.3	C	TR	0.74	33.9	C	TR	0.67	31.6	C	TR	0.76	34.4	C	TR	0.65	39.4	D	TR	0.70	41.1	D
	Int.		22.7	C	Int.		23.8	C	Int.		21.0	C	Int.		22.2	C	Int.		27.9	C	Int.		28.3	C
6. Pelham Parkway (Westbound) & Eastchester Road																								
WB	L	0.60	26.9	C	L	0.60	26.9	C	L	0.59	26.6	C	L	0.59	26.6	C	L	0.99	88.6	F	L	0.99	88.6	F
	LT	0.83	30.1	C	LT	0.83	30.1	C	LT	0.64	24.8	C	LT	0.64	24.8	C	LT	1.23	156.6	F	LT	1.23	156.6	F
NB	R	0.13	18.8	B	R	0.13	18.8	B	R	0.14	18.9	B	R	0.14	18.9	B	R	0.28	39.3	D	R	0.28	39.3	D
	L	0.48	28.9	C	L	0.51	31.3	C	L	0.65	32.4	C	L	0.69	35.8	D	L	0.54	25.9	C	L	0.54	26.3	C
	T	0.39	14.7	B	T	0.41	15.0	B	T	0.39	14.7	B	T	0.44	15.4	B	T	0.36	9.3	A	T	0.41	9.7	A
SB	TR	0.70	32.6	C	TR	0.77	35.1	D	TR	0.61	30.3	C	TR	0.68	32.0	C	TR	0.86	53.9	D	TR	0.92	60.3	E+
	Int.		27.3	C	Int.		28.0	C	Int.		24.8	C	Int.		25.4	C	Int.		82.1	F	Int.		81.4	F
7. & 8. Pelham Parkway (Eastbound) & Eastchester Road																								
EB (ML)	LT	0.99	51.7	D	LT	1.03	61.0	E+	LT	0.87	33.8	C	LT	0.87	33.8	C	LT	1.07	83.6	F	LT	1.07	83.6	F
EB (SR)	TR	1.14	112.2	F	TR	1.14	113.8	F	TR	0.83	39.1	D	TR	0.83	39.4	D	TR	1.16	129.4	F	TR	1.16	129.4	F
NB	TR	0.87	39.4	D	TR	0.92	45.0	D	TR	0.74	32.0	C	TR	0.82	36.0	D	TR	0.56	27.9	C	TR	0.62	29.0	C
SB	L	0.54	31.9	C	L	0.56	33.9	C	L	0.32	22.6	C	L	0.34	25.2	C	L	0.56	40.2	D	L	0.60	45.2	D+
	LT	0.77	22.2	C	LT	0.82	24.3	C	LT	0.52	16.6	B	LT	0.57	17.4	B	LT	0.56	19.6	B	LT	0.60	20.4	C
	Int.		47.9	D	Int.		45.6	D	Int.		29.3	C	Int.		30.4	C	Int.		60.6	E	Int.		60.0	E

Bronx Psychiatric Center Land Use Improvement Project

Table 14-26 (cont'd)
2023 No-Action and With-Action without HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action			
	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
9. Morris Park Avenue & Eastchester Road																								
EB	L	0.93	78.2	E	L	0.93	78.2	E	L	0.79	61.8	E	L	0.80	62.2	E	L	1.02	100.3	F	L	1.03	103.3	F+
	LT	0.48	41.5	D	LT	0.48	41.5	D	LT	0.24	35.7	D	LT	0.24	35.7	D	LT	0.54	43.9	D	LT	0.54	44.1	D
	R	0.71	49.7	D	R	0.76	52.7	D	R	0.67	48.1	D	R	0.73	51.6	D	R	0.69	49.0	D	R	0.78	55.1	E+
WB	LTR	0.24	35.8	D	LTR	0.24	36.0	D	LTR	0.14	33.7	C	LTR	0.14	33.8	C	LTR	0.24	35.6	D	LTR	0.26	36.0	D
NB	L	0.81	70.4	E	L	0.84	74.8	E+	L	0.79	68.2	E	L	0.88	78.3	E+	L	0.95	92.6	F	L	1.10	134.4	F+
	TR	0.45	18.7	B	TR	0.47	19.1	B	TR	0.47	19.0	B	TR	0.52	19.9	B	TR	0.76	26.3	C	TR	0.83	29.4	C
SB	LTR	1.20	142.7	F	LTR	1.29	177.0	F+	LTR	1.13	114.8	F	LTR	1.22	150.4	F+	LTR	1.15	124.3	F	LTR	1.28	178.7	F+
	Int.		83.3	F	Int.		98.4	F	Int.		67.0	E	Int.		81.7	F	Int.		68.9	E	Int.		88.8	F
10. Waters Place & Eastchester Road																								
WB	L	1.05	92.3	F	L	1.23	156.9	F+	L	0.81	38.1	D	L	1.04	77.0	E+	L	1.25	159.5	F	L	1.82	412.1	F+
	R	0.92	42.6	D	R	1.02	64.7	E+	R	0.62	22.1	C	R	0.78	28.5	C	R	0.81	31.8	C	R	1.04	69.1	E+
NB	TR	0.98	45.9	D	TR	1.14	97.5	F+	TR	0.89	35.1	D	TR	1.03	60.7	E+	TR	0.83	29.1	C	TR	0.92	36.1	D
SB	DefL	0.84	48.1	D	DefL	1.14	124.6	F+	DefL	1.08	105.0	F	DefL	1.53	291.1	F+	DefL	0.83	43.9	D	DefL	1.08	97.0	F+
	T	0.49	10.8	B	T	0.49	10.8	B	T	0.59	17.3	B	T	0.59	17.3	B	T	0.58	12.3	B	T	0.58	12.3	B
	Int.		47.7	D	Int.		93.2	F	Int.		39.6	D	Int.		84.6	F	Int.		55.4	E	Int.		141.2	F
11. Blondell Avenue & Eastchester Road																								
EB	LR	0.41	27.3	C	LR	0.41	27.3	C	LR	0.43	27.1	C	LR	0.43	27.1	C	LR	0.52	30.9	C	LR	0.52	30.9	C
WB	LTR	0.72	33.3	C	LTR	0.72	33.3	C	LTR	0.59	28.2	C	LTR	0.59	28.2	C	LTR	0.71	32.7	C	LTR	0.71	32.7	C
NB	LT	0.66	21.8	C	LT	0.79	26.0	C	LT	0.61	20.7	C	LT	0.71	23.2	C	LT	0.52	19.1	B	LT	0.60	20.4	C
SB	TR	0.61	20.6	C	TR	0.66	21.8	C	TR	0.62	20.7	C	TR	0.72	23.1	C	TR	0.67	21.8	C	TR	0.86	28.9	C
	Int.		23.7	C	Int.		25.7	C	Int.		22.2	C	Int.		24.1	C	Int.		23.5	C	Int.		27.0	C
12. Williamsbridge Road & Eastchester Road																								
EB	LTR	0.56	20.6	C	LTR	0.56	20.6	C	LTR	0.54	20.2	C	LTR	0.54	20.2	C	LTR	0.57	20.8	C	LTR	0.57	20.8	C
WB	LTR	0.45	18.7	B	LTR	0.45	18.8	B	LTR	0.56	20.6	C	LTR	0.56	20.6	C	LTR	0.60	21.3	C	LTR	0.60	21.3	C
NB	LTR	0.79	30.7	C	LTR	1.03	66.9	E+	LTR	0.74	28.2	C	LTR	1.02	65.6	E+	LTR	0.67	25.2	C	LTR	0.96	53.9	D+
SB	L	0.31	18.9	B	L	0.42	22.9	C	L	0.41	21.0	C	L	0.51	25.4	C	L	0.35	19.3	B	L	0.40	20.9	C
	TR	0.89	40.0	D	TR	0.99	58.7	E+	TR	1.04	70.7	E	TR	1.26	153.6	F+	TR	1.10	90.5	F	TR	1.51	261.8	F+
	Int.		27.2	C	Int.		42.6	D	Int.		35.4	D	Int.		69.9	E	Int.		40.7	D	Int.		107.3	F
13. East Tremont Avenue & Silver Street																								
EB	L	0.76	31.4	C	L	0.98	58.1	E+	L	0.59	18.4	B	L	0.74	23.5	C	L	0.65	28.5	C	L	0.77	34.1	C
	T	0.41	8.6	A	T	0.41	8.6	A	T	0.47	9.9	A	T	0.47	9.9	A	T	0.52	10.0	A	T	0.52	10.0	A
WB	TR	0.65	36.1	D	TR	0.65	36.1	D	TR	0.66	34.7	C	TR	0.66	34.7	C	TR	0.73	38.7	D	TR	0.73	38.7	D
SB	R	1.19	146.2	F	R	1.34	206.4	F+	R	1.19	133.7	F	R	1.46	249.7	F+	R	1.39	229.3	F	R	1.98	487.4	F+
	Int.		60.1	E	Int.		85.4	F	Int.		54.2	D	Int.		95.3	F	Int.		85.4	F	Int.		191.3	F
14. Project Driveway & Marconi Street																								
EB	LTR	0.67	45.5	D	LTR	0.61	39.9	D	LTR	0.60	41.9	D	LTR	0.57	37.8	D	LTR	0.63	42.6	D	LTR	0.66	42.9	D
WB	LTR	0.02	29.0	C	L	0.52	44.0	D	LTR	0.08	29.8	C	L	0.54	35.9	D	LTR	0.00	28.8	C	L	1.05	91.3	F+
					TR	0.00	16.8	B					TR	0.02	11.9	B				TR	0.00	13.9	B	
NB	LTR	1.25	142.6	F	LT	1.10	79.3	E	LTR	0.80	27.5	C	LT	0.92	41.2	D	DefL	1.37	252.0	F	DefL	1.37	252.0	F
					R	0.55	11.1	B					R	0.30	7.5	A				T	0.58	21.9	C	
SB	LTR	0.30	16.6	B	LTR	0.27	13.5	B	LTR	0.65	22.0	C	LTR	0.73	26.6	C	LTR	0.96	40.4	D	R	0.16	6.4	A
	Int.		109.6	F	Int.		53.4	D	Int.		26.3	C	Int.		31.7	C	Int.		47.8	D	Int.		54.4	D

Table 14-26 (cont'd)
2023 No-Action and With-Action without HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action			
	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS
15. Waters Place & Marconi Street																								
EB	L	1.60	313.5	F	L	2.40	671.7	F+	DefL	1.29	184.8	F	DefL	2.15	550.2	F+	DefL	0.88	54.9	D	DefL	1.59	307.0	F+
WB	LT	0.65	16.4	B	LT	1.22	141.5	F+	LT	0.44	11.1	B	T	0.55	12.9	B	LT	0.47	11.5	B	T	0.56	13.0	B
SB	TR	1.04	59.6	E	TR	1.28	157.4	F+	TR	0.65	20.7	C	TR	0.87	29.5	C	TR	0.60	19.5	B	TR	0.82	25.7	C
	L	0.44	29.3	C	L	0.64	34.9	C	L	0.99	70.2	E	L	1.27	168.1	F+	L	1.35	503.6	F	L	1.96	772.0	F+
	R	0.64	35.7	D	R	0.86	52.3	D+	R	1.09	104.4	F	R	1.46	255.0	F+	R	1.24	500.8	F	R	1.74	728.0	F+
	Int.		87.1	F	Int.		228.1	F	Int.		65.6	E	Int.		162.8	F	Int.		220.2	F	Int.		363.8	F
16. Waters Place & BPC Driveway																								
EB	LT	0.67	21.3	C	DefL	1.24	200.0	F+	LT	0.76	22.8	C	LT	1.48	247.4	F+	LT	0.97	40.7	D	LT	1.88	421.7	F+
WB	T				T	0.79	27.6	C	T				T				T				T			
SB	TR	1.18	108.7	F	TR	1.82	395.3	F+	TR	0.60	17.9	B	TR	0.83	24.9	C	TR	0.61	18.0	B	TR	0.78	22.6	C
	L	0.09	17.7	B	L	0.20	19.0	B	L	0.11	18.0	B	L	0.39	21.8	C	L	0.13	18.2	B	L	0.47	23.1	C
	LR	0.13	18.3	B	LR	0.27	20.0	C	LR	0.14	18.4	B	LR	0.40	22.4	C	LR	0.21	19.2	B	LR	0.65	28.5	C
	Int.		84.9	F	Int.		302.5	F	Int.		20.2	C	Int.		117.3	F	Int.		29.9	C	Int.		214.6	F
17. Waters Place & Fink Avenue/HRP Southbound Off-Ramp																								
EB	TR	0.44	18.4	B	TR	0.56	20.3	C	TR	0.77	25.6	C	TR	1.00	48.8	D+	TR	0.91	186.2	F	TR	1.31	359.9	F+
WB	LT	0.54	19.9	B	LT	0.66	22.2	C	LT	0.34	17.0	B	LT	0.39	17.7	B	LT	0.27	16.3	B	LT	0.34	17.2	B
NB	LR	1.30	182.1	F	LR	2.13	542.8	F+	LR	0.41	20.2	C	LR	0.59	25.1	C	LR	0.55	26.7	C	LR	0.74	38.0	D
SB	L	0.55	21.3	C	L	0.55	21.3	C	L	0.33	17.5	B	L	0.33	17.5	B	L	0.44	19.1	B	L	0.44	19.1	B
	T	0.57	22.6	C	T	0.57	22.6	C	T	0.20	15.8	B	T	0.29	17.3	B	T	0.54	21.2	C	T	0.66	25.7	C
	Int.		45.6	D	Int.		131.1	F	Int.		21.5	C	Int.		34.9	C	Int.		103.3	F	Int.		217.6	F
18. Westchester Avenue & Ericson Place/Middletown Road																								
EB	DefL	1.45	594.0	F	DefL	1.87	795.3	F+	DefL	1.59	602.7	F	DefL	2.16	857.5	F+	DefL	1.52	555.2	F	DefL	2.41	945.7	F+
WB	TR	0.88	99.3	F	TR	0.90	112.1	F+	TR	1.07	195.6	F	TR	1.10	206.8	F+	TR	1.15	209.5	F	TR	1.20	229.6	F+
NB	LT	1.34	459.6	F	LT	1.43	497.9	F+	LT	1.17	418.5	F	LT	1.18	422.7	F+	LT	1.13	383.8	F	LT	1.14	385.0	F
SB	LTR	0.98	115.6	F	LTR	1.06	147.1	F+	LTR	0.65	45.2	D	LTR	0.68	47.2	D	LTR	0.96	94.3	F	LTR	0.97	104.9	F+
	L	1.10	152.7	F	L	1.06	139.3	F	L	1.05	149.1	F	L	1.12	177.5	F+	L	1.13	169.7	F	L	1.25	225.5	F+
	Int.		237.4	F	Int.		292.2	F	Int.		268.5	F	Int.		352.7	F	Int.		249.4	F	Int.		375.0	F
19. Waters Place & Westchester Avenue																								
EB	LT	0.54	19.9	B	LT	0.63	21.6	C	LT	0.79	26.2	C	LT	0.97	43.6	D	LT	0.95	258.9	F	LT	1.27	395.8	F+
NB	LTR	1.57	322.8	F	DefL	3.00	955.7	F+	LTR	0.90	42.6	D	LTR	1.19	129.6	F+	LTR	0.67	59.7	E	LTR	0.75	83.6	F+
WB	TR				TR	1.14	278.4	F																
SB	LTR	1.06	153.6	F	LTR	1.13	181.1	F+	LTR	0.81	29.9	C	LTR	0.86	34.2	C	LTR	0.68	24.0	C	LTR	0.70	24.8	C
	Int.		152.8	F	Int.		227.9	F	Int.		31.2	C	Int.		60.6	E	Int.		149.6	F	Int.		247.1	F

Bronx Psychiatric Center Land Use Improvement Project

Table 14-26 (cont'd)
2023 No-Action and With-Action without HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action			
	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
21. Tan Place & Westchester Avenue																								
WB	L	0.15	18.5	B	L	0.15	18.5	B	L	0.08	17.6	B	L	0.08	17.6	B	L	0.07	17.5	B	L	0.07	17.5	B
	R	0.68	29.7	C	R	0.87	43.1	D	R	0.38	21.9	C	R	0.45	23.3	C	R	0.39	22.0	C	R	0.43	22.6	C
NB	T	0.68	69.9	E	T	0.92	165.7	F+	T	0.54	17.8	B	T	0.61	19.4	B	T	0.53	23.5	C	T	0.57	24.9	C
SB	T	0.56	21.1	C	T	0.58	21.7	C	T	0.57	18.3	B	T	0.61	19.2	B	T	0.59	17.8	B	T	0.64	18.9	B
	Int.		38.6	D	Int.		79.9	E	Int.		18.6	B	Int.		19.9	B	Int.		20.3	C	Int.		21.5	C
22. Blondell Avenue & Westchester Avenue																								
WB	L	0.18	22.0	C	L	0.18	22.0	C	L	0.16	21.8	C	L	0.16	21.8	C	L	0.27	23.5	C	L	0.27	23.5	C
	T	0.34	24.4	C	T	0.34	24.4	C	T	0.19	22.2	C	T	0.19	22.2	C	T	0.25	23.1	C	T	0.25	23.1	C
NB	LT	0.72	53.0	D	LT	0.85	76.1	E+	LT	0.73	35.9	D	LT	0.79	39.3	D	LT	0.68	50.1	D	LT	0.73	56.6	E+
SB	TR	0.78	38.6	D	TR	0.80	40.5	D	TR	0.50	26.2	C	TR	0.53	26.9	C	TR	0.66	32.9	C	TR	0.71	35.3	D
	Int.		39.7	D	Int.		48.9	D	Int.		23.1	C	Int.		30.4	C	Int.		36.1	D	Int.		39.3	D
23. East Tremont Avenue & Westchester Avenue																								
EB	LTR	0.41	25.2	C	LTR	0.42	25.3	C	LTR	0.51	26.9	C	LTR	0.52	27.1	C	LTR	0.66	30.4	C	LTR	0.67	30.7	C
WB	LTR	0.59	28.2	C	LTR	0.59	28.3	C	LTR	0.41	25.0	C	LTR	0.41	25.0	C	LTR	0.57	27.8	C	LTR	0.57	27.8	C
NB	LT	1.16	206.2	F	LT	1.38	296.3	F+	LT	0.79	40.9	D	LT	0.84	45.1	D	LT	0.86	64.9	E	LT	0.90	75.2	E+
SB	TR	0.58	32.1	C	TR	0.59	32.8	C	TR	0.49	26.0	C	TR	0.52	26.4	C	TR	0.65	35.1	D	TR	0.69	36.8	D
	Int.		65.1	E	Int.		90.8	F	Int.		29.0	C	Int.		30.1	C	Int.		36.7	D	Int.		39.2	D
24. Commerce Avenue & Westchester Avenue																								
EB	LT	0.46	27.2	C	LT	0.46	21.1	C	LT	0.30	23.9	C	LT	0.30	23.9	C	LT	0.47	27.4	C	LT	0.47	27.4	C
WB	LT	0.34	24.8	C	LT	0.34	24.8	C	LT	0.28	23.8	C	LT	0.28	23.8	C	LT	0.34	24.7	C	LT	0.34	24.7	C
	R	0.36	25.6	C	R	0.36	25.6	C	R	0.23	23.1	C	R	0.23	23.1	C	R	0.31	24.6	C	R	0.31	24.6	C
NB	LTR	0.60	41.1	D	LTR	0.70	46.5	D+	LTR	0.53	23.7	C	LTR	0.57	24.5	C	LTR	0.61	38.1	D	LTR	0.64	41.2	D
SB	LTR	0.69	50.1	D	DefL	0.65	99.0	F+	LTR	0.66	27.8	C	LTR	0.70	29.5	C	LTR	0.74	53.2	D	LTR	0.80	63.0	E+
	Int.		38.2	D	Int.		39.7	D	Int.		25.1	C	Int.		26.0	C	Int.		38.5	D	Int.		43.1	D
26. East Tremont Avenue & HRP East																								
EB	T	0.22	7.3	A	T	0.22	7.3	A	T	0.27	7.6	A	T	0.27	7.7	A	T	0.44	9.1	A	T	0.45	9.2	A
WB	T	0.72	13.5	B	T	0.82	16.6	B	T	0.48	9.5	A	T	0.52	10.0	A	T	0.66	12.1	B	T	0.68	12.6	B
SB	LR	0.64	39.4	D	LR	0.66	40.3	D	LR	0.39	32.5	C	LR	0.44	33.6	C	LR	0.52	35.3	D	LR	0.60	37.9	D
	Int.		15.3	B	Int.		17.4	B	Int.		10.8	B	Int.		11.3	B	Int.		12.9	B	Int.		13.7	B
27. East Tremont Avenue & Ericson Place																								
EB	LT	0.39	14.4	B	LT	0.41	14.6	B	LT	0.45	14.9	B	LT	0.47	15.3	B	LT	0.72	20.6	C	LT	0.76	21.8	C
WB	T	1.02	67.6	E	T	1.06	82.4	F+	T	0.71	34.6	C	T	0.74	35.6	D	T	0.90	46.1	D	T	0.92	48.0	D
NB	LTR	1.07	84.8	F	LTR	1.30	175.0	F+	LTR	0.78	36.8	D	LTR	0.87	43.3	D	LTR	1.06	80.8	F	LTR	1.11	97.4	F+
	Int.		62.9	E	Int.		108.9	F	Int.		28.5	C	Int.		31.3	C	Int.		47.7	D	Int.		54.2	D

Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity; Def = De Facto; + denotes a significant adverse traffic impact

Table 14-27

2023 No-Action and With-Action without HRP Improvements Conditions
Level of Service Analysis: Unsignalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action				2023 No-Action				2023 With-Action			
	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
17. Waters Place & HRP Southbound Off-Ramp *																								
SB	R	1.24	138.3	F	R	2.88	872.9	F+	R	0.36	10.8	B	R	0.76	26.5	D	R	0.58	16.4	C	R	1.02	72.7	F+
19. Waters Place & Westchester Avenue *																								
EB	R	0.19	8.3	A	R	0.22	8.5	A	R	0.12	8.2	A	R	0.15	8.4	A	R	0.07	8.1	A	R	0.11	8.3	A
20. Westchester Avenue & Waters Avenue																								
EB	LR	0.85	44.4	E	LR	2.61	791.2	F+	LR	0.30	12.1	B	LR	0.35	13.5	B	LR	0.56	14.0	B	LR	0.65	17.0	C
NB	LT	0.41	12.2	B	LT	0.70	18.8	C	LT	0.14	9.4	A	LT	0.21	9.9	A	LT	0.12	9.0	A	LT	0.17	9.3	A
22. Blondell Avenue & Westchester Avenue *																								
WB	R	0.11	8.6	A	R	0.22	9.5	A	R	0.14	8.8	A	R	0.19	9.1	A	R	0.12	8.7	A	R	0.15	8.8	A
24. Commerce Avenue & Westchester Avenue *																								
EB	R	0.26	13.1	B	R	0.27	13.3	B	R	0.36	14.7	B	R	0.37	15.0	B	R	0.31	13.7	B	R	0.33	14.2	B
25. East Tremont Avenue & Tan Place **																								
28. Roebling Avenue and Ericson Place/HRP East																								
WB	LR	0.14	9.3	A	LR	0.15	9.5	A	LR	0.05	8.0	A	LR	0.05	8.1	A	LR	0.07	9.4	A	LR	0.07	9.5	A
NB	TR	0.59	14.2	B	TR	0.65	16.0	C	TR	0.41	10.4	B	TR	0.43	10.8	B	TR	0.71	18.6	C	TR	0.73	19.8	C
SB	LT	0.23	9.5	A	LT	0.25	9.7	A	LT	0.19	8.9	A	LT	0.22	9.0	A	LT	0.27	10.3	B	LT	0.32	10.8	B
30. BPC Roundabout																								
EB	TR	0.04	4.3	A	TR	0.18	5.6	A	TR	0.06	4.8	A	TR	0.38	8.8	A	TR	0.08	4.8	A	TR	0.60	13.1	B
WB	LT	0.09	4.6	A	LT	0.16	8.9	A	LT	0.11	5.1	A	LT	0.15	7.2	A	LT	0.15	5.0	A	LT	0.19	6.4	A
NB	LR	0.17	4.9	A	LR	0.70	14.1	B	LR	0.13	5.0	A	LR	0.40	8.2	A	LR	0.10	4.6	A	LR	0.30	6.7	A
Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity; + denotes a significant adverse traffic impact * Channelized Right Turn analyzed as Stop Controlled. ** No traffic control.																								

Bronx Psychiatric Center Land Use Improvement Project

3 & 4. Pelham Parkway (Eastbound) and Williamsbridge Road

- Eastbound mainline left-turn/through would deteriorate within LOS F (from a v/c ratio of 1.16 and 121.3 spv of delay to a v/c ratio of 1.22 and 144.3 spv of delay) during the weekday AM peak hour.

6. Pelham Parkway (Westbound) and Eastchester Road

- Southbound through/right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.86 and 53.9 spv of delay to a v/c ratio of 0.92 and 60.3 spv of delay) during the weekday PM peak hour.

7 & 8. Pelham Parkway (Eastbound) and Eastchester Road

- Eastbound mainline left-turn/through would deteriorate from LOS D to LOS E (from a v/c ratio of 0.99 and 51.7 spv of delay to a v/c ratio of 1.03 and 61.0 spv of delay) during the weekday AM peak hour.
- Southbound left-turn would deteriorate within LOS D (from a v/c ratio of 0.56 and 40.2 spv of delay to a v/c ratio of 0.60 and 45.2 spv of delay) during the weekday PM peak hour.

9. Morris Park Avenue and Eastchester Road

- Eastbound left-turn would deteriorate within LOS F (from a v/c ratio of 1.02 and 100.3 spv of delay to a v/c ratio of 1.03 and 103.3 spv of delay) during the weekday PM peak hour.
- Eastbound right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.69 and 49.0 spv of delay to a v/c ratio of 0.78 and 55.1 spv of delay) during the weekday PM peak hour.
- Northbound left-turn would deteriorate within LOS E (from a v/c ratio of 0.81 and 70.4 spv of delay to a v/c ratio of 0.84 and 74.8 spv of delay) during the weekday AM peak hour; within LOS E (from a v/c ratio of 0.79 and 68.2 spv of delay to a v/c ratio of 0.88 and 78.3 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 0.95 and 92.6 spv of delay to a v/c ratio of 1.10 and 134.4 spv of delay) during the weekday PM peak hour.
- Southbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.20 and 142.7 spv of delay to a v/c ratio of 1.29 and 177.0 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.13 and 114.8 spv of delay to a v/c ratio of 1.22 and 150.4 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.15 and 124.3 spv of delay to a v/c ratio of 1.28 and 178.7 spv of delay) during the weekday PM peak hour.

10. Waters Place and Eastchester Road

- Westbound left-turn would deteriorate within LOS F (from a v/c ratio of 1.05 and 92.3 spv of delay to a v/c ratio of 1.23 and 156.9 spv of delay) during the weekday AM peak hour; from LOS D to LOS E (from a v/c ratio of 0.81 and 38.1 spv of delay to a v/c ratio of 1.04 and 77.0 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.25 and 159.5 spv of delay to a v/c ratio of 1.82 and 412.1 spv of delay).
- Westbound right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.92 and 42.6 spv of delay to a v/c ratio of 1.02 and 64.7 spv of delay) during the weekday AM peak hour and from LOS C to LOS E (from a v/c ratio of 0.81 and 31.8 spv of delay to a v/c ratio of 1.04 and 69.1 spv of delay) during the weekday PM peak hour.
- Northbound through/right-turn would deteriorate from LOS D to LOS F (from a v/c ratio of 0.98 and 45.9 spv of delay to a v/c ratio of 1.14 and 97.5 spv of delay) during the weekday

AM peak hour and from LOS D to LOS E (from a v/c ratio of 0.89 and 35.1 spv of delay to a v/c ratio of 1.03 and 60.7 spv of delay) during the weekday midday peak hour.

- Southbound de facto left-turn would deteriorate from LOS D to LOS F (from a v/c ratio of 0.84 and 48.1 spv of delay to a v/c ratio of 1.14 and 124.6 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.08 and 105.0 spv of delay to a v/c ratio of 1.53 and 291.1 spv of delay) during the weekday midday peak hour; and from LOS D to LOS F (from a v/c ratio of 0.83 and 43.9 spv of delay to a v/c ratio of 1.08 and 97.0 spv of delay) during the weekday PM peak hour.

12. Williamsbridge Road and Eastchester Road

- Northbound left-turn/through/right-turn would deteriorate from LOS C to LOS E (from a v/c ratio of 0.79 and 30.7 spv of delay to a v/c ratio of 1.03 and 66.9 spv of delay) during the weekday AM peak hour; from LOS C to LOS E (from a v/c ratio of 0.74 and 28.2 spv of delay to a v/c ratio of 1.02 and 65.6 spv of delay) during the weekday midday peak hour; and from LOS C to LOS D (from a v/c ratio of 0.67 and 25.2 spv of delay to a v/c ratio of 0.96 and 53.9 spv of delay) during the weekday PM peak hour.
- Southbound through/right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.89 and 40.0 spv of delay to a v/c ratio of 0.99 and 58.7 spv of delay) during the weekday AM peak hour; from LOS E to LOS F (from a v/c ratio of 1.04 and 70.7 spv of delay to a v/c ratio of 1.26 and 153.6 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.10 and 90.5 spv of delay to a v/c ratio of 1.51 and 261.8 spv of delay).

13. East Tremont Avenue and Silver Street

- Eastbound left-turn would deteriorate from LOS C to LOS E (from a v/c ratio of 0.76 and 31.4 spv of delay to a v/c ratio of 0.98 and 58.1 spv of delay) during the weekday AM peak hour.
- Southbound right-turn would deteriorate within LOS F (from a v/c ratio of 1.19 and 146.2 spv of delay to a v/c ratio of 1.34 and 206.4 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.19 and 133.7 spv of delay to a v/c ratio of 1.46 and 249.7 spv of delay) during the midday peak hour; and within LOS F (from a v/c ratio of 1.39 and 229.3 spv of delay to a v/c ratio of 1.98 and 487.4 spv of delay) during the weekday PM peak hour.

14. Project Driveway and Marconi Street

- Westbound left-turn/through/right-turn would deteriorate from LOS C to a left-turn at LOS F (from a v/c ratio of 0.00 and 28.8 spv of delay to a v/c ratio of 1.05 and 91.3 spv of delay) during the weekday PM peak hour.

15. Waters Place and Marconi Street

- Eastbound left-turn would deteriorate within LOS F (from a v/c ratio of 1.60 and 313.5 spv of delay to a v/c ratio of 2.40 and 671.7 spv of delay) during the weekday AM peak hour.
- Eastbound de facto left-turn would deteriorate within LOS F (from a v/c ratio of 1.29 and 184.8 spv of delay to a v/c ratio of 2.15 and 550.2 spv of delay) during the weekday midday peak hour; and from LOS D to LOS F (from a v/c ratio of 0.88 and 54.9 spv of delay to a v/c ratio of 1.59 and 307.0 spv of delay) during the weekday PM peak hour.
- Eastbound left-turn/through would deteriorate from LOS B to LOS F (from a v/c ratio of 0.65 and 16.4 spv of delay to a v/c ratio of 1.22 and 141.5 spv of delay) during the weekday AM peak hour.

Bronx Psychiatric Center Land Use Improvement Project

- Westbound through/right-turn would deteriorate from LOS E to LOS F (from a v/c ratio of 1.04 and 59.6 spv of delay to a v/c ratio of 1.28 and 157.4 spv of delay) during the weekday AM peak hour.
- Southbound left-turn would deteriorate from LOS E to LOS F (from a v/c ratio of 0.99 and 70.2 spv of delay to a v/c ratio of 1.27 and 168.1 spv of delay) during the midday peak hour; and within LOS F (from a v/c ratio of 1.35 and 503.6 spv of delay to a v/c ratio of 1.96 and 772.0 spv of delay) during the weekday PM peak hour.
- Southbound right-turn would deteriorate within LOS D (from a v/c ratio of 0.64 and 35.7 spv of delay to a v/c ratio of 0.86 and 52.3 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.09 and 104.4 spv of delay to a v/c ratio of 1.46 and 255.0 spv of delay) during the midday peak hour; and within LOS F (from a v/c ratio of 1.24 and 500.8 spv of delay to a v/c ratio of 1.74 and 728.0 spv of delay) during the PM peak hour.

16. Waters Place and BPC Driveway

- Eastbound left-turn/through would deteriorate to a de facto left-turn from LOS C to LOS F (from a v/c ratio of 0.67 and 21.3 spv of delay to a v/c ratio of 1.24 and 200.0 spv of delay) during the weekday AM peak hour.
- Eastbound left-turn/through would deteriorate from LOS C to LOS F (from a v/c ratio of 0.76 and 22.8 spv of delay to a v/c ratio of 1.48 and 247.4 spv of delay) during the weekday midday peak hour and from LOS D to LOS F (from a v/c ratio of 0.97 and 40.7 spv of delay to a v/c ratio of 1.88 and 421.7 spv of delay) during the weekday PM peak hour.
- Westbound through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.18 and 108.7 spv of delay to a v/c ratio of 1.82 and 395.3 spv of delay) during the weekday AM peak hour.

17. Waters Place and Fink Avenue/Hutchinson River Parkway Southbound Off-Ramp

- Eastbound through/right-turn would deteriorate from LOS C to LOS D (from a v/c ratio of 0.77 and 25.6 spv of delay to a v/c ratio of 1.00 and 48.8 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 0.91 and 186.2 spv of delay to a v/c ratio of 1.31 and 359.9 spv of delay) during the weekday PM peak hour.
- Northbound left-turn/right-turn would deteriorate within LOS F (from a v/c ratio of 1.30 and 182.1 spv of delay to a v/c ratio of 2.13 and 542.8 spv of delay) during the weekday AM peak hour.
- Southbound channelized right-turn (unsignalized) would deteriorate within LOS F (from a v/c ratio of 1.24 and 138.3 spv of delay to a v/c ratio of 2.88 and 872.9 spv of delay) during the weekday AM peak hour and from LOS C to LOS F (from a v/c ratio of 0.58 and 16.4 spv of delay to a v/c ratio of 1.02 and 72.7 spv of delay) during the weekday PM peak hour.

18. Westchester Avenue and Ericson Place/Middletown Road

- Eastbound de facto left-turn would deteriorate within LOS F (from a v/c ratio of 1.45 and 594.0 spv of delay to a v/c ratio of 1.87 and 795.3 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.59 and 602.7 spv of delay to a v/c ratio of 2.16 and 857.5 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.52 and 555.2 spv of delay to a v/c ratio of 2.41 and 945.7 spv of delay) during the weekday PM peak hour.
- Eastbound through/right-turn would deteriorate within LOS F (from a v/c ratio of 0.88 and 99.3 spv of delay to a v/c ratio of 0.90 and 112.1 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.09 and 203.6 spv of delay to a v/c ratio of 1.13 and 216.0 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio

- of 1.15 and 209.5 spv of delay to a v/c ratio of 1.20 and 229.6 spv of delay) during the weekday PM peak hour.
- Westbound left-turn/through would deteriorate within LOS F (from a v/c ratio of 1.34 and 459.6 spv of delay to a v/c ratio of 1.43 and 497.9 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.17 and 418.5 spv of delay to a v/c ratio of 1.18 and 422.7 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.13 and 383.8 spv of delay to a v/c ratio of 1.14 and 385.0 spv of delay) during the weekday PM peak hour.
 - Northbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 0.98 and 115.6 spv of delay to a v/c ratio of 1.06 and 147.1 spv of delay) during the weekday AM peak hour; and within LOS F (from a v/c ratio of 0.96 and 94.3 spv of delay to a v/c ratio of 0.97 and 104.9 spv of delay) during the weekday PM peak hour.
 - Southbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.05 and 149.1 spv of delay to a v/c ratio of 1.12 and 177.5 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.13 and 169.7 spv of delay to a v/c ratio of 1.25 and 225.5 spv of delay) during the weekday PM peak hour.

19. Waters Place and Westchester Avenue

- Eastbound left-turn/through would deteriorate within LOS F (from a v/c ratio of 0.95 and 258.9 spv of delay to a v/c ratio of 1.27 and 395.8 spv of delay) during the weekday PM peak hour.
- Northbound de facto left-turn would deteriorate within LOS F (from a v/c ratio of 1.57 and 322.8 spv of delay to a v/c ratio of 3.00 and 955.7 spv of delay) during the weekday AM peak hour.
- Northbound left-turn/through/right-turn would deteriorate from a LOS D to LOS F (from a v/c ratio of 0.90 and 42.6 spv of delay to a v/c ratio of 1.19 and 129.6 spv of delay) during the weekday midday peak hour; and from LOS E to LOS F (from a v/c ratio of 0.67 and 59.7 spv of delay to a v/c ratio of 0.75 and 83.6 spv of delay) during the weekday PM peak hour.
- Southbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.06 and 153.6 spv of delay to a v/c ratio of 1.13 and 181.1 spv of delay) during the weekday AM peak hour.

20. Westchester Avenue and Waters Avenue

- Eastbound left-turn/right-turn deteriorates from LOS E to LOS F (from a v/c ratio of 0.85 and 44.4 spv of delay to a v/c ratio of 2.61 and 791.2 spv of delay).

21. Tan Place and Westchester Avenue

- Northbound through would deteriorate from LOS E to LOS F (from a v/c ratio of 0.68 and 69.9 spv of delay to a v/c ratio of 0.92 and 165.7 spv of delay) during the weekday AM peak hour.

22. Blondell Avenue and Westchester Avenue

- Northbound left-turn/through would deteriorate from LOS D to LOS E (from a v/c ratio of 0.72 and 53.0 spv of delay to a v/c ratio of 0.85 and 76.1 spv of delay) during the weekday AM peak hour; and from LOS D to LOS E (from a v/c ratio of 0.68 and 50.1 spv of delay to a v/c ratio of 0.73 and 56.6 spv of delay) during the weekday PM peak hour.

23. East Tremont Avenue and Westchester Avenue

- Northbound left-turn/through would deteriorate within LOS F (from a v/c ratio of 1.16 and 206.2 spv of delay to a v/c ratio of 1.38 and 296.3 spv of delay) during the weekday AM peak hour;

Bronx Psychiatric Center Land Use Improvement Project

and within LOS E (from a v/c ratio of 0.86 and 64.9 spv of delay to a v/c ratio of 0.90 and 75.2 spv of delay) during the weekday PM peak hour.

24. Commerce Avenue and Westchester Avenue

- Northbound left-turn/through/right-turn would deteriorate within LOS D (from a v/c ratio of 0.60 and 41.1 spv of delay to a v/c ratio of 0.70 and 46.5 spv of delay) during the weekday AM peak hour.
- Southbound left-turn/through/right-turn would deteriorate to a de facto left-turn from LOS D to LOS E (from a v/c ratio of 0.69 and 50.1 spv of delay to a v/c ratio of 0.65 and 99.0 spv of delay) during the weekday AM peak hour.
- Southbound left-turn/through/right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.74 and 53.2 spv of delay to a v/c ratio of 0.80 and 63.0 spv of delay) during the weekday PM peak hour.

27. East Tremont Avenue and Ericson Place

- Westbound through would deteriorate from LOS E to LOS F (from a v/c ratio of 1.02 and 67.6 spv of delay to a v/c ratio of 1.06 and 82.4 spv of delay) during the weekday AM peak hour.
- Northbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.07 and 84.8 spv of delay to a v/c ratio of 1.30 and 175.0 spv of delay) during the weekday AM peak hour; and within LOS F (from a v/c ratio of 1.06 and 80.8 spv of delay to a v/c ratio of 1.11 and 97.4 spv of delay) during the PM peak hour.

THE FUTURE WITHOUT THE PROPOSED PROJECT (WITH HRP IMPROVEMENTS)

2028 NO-ACTION

For the 2028 No-Action with HRP Improvements condition, as per *CEQR Technical Manual* guidelines, an annual background growth rate of 0.125 percent was assumed for the remaining years (year 2023 through 2028) to address the general growth in traffic in the study area. It should be noted that the 2028 No-Action condition does not include the Phase I completion of the proposed project.

As discussed above under Section B, “Preliminary Analysis Methodology and Screening Assessment,” NYCDOT has conducted a preliminary study and developed conceptual designs for access improvements to the southbound HRP (With HRP Improvements); these would include reconfiguring the HRP on- and off-ramps and introducing a new service road along the southbound HRP between Exit 2 (Westchester Avenue) and Exit 3 (Pelham Parkway). The new service road would also create a new signalized intersection at the East-West Road bisecting the project site. This new intersection has been added to the 2028 No-Action and With-Action traffic analyses presented below.

The southbound HRP improvements would provide direct access and egress between the existing Hutchinson Metro Center and the proposed project and the southbound HRP. Much of the inbound traffic from the north that currently exits onto Waters Place would be diverted from Waters Place to the new East-West Road through the project site. Similarly, outbound traffic to the south would not have to traverse Marconi Street and Waters Place to access the southbound HRP on-ramp at Westchester Avenue. Overall, the reconfiguration of the HRP on- and off-ramps providing access to the project site from the east would reroute vehicle traffic away from intersections along Waters Place. These new traffic routings have been assumed in the 2028 Phase II analyses. However, as stated previously, because there is currently no funding or plan to construct these potential HRP

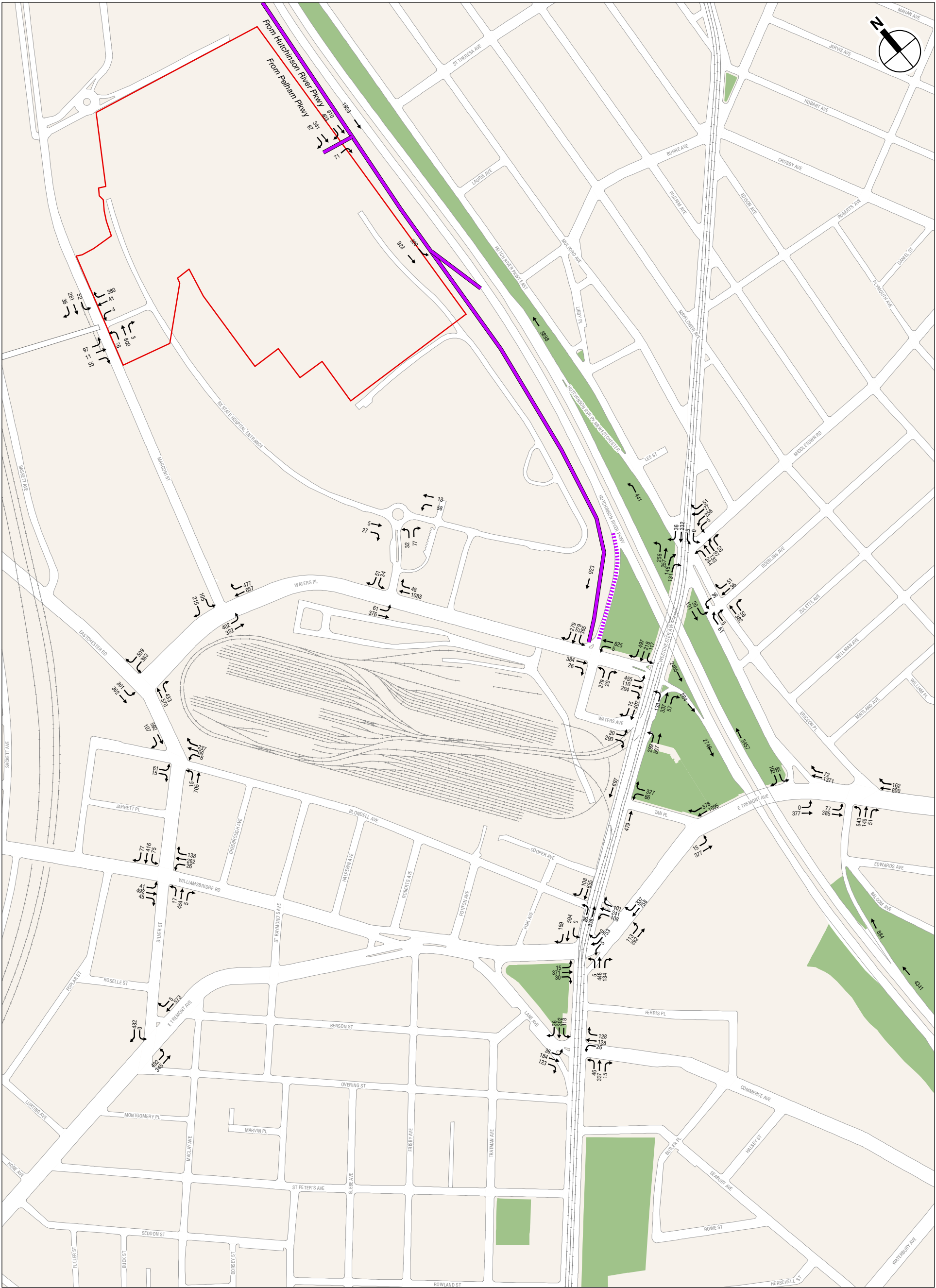
improvements by NYCDOT, absent other means of addressing traffic expected to be generated by Phase II of the proposed project, this second phase of the proposed project cannot proceed.

TRAFFIC OPERATIONS

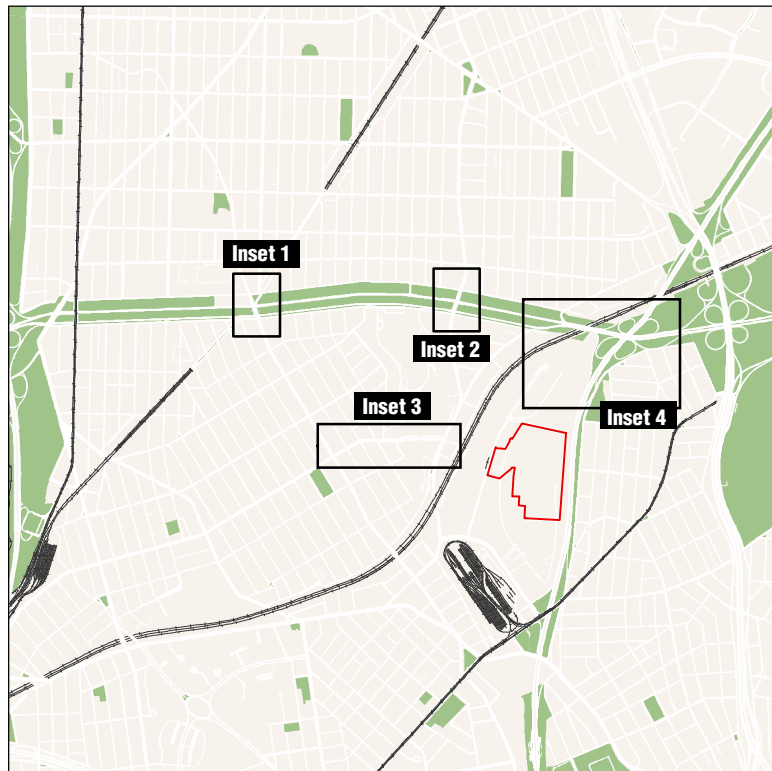
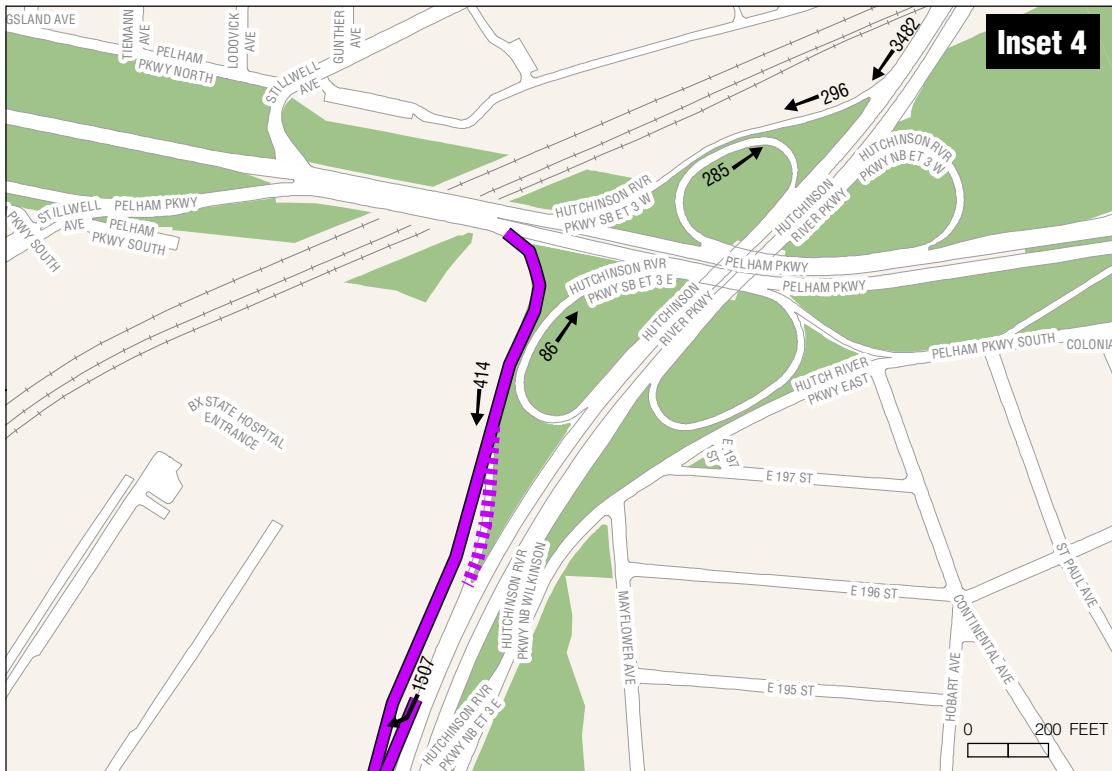
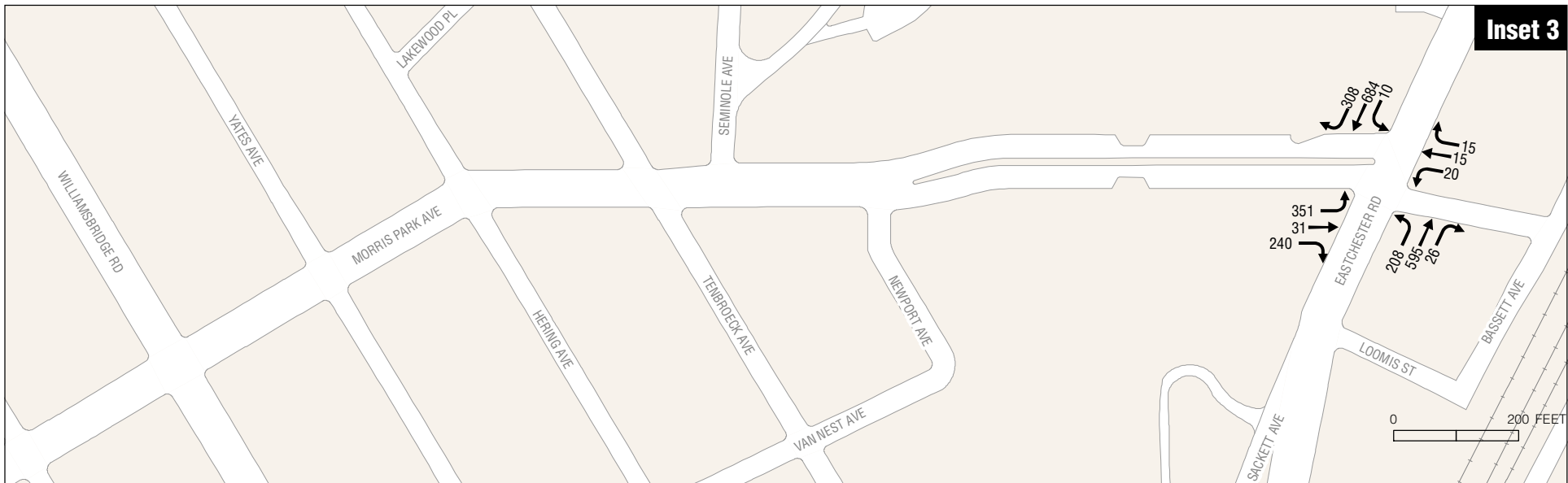
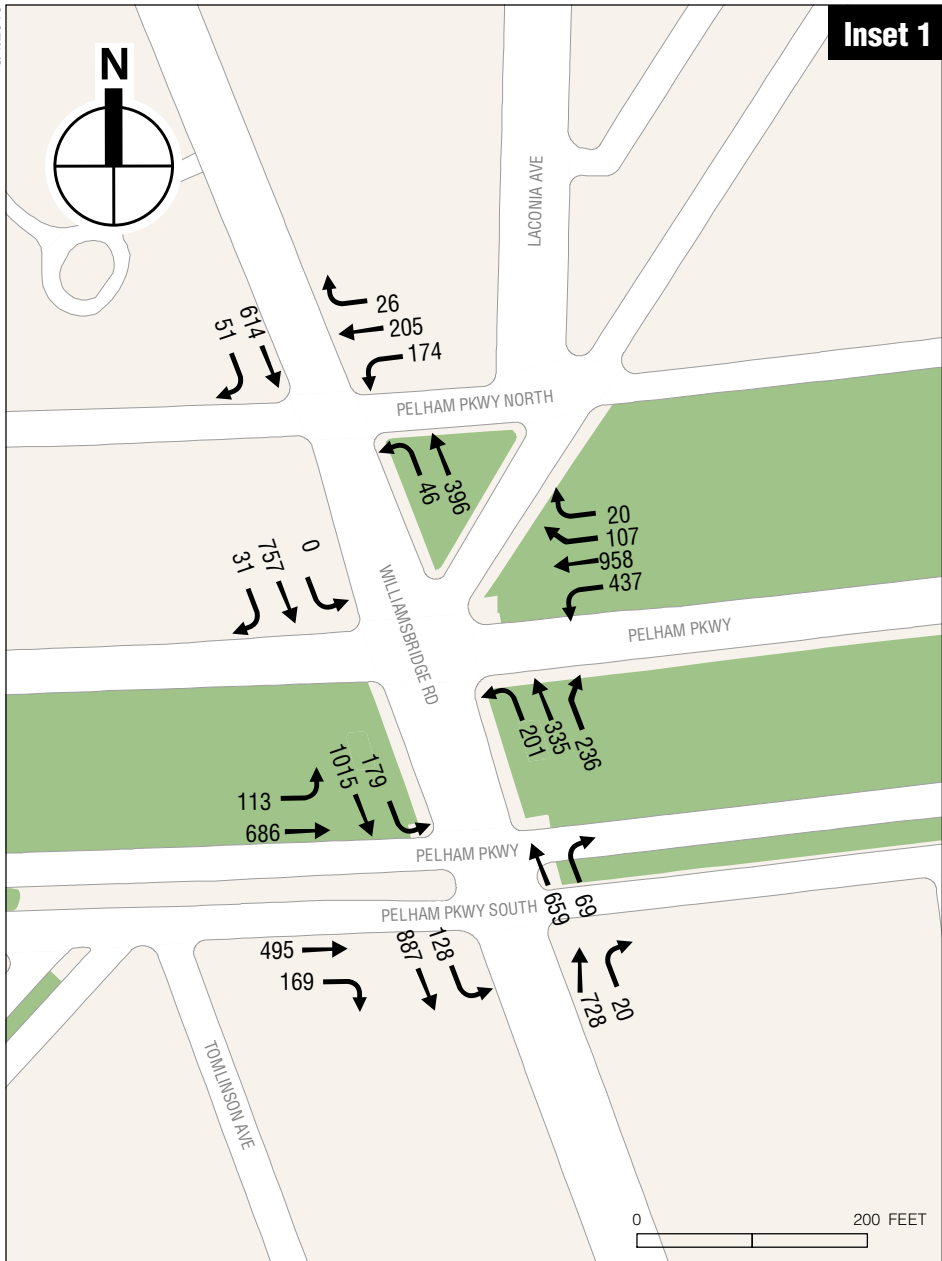
The 2028 No-Action with HRP Improvements condition traffic volumes are shown in **Figures 14-27A through 14-29B** for the weekday AM, midday, and PM peak hours. A summary of the 2028 No-Action with HRP Improvements condition traffic analysis results by lane group is presented in **Table 14-28**. Details on LOS, v/c ratios, and average delays are presented in **Tables 14-29 and 14-30**.

Table 14-28
Summary of 2028 No-Action with HRP Improvements
Traffic Analysis Results

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
Signalized Intersections			
Lane Groups at LOS A/B/C	63	80	59
Lane Groups at LOS D	22	11	21
Lane Groups at LOS E	6	7	3
Lane Groups at LOS F	17	10	25
Total	108	108	108
Lane Groups with v/c \geq 0.90	24	14	24
Unsignalized Intersections			
Lane Groups at LOS A/B/C	11	12	12
Lane Groups at LOS D	0	0	0
Lane Groups at LOS E	1	0	0
Lane Groups at LOS F	0	0	0
Total	12	12	12
Lane Groups with v/c \geq 0.90	0	0	0
Notes: LOS = Level of service; v/c = volume-to-capacity ratio.			



2028 No-Action Traffic Volumes (With HRP Improvements)
Weekday AM Peak Hour
Figure 14-27A

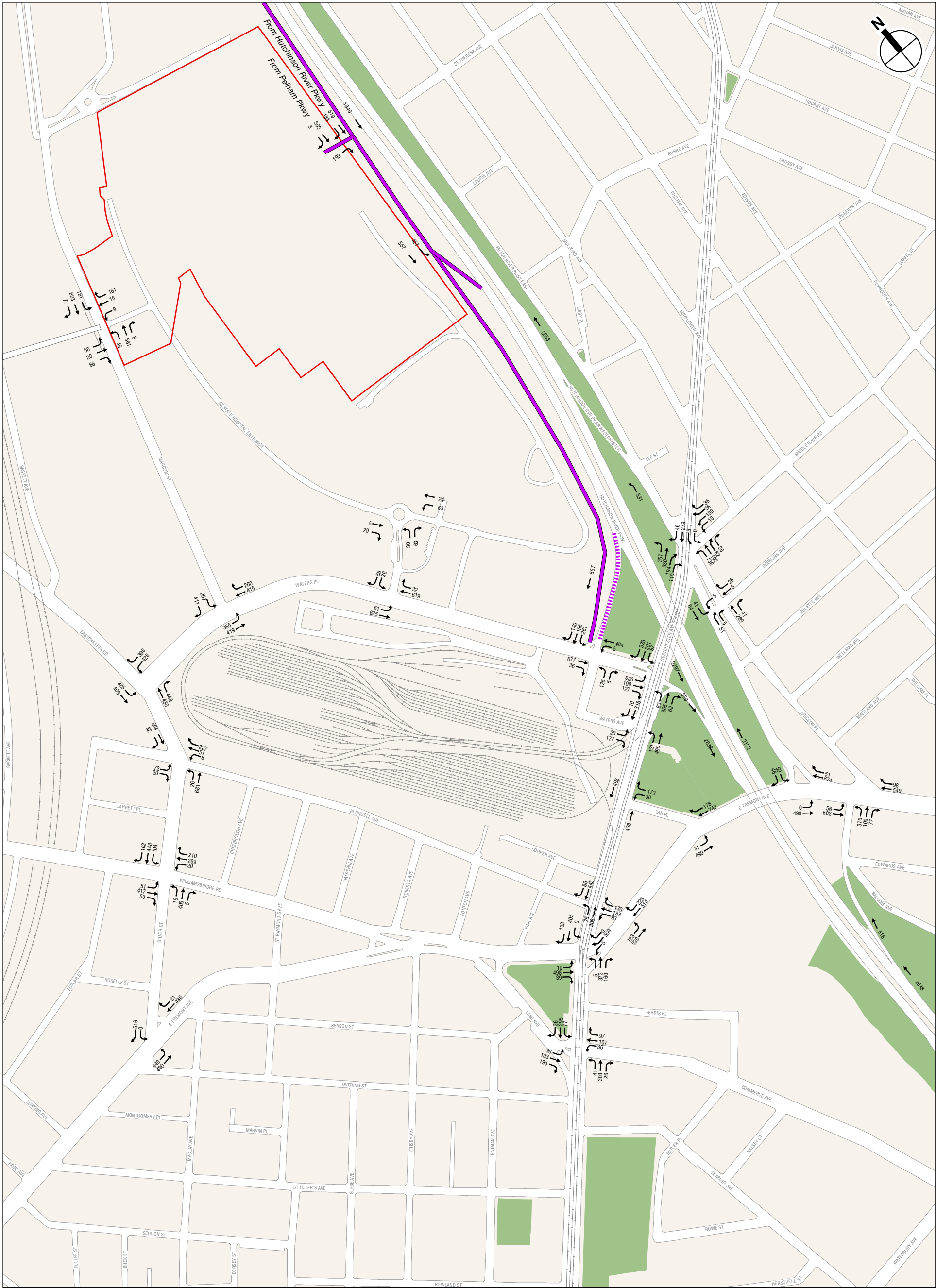


- Project Site
- Hutchinson River Parkway Improvement* (Proposed Roadway)
- Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

BRONX PSYCHIATRIC CENTER LAND USE IMPROVEMENT PROJECT

2028 No-Action Traffic Volumes (With HRP Improvements)
Weekday AM Peak Hour
Figure 14-27B

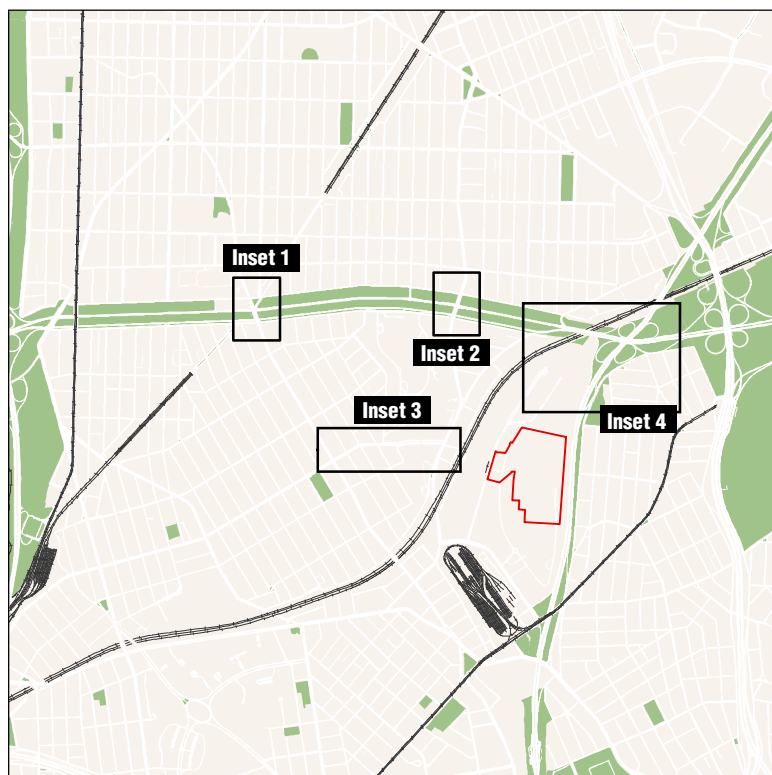
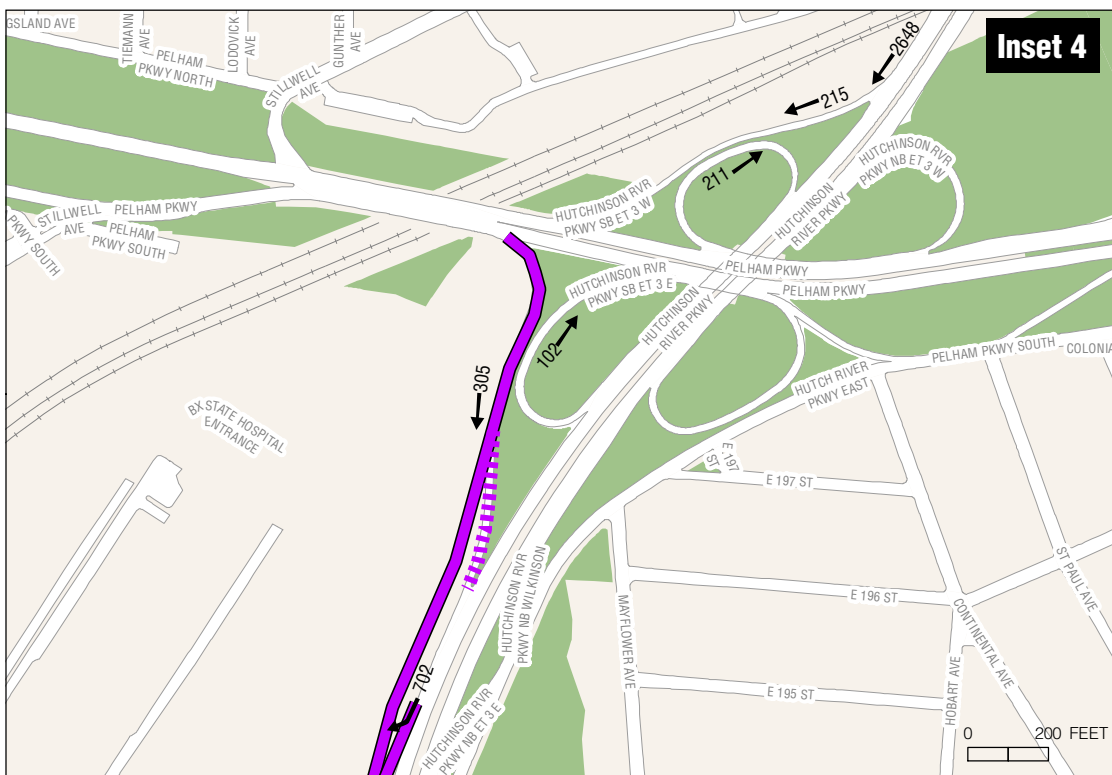
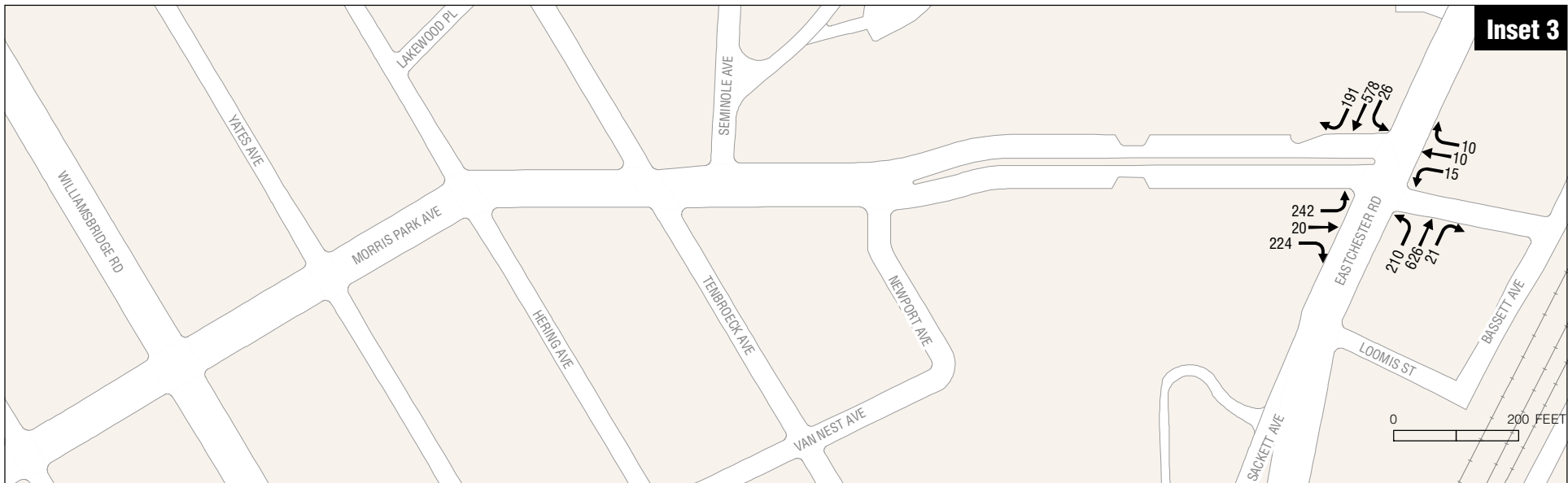
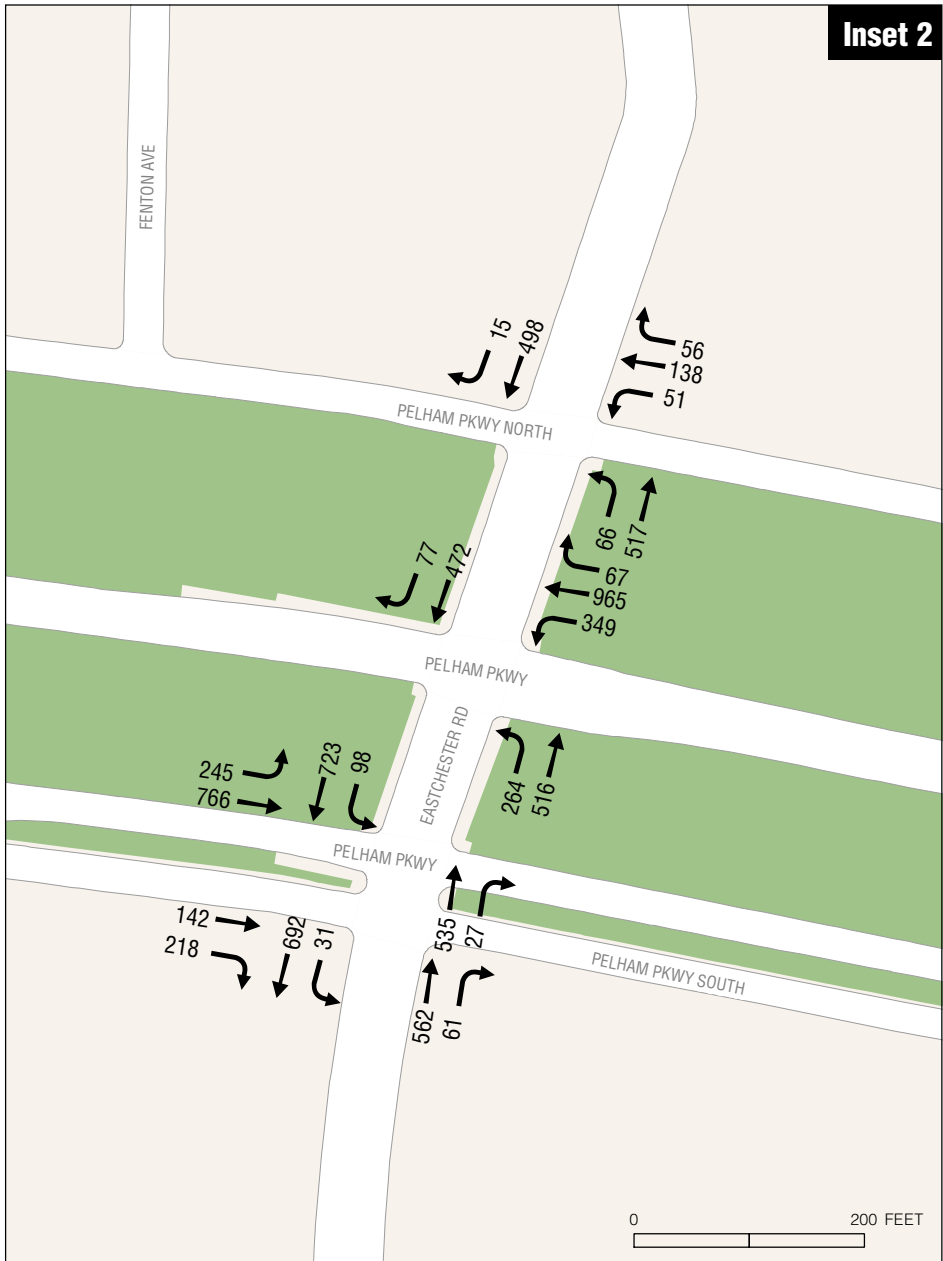
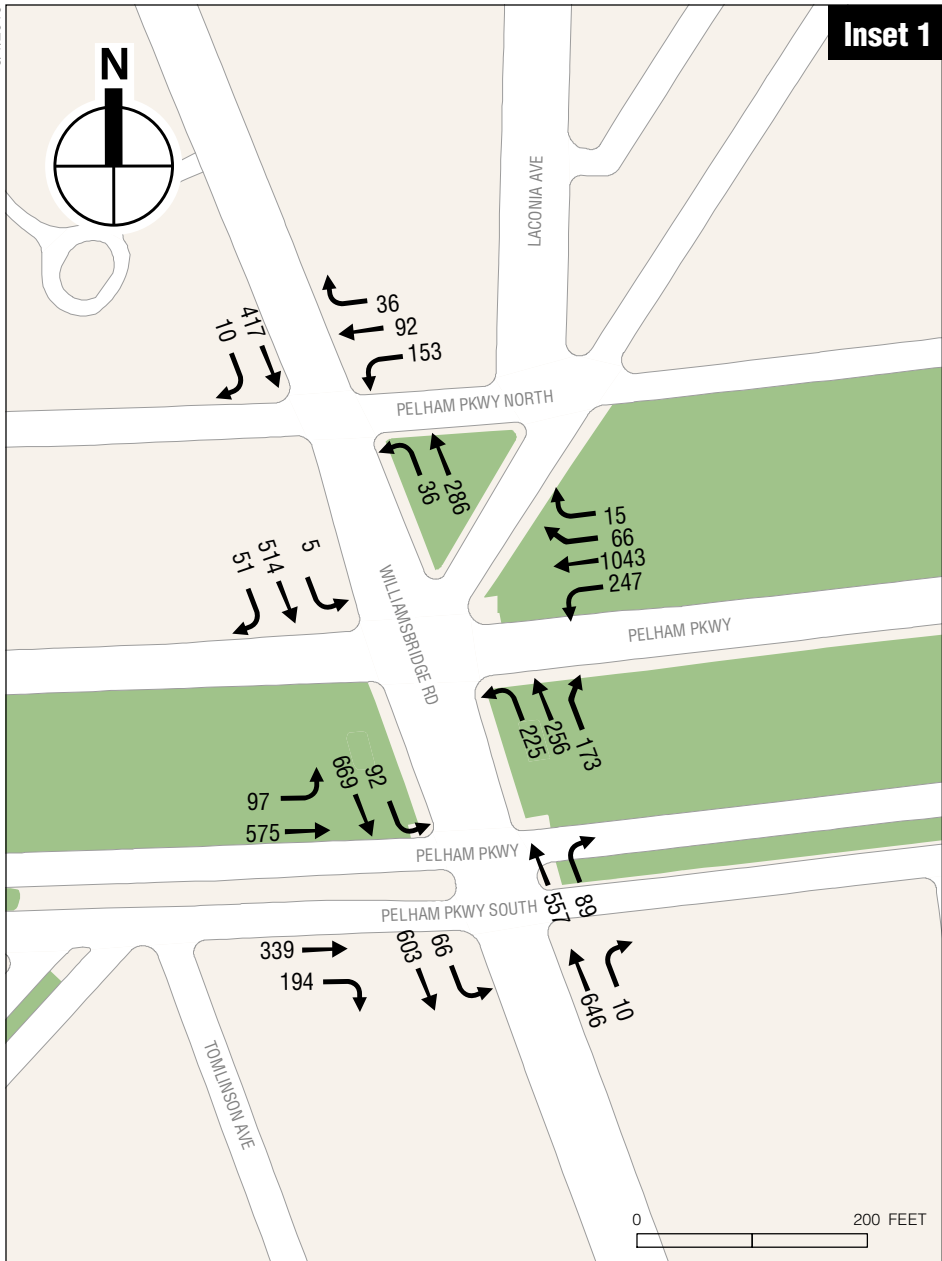


- Project Site
- Hutchinson River Parkway Improvement* (Proposed Roadway)
- Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

2028 No-Action Traffic Volumes (With HRP Improvements)
Weekday Midday Peak Hour
Figure 14-28A

BRONX PSYCHIATRIC CENTER LAND USE IMPROVEMENT PROJECT

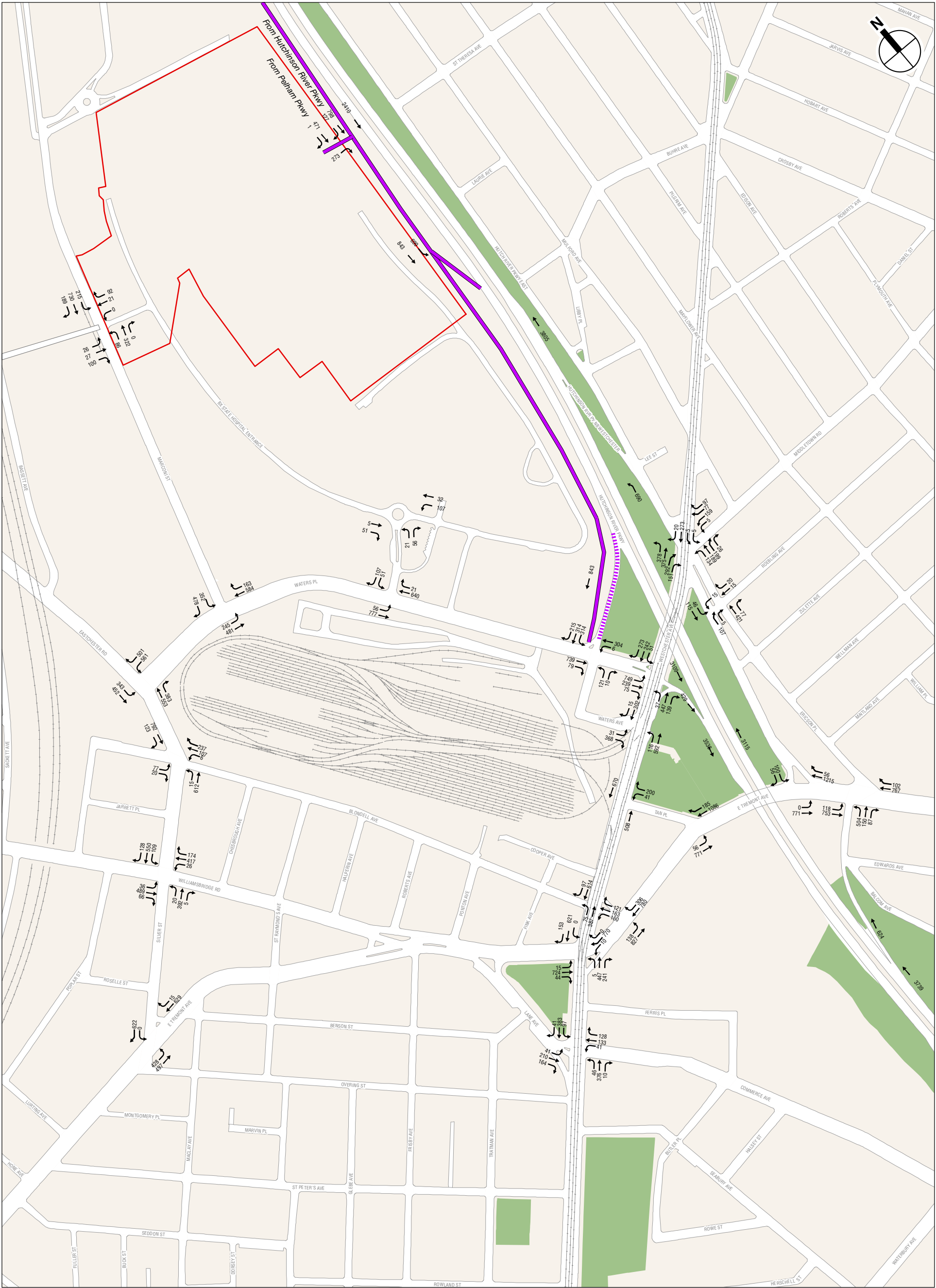


- Project Site
- Hutchinson River Parkway Improvement* (Proposed Roadway)
- Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

BRONX PSYCHIATRIC CENTER LAND USE IMPROVEMENT PROJECT

2028 No-Action Traffic Volumes (With HRP Improvements)
Weekday Midday Peak Hour
Figure 14-28B



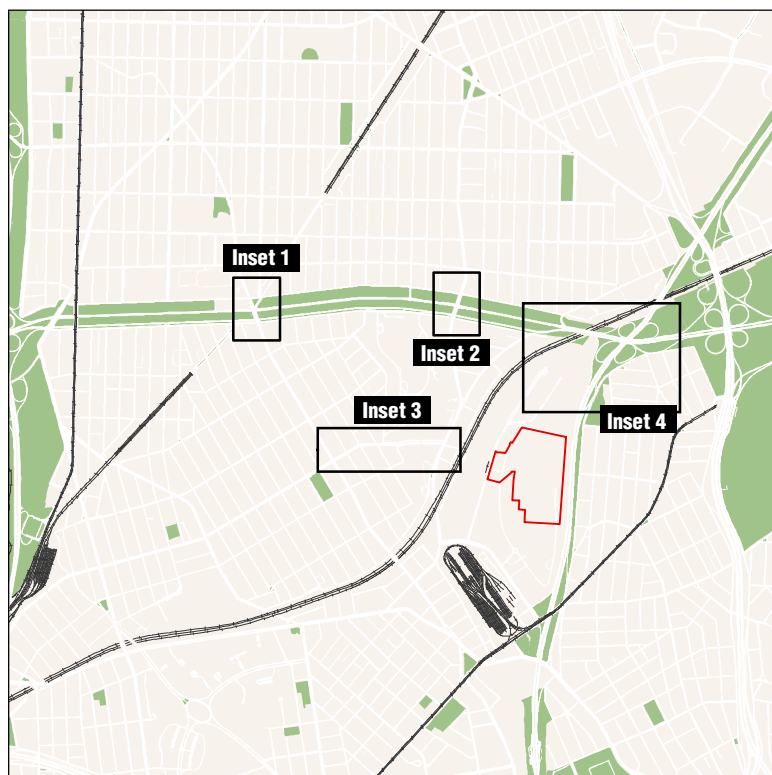
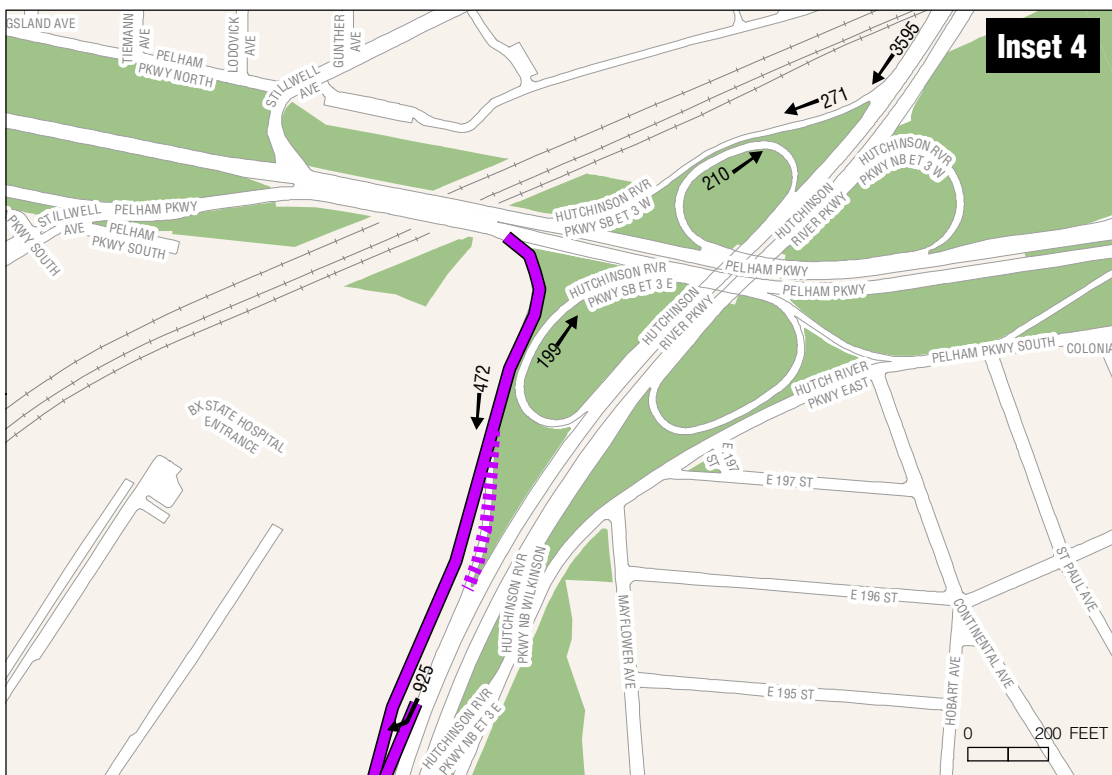
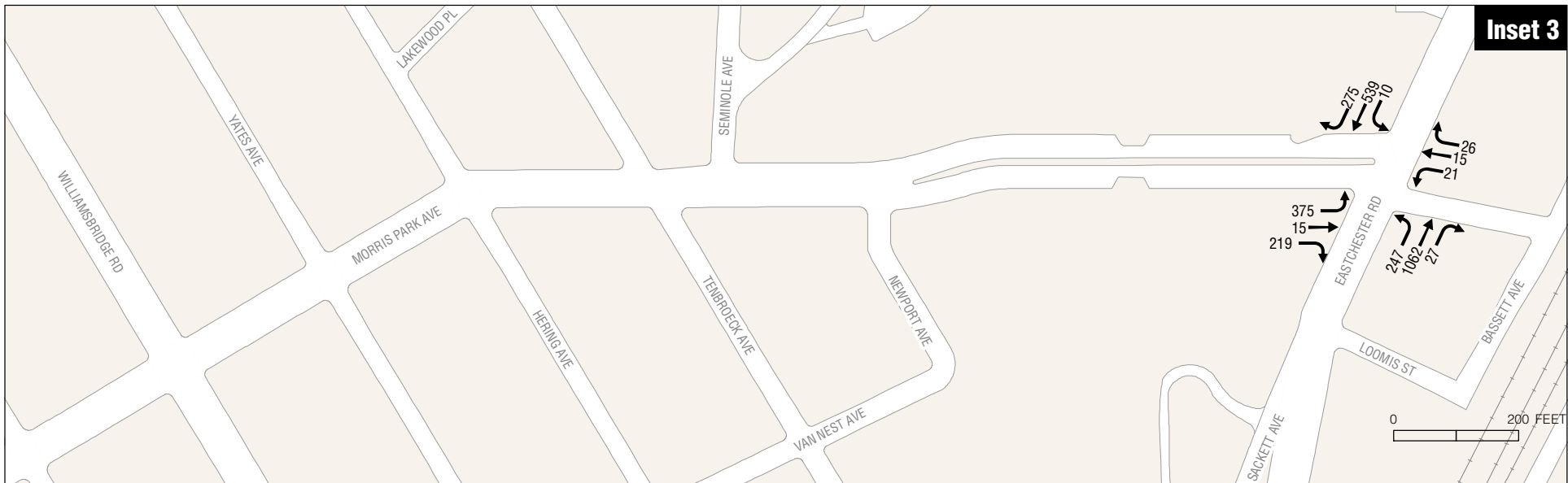
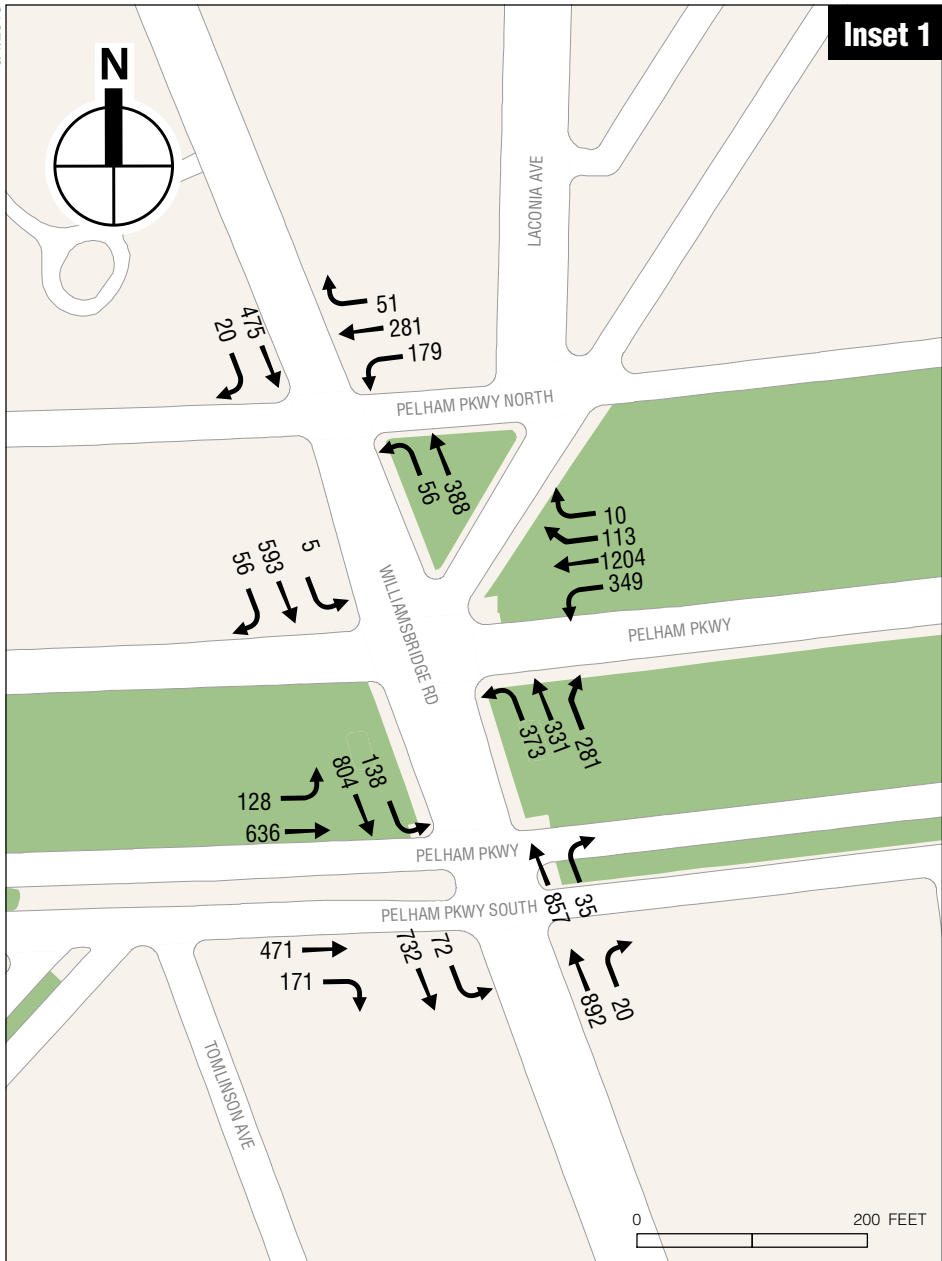
Project Site

Hutchinson River Parkway Improvement* (Proposed Roadway)

Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

2028 No-Action Traffic Volumes (With HRP Improvements)
Weekday PM Peak Hour
Figure 14-29A



- Project Site
 - Hutchinson River Parkway Improvement* (Proposed Roadway)
 - Hutchinson River Parkway Improvement* (Removal of Existing Ramp)
- *NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

Bronx Psychiatric Center Land Use Improvement Project

Table 14-29
Existing and 2028 No-Action with HRP Improvements Conditions
Level of Service Analysis
Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2028 No-Action				Existing				2028 No-Action				Existing				2028 No-Action			
	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS
1. Pelham Parkway North & Williamsbridge Road																								
WB	L	0.23	21.9	C	L	0.27	22.7	C	L	0.25	22.2	C	L	0.29	23.1	C	L	0.26	22.4	C	L	0.32	23.5	C
	LTR	0.48	25.7	C	LTR	0.30	22.3	C	LTR	0.26	22.2	C	LTR	0.16	20.8	C	LTR	0.55	27.2	C	LTR	0.35	22.9	C
NB	LT	0.35	12.3	B	LT	0.36	12.4	B	LT	0.21	10.8	B	LT	0.22	10.9	B	LT	0.30	11.7	B	LT	0.31	11.8	B
SB	TR	0.51	14.2	B	TR	0.52	14.3	B	TR	0.30	11.7	B	TR	0.31	11.7	B	TR	0.37	12.4	B	TR	0.38	12.5	B
	Int.		16.4	B	Int.		15.9	B	Int.		14.4	B	Int.		14.3	B	Int.		16.8	B	Int.		15.9	B
2. Pelham Parkway (Westbound) & Williamsbridge Road & Esplanade																								
WB	LT	0.99	51.4	D	LT	1.05	67.6	E	LT	0.85	35.8	D	LT	0.95	44.2	D	LT	1.00	54.2	D	LT	1.10	86.4	F
	R	0.36	26.9	C	R	0.37	27.0	C	R	0.21	24.1	C	R	0.22	24.2	C	R	0.31	25.7	C	R	0.32	25.9	C
NB	L	0.32	22.7	C	L	0.33	23.0	C	L	0.33	18.1	B	L	0.34	18.8	B	L	0.45	23.3	C	L	0.46	24.0	C
	T	0.34	10.5	B	T	0.35	10.6	B	T	0.24	9.6	A	T	0.25	9.7	A	T	0.47	12.0	D	T	0.49	12.2	B
SB	LTR	0.97	54.7	D	LTR	0.99	59.5	E	LTR	0.70	33.3	C	LTR	0.72	33.9	C	LTR	0.85	40.3	D	LTR	0.87	42.5	D
	Int.		42.1	D	Int.		50.8	D	Int.		28.8	C	Int.		33.4	C	Int.		38.1	D	Int.		53.8	D
3. & 4. Pelham Parkway (Eastbound) & Williamsbridge Road																								
EB (ML)	LT	1.05	80.6	F	LT	1.17	124.0	F	LT	0.98	62.9	E	LT	1.01	70.6	E	LT	1.05	83.0	F	LT	1.09	94.6	F
EB (SR)	TR	0.68	36.4	D	TR	0.85	44.8	D	TR	0.38	30.5	C	TR	0.49	32.1	C	TR	0.61	34.7	C	TR	0.74	38.7	D
	R	0.75	49.3	D	R	0.78	51.5	D	R	0.85	62.6	E	R	0.87	66.4	E	R	0.88	71.6	E	R	0.93	81.2	F
NB	T	0.82	38.8	D	T	0.84	40.4	D	T	0.66	32.0	C	T	0.68	32.6	C	T	1.03	70.2	E	T	1.05	78.3	E
	R	0.28	27.2	C	R	0.32	27.9	C	R	0.31	27.6	C	R	0.32	27.8	C	R	0.17	25.1	C	R	0.18	25.3	C
SB	L	0.45	11.2	B	L	0.47	11.7	B	L	0.23	7.8	A	L	0.23	7.9	A	L	0.31	10.9	B	L	0.32	11.1	B
	LT	0.56	9.7	A	LT	0.57	10.0	A	LT	0.35	7.4	A	LT	0.36	7.5	A	LT	0.48	8.8	A	LT	0.50	9.1	A
	Int.		37.8	D	Int.		50.4	D	Int.		35.1	D	Int.		37.7	D	Int.		50.0	D	Int.		55.5	E
5. Pelham Parkway North & Eastchester Road																								
WB	LTR	0.60	33.2	C	LTR	0.62	33.5	C	LTR	0.36	28.9	C	LTR	0.37	29.1	C	LTR	0.64	42.0	D	LTR	0.65	42.3	D
NB	LT	0.33	8.1	A	LT	0.37	8.4	A	LT	0.28	7.7	A	LT	0.34	8.2	A	LT	0.42	11.1	B	LT	0.47	11.8	B
SB	TR	0.60	29.8	C	TR	0.66	31.4	C	TR	0.57	29.3	C	TR	0.68	31.7	C	TR	0.55	36.9	D	TR	0.65	39.5	D
	Int.		22.2	C	Int.		22.8	C	Int.		20.1	C	Int.		21.1	C	Int.		26.9	C	Int.		28.0	C
6. Pelham Parkway (Westbound) & Eastchester Road																								
WB	L	0.53	24.6	C	L	0.61	27.0	C	L	0.47	23.6	C	L	0.60	26.8	C	L	0.76	54.2	D	L	0.99	89.8	F
	LT	0.74	26.9	C	LT	0.83	30.4	C	LT	0.52	22.8	C	LT	0.64	24.8	C	LT	1.02	78.2	E	LT	1.24	159.8	F
NB	R	0.13	18.9	B	R	0.13	18.8	B	R	0.10	18.5	B	R	0.14	18.9	B	R	0.25	38.7	D	R	0.28	39.3	D
	L	0.37	24.4	C	L	0.49	29.0	C	L	0.52	25.7	C	L	0.66	32.8	C	L	0.39	20.6	C	L	0.54	26.2	C
	T	0.38	14.6	B	T	0.39	14.7	B	T	0.38	14.6	B	T	0.39	14.7	B	T	0.43	10.1	B	T	0.36	9.3	A
SB	TR	0.75	34.8	C	TR	0.70	32.7	C	TR	0.53	28.8	C	TR	0.61	30.4	C	TR	0.73	46.9	D	TR	0.86	54.5	D
	Int.		25.8	C	Int.		27.4	C	Int.		22.6	C	Int.		24.9	C	Int.		47.6	D	Int.		83.5	F
7. & 8. Pelham Parkway (Eastbound) & Eastchester Road																								
EB (ML)	LT	0.91	37.9	D	LT	1.00	53.1	D	LT	0.85	32.3	C	LT	0.87	34.2	C	LT	1.05	75.1	E	LT	1.08	86.4	F
EB (SR)	TR	0.90	48.4	D	TR	1.14	113.0	F	TR	0.67	29.6	C	TR	0.83	39.6	D	TR	0.98	71.7	E	TR	1.17	133.2	F
NB	TR	0.76	32.8	C	TR	0.87	39.9	D	TR	0.61	28.2	C	TR	0.74	32.1	C	TR	0.50	26.7	C	TR	0.56	28.0	C
	L	0.47	27.1	C	L	0.54	32.2	C	L	0.24	18.7	B	L	0.33	22.8	C	L	0.45	31.4	C	L	0.56	40.6	D
SB	LT	0.72	20.6	C	LT	0.77	22.3	C	LT	0.45	15.5	B	LT	0.52	16.6	B	LT	0.47	17.9	B	LT	0.56	19.7	B
	Int.		32.3	C	Int.		48.6	D	Int.		26.5	C	Int.		29.6	C	Int.		49.4	D	Int.		62.2	E

Table 14-29 (cont'd)
Existing and 2028 No-Action with HRP Improvements Conditions
Level of Service Analysis
Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2028 No-Action				Existing				2028 No-Action				Existing				2028 No-Action			
	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS
9. Morris Park Avenue & Eastchester Road																								
EB	L	0.91	63.4	E	L	0.93	78.9	E	L	0.75	47.0	D	L	0.80	62.2	E	L	0.97	76.8	E	L	1.03	103.1	F
	LT	0.47	32.1	C	LT	0.48	41.7	D	LT	0.23	26.7	C	LT	0.24	35.7	D	LT	0.52	33.7	C	LT	0.54	44.2	D
	R	0.67	37.9	D	R	0.71	49.9	D	R	0.62	36.2	D	R	0.67	48.4	D	R	0.65	36.9	D	R	0.70	49.4	D
WB	LTR	0.23	27.1	C	LTR	0.24	35.8	D	LTR	0.14	25.3	C	LTR	0.14	33.7	C	LTR	0.23	26.8	C	LTR	0.25	35.7	D
NB	L	0.78	56.1	E	L	0.81	71.2	E	L	0.74	51.7	D	L	0.80	68.6	E	L	0.89	68.9	E	L	0.96	93.4	F
	TR	0.39	13.1	B	TR	0.45	18.7	B	TR	0.39	13.2	B	TR	0.47	19.0	B	TR	0.69	17.9	B	TR	0.77	26.5	C
SB	LTR	1.05	74.7	E	LTR	1.21	146.0	F	LTR	1.02	68.2	E	LTR	1.14	118.4	F	LTR	0.99	60.5	E	LTR	1.17	130.2	F
	Int.		49.9	D	Int.		84.8	F	Int.		43.6	D	Int.		68.5	E	Int.		42.4	D	Int.		71.0	E
10. Waters Place & Eastchester Road																								
WB	L	1.05	90.9	F	L	1.06	93.8	F	L	0.68	31.6	C	L	0.81	38.4	D	L	1.05	87.2	F	L	1.25	162.8	F
	R	0.84	34.0	C	R	0.92	43.7	D	R	0.53	19.9	B	R	0.62	22.1	C	R	0.73	27.3	C	R	0.82	32.2	C
NB	TR	0.87	31.7	C	TR	0.98	47.1	D	TR	0.78	28.0	C	TR	0.90	35.9	D	TR	0.75	25.3	C	TR	0.84	29.4	C
SB	DefL	0.58	29.6	C	DefL	0.84	48.7	D	DefL	0.83	48.9	D	DefL	1.09	108.5	F	DefL	0.71	32.6	C	DefL	0.84	45.1	D
	T	0.41	9.6	A	T	0.49	10.9	B	T	0.52	15.7	B	T	0.59	17.4	B	T	0.49	10.7	B	T	0.58	12.4	B
	Int.		39.3	D	Int.		48.7	D	Int.		28.0	C	Int.		40.4	D	Int.		36.5	D	Int.		56.5	E
11. Blondell Avenue & Eastchester Road																								
EB	LR	0.24	18.8	B	LR	0.25	19.0	B	LR	0.28	19.3	B	LR	0.29	19.6	B	LR	0.33	20.5	C	LR	0.34	20.9	C
WB	LTR	0.61	25.1	C	LTR	0.62	25.7	C	LTR	0.49	22.3	C	LTR	0.51	22.6	C	LTR	0.59	24.8	C	LTR	0.61	25.3	C
NB	LT	0.54	18.2	B	LT	0.63	19.9	B	LT	0.49	17.4	B	LT	0.59	19.0	B	LT	0.43	16.5	B	LT	0.50	17.5	B
SB	TR	0.53	17.9	B	TR	0.58	18.8	B	TR	0.50	17.4	B	TR	0.59	18.9	B	TR	0.53	17.9	B	TR	0.64	19.9	B
	Int.		19.5	B	Int.		20.5	C	Int.		18.4	B	Int.		19.6	B	Int.		19.0	B	Int.		20.2	C
12. Williamsbridge Road & Eastchester Road																								
EB	LTR	0.55	20.2	C	LTR	0.57	20.6	C	LTR	0.51	19.8	B	LTR	0.54	20.2	C	LTR	0.55	20.4	C	LTR	0.57	20.8	C
WB	LTR	0.44	18.6	B	LTR	0.46	18.8	B	LTR	0.55	20.3	C	LTR	0.56	20.6	C	LTR	0.59	21.0	C	LTR	0.60	21.4	C
NB	LTR	0.64	23.8	C	LTR	0.80	30.9	C	LTR	0.55	21.5	C	LTR	0.75	28.4	C	LTR	0.51	20.7	C	LTR	0.68	25.4	C
SB	L	0.24	17.3	B	L	0.31	19.0	B	L	0.32	18.5	B	L	0.41	21.0	C	L	0.29	17.8	B	L	0.35	19.4	B
	TR	0.79	31.2	C	TR	0.90	40.8	D	TR	0.84	34.9	C	TR	1.04	71.6	E	TR	0.86	37.0	D	TR	1.10	92.2	F
	Int.		23.1	C	Int.		27.5	C	Int.		23.8	C	Int.		35.7	D	Int.		24.5	C	Int.		41.3	D
13. East Tremont Avenue & Silver Street																								
EB	L	0.61	24.6	C	L	0.76	32.0	C	L	0.44	14.9	B	L	0.59	18.6	B	L	0.52	23.7	C	L	0.65	28.7	C
	T	0.40	8.5	A	T	0.42	8.6	A	T	0.46	9.8	A	T	0.47	9.9	A	T	0.51	9.9	A	T	0.53	10.1	B
WB	TR	0.64	35.8	D	TR	0.65	36.2	D	TR	0.65	34.5	C	TR	0.67	34.9	C	TR	0.72	38.3	D	TR	0.73	38.9	D
SB	R	1.05	94.2	F	R	1.20	149.5	F	R	0.92	55.1	E	R	1.19	135.4	F	R	1.05	93.5	F	R	1.40	232.7	F
	Int.		43.4	D	Int.		61.1	E	Int.		29.6	C	Int.		54.7	D	Int.		42.4	D	Int.		86.5	F

Bronx Psychiatric Center Land Use Improvement Project

Table 14-29 (cont'd)
Existing and 2028 No-Action with HRP Improvements Conditions
Level of Service Analysis
Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2028 No-Action				Existing				2028 No-Action				Existing				2028 No-Action			
	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
14. Project Driveway & Marconi Street																								
EB					LTR	0.67	45.4	D					LTR	0.86	69.4	E					LTR	0.69	47.0	D
WB					LTR	1.45	253.6	F					LTR	0.82	57.9	E					LTR	0.38	34.1	C
NB					LTR	0.81	27.2	C					LTR	0.61	21.5	C					DefL	1.11	158.3	F
SB					LTR	0.46	19.2	B					LTR	1.17	115.5	F					TR	0.45	19.3	B
					Int.		82.5	F					Int.		72.0	E					LTR	1.23	136.6	F
15. Waters Place & Marconi Street																								
EB	L	1.05	94.5	F	L	1.28	163.4	F	L	0.82	40.3	D	DefL	1.07	94.7	F	L	0.64	19.9	B	DefL	0.78	36.8	D
WB	LT	0.44	10.6	B	LT	0.44	10.4	B	LT	0.43	11.0	B	T	0.44	11.1	B	LT	0.46	11.4	B	T	0.47	11.6	B
SB	TR	0.85	27.5	C	TR	0.69	21.4	C	TR	0.53	18.5	B	TR	0.50	17.9	B	TR	0.54	18.5	B	TR	0.51	17.9	B
	L	0.28	26.4	C	L	0.28	26.4	C	L	0.68	35.8	D	L	0.60	33.1	C	L	1.01	374.0	F	L	0.80	256.8	F
	R	0.46	30.0	C	R	0.64	35.8	D	R	0.78	43.6	D	R	1.10	105.2	F	R	0.91	358.2	F	R	1.25	503.7	F
	Int.				Int.				Int.				Int.				Int.				Int.			
16. Waters Place & BPC Driveway																								
EB	LT	0.55	18.1	B	LT	0.52	17.2	B	LT	0.61	18.5	B	LT	0.59	18.0	B	LT	0.81	24.4	C	LT	0.73	21.3	C
WB	TR	1.02	50.7	D	TR	0.83	24.6	C	TR	0.51	16.4	B	TR	0.47	15.7	B	TR	0.56	17.1	B	TR	0.51	16.4	B
SB	L	0.09	17.7	B	L	0.07	17.5	B	L	0.11	18.0	B	L	0.07	17.5	B	L	0.13	18.1	B	L	0.08	17.6	B
	LR	0.13	18.3	B	LR	0.13	18.2	B	LR	0.14	18.3	B	LR	0.14	18.4	B	LR	0.21	19.2	B	LR	0.21	19.2	B
	Int.				Int.				Int.				Int.				Int.				Int.			
17. Waters Place & Fink Avenue/HRP Southbound Off-Ramp																								
EB	TR	0.38	17.6	B	TR	0.38	17.6	B	TR	0.63	21.6	C	TR	0.61	21.2	C	TR	0.78	119.0	F	TR	0.69	90.9	F
WB	LT	0.45	18.6	B	LT	0.54	20.0	B	LT	0.31	16.7	B	LT	0.34	17.1	B	LT	0.25	16.1	B	LT	0.27	16.3	B
NB	LR	1.05	93.6	F	LR	1.31	188.4	F	LR	0.33	18.5	B	LR	0.42	20.3	C	LR	0.48	23.8	C	LR	0.57	27.4	C
SB	L	0.59	22.2	C	L	0.59	22.2	C	L	0.32	17.3	B	L	0.38	18.2	B	L	0.43	19.0	B	L	0.51	20.3	C
	T	0.61	23.6	C	T	0.41	18.6	B	T	0.29	17.2	B	T	0.21	15.9	B	T	0.65	25.3	B	T	0.47	19.4	B
	Int.				Int.				Int.				Int.				Int.				Int.			
18. Westchester Avenue & Ericson Place/Middletown Road																								
EB	DefL	0.88	132.3	F	DefL	1.46	600.5	F	LTR	1.05	223.9	F	DefL	1.61	611.9	F	LTR	1.05	198.1	F	DefL	1.54	562.0	F
WB	TR				TR	0.89	105.2	F	LT				TR	1.07	197.2	F	LT				TR	1.16	213.5	F
NB	LT	0.47	44.2	D	LT	1.34	462.5	F	LT	0.50	48.9	D	LT	1.17	421.3	F	LT	0.49	45.8	D	LT	1.14	385.0	F
SB	LTR	1.05	153.3	F	LTR	0.98	117.7	F	LTR	0.70	52.2	D	LTR	0.66	45.6	D	LTR	1.05	145.9	F	LTR	0.96	98.2	F
	LTR	1.05	134.4	F	LTR	1.10	154.4	F	LTR	1.01	138.2	F	LTR	1.05	150.0	F	LTR	1.05	140.0	F	LTR	1.13	171.6	F
	Int.				Int.				Int.				Int.				Int.				Int.			
19. Waters Place & Westchester Avenue																								
EB	LT	0.51	19.4	B	LT	0.50	19.3	B	LT	0.68	22.8	C	LT	0.67	22.5	C	LT	0.84	199.1	F	LT	0.78	174.2	F
NB	LTR	1.01	191.9	F	DefL	1.60	333.6	F	LTR	0.77	29.4	C	LTR	0.91	43.6	D	LTR	0.63	53.9	D	LTR	0.67	61.1	E
SB					TR	1.14	280.1	F																
	LTR	1.01	146.8	F	LTR	1.06	155.1	F	LTR	0.75	26.8	C	LTR	0.81	30.4	C	LTR	0.65	23.1	C	LTR	0.69	24.2	C
	Int.				Int.				Int.				Int.				Int.				Int.			
21. Tan Place & Westchester Avenue																								
WB	L	0.14	18.4	B	L	0.15	18.5	B	L	0.08	17.6	B	L	0.08	17.6	B	L	0.07	17.5	B	L	0.07	17.5	B
NB	R	0.56	25.8	C	R	0.68	29.8	C	R	0.34	21.2	C	R	0.38	21.9	C	R	0.38	21.7	C	R	0.40	22.1	C
SB	T	0.57	55.4	E	T	0.68	70.5	E	T	0.49	16.8	B	T	0.54	17.8	B	T	0.50	22.7	C	T	0.53	23.7	C
	T	0.54	20.7	C	T	0.56	21.2	C	T	0.53	17.5	B	T	0.57	18.4	B	T	0.56	17.2	B	T	0.59	17.9	B
	Int.				Int.				Int.				Int.				Int.				Int.			

Table 14-29 (cont'd)
Existing and 2028 No-Action with HRP Improvements Conditions
Level of Service Analysis
Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2028 No-Action				Existing				2028 No-Action				Existing				2028 No-Action			
	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS
22. Blondell Avenue & Westchester Avenue																								
WB	L	0.17	21.9	C	L	0.18	22.0	C	L	0.16	17.9	B	L	0.16	21.8	C	L	0.27	23.4	C	L	0.28	23.5	C
	T	0.34	24.3	C	T	0.35	24.5	C	T	0.20	18.2	B	T	0.19	22.2	C	T	0.25	23.0	C	T	0.25	23.1	C
NB	LT	0.53	32.0	C	LT	0.72	54.0	D	LT	0.56	19.1	B	LT	0.74	36.3	D	LT	0.53	32.2	C	LT	0.69	51.1	D
SB	TR	0.66	28.3	C	TR	0.78	38.9	D	TR	0.42	15.8	B	TR	0.51	26.3	C	TR	0.55	25.0	C	TR	0.66	33.0	C
	Int.		28.3	C	Int.		40.1	D	Int.		17.4	B	Int.		29.0	C	Int.		26.8	C	Int.		36.5	D
23. East Tremont Avenue & Westchester Avenue																								
EB	LTR	0.40	24.9	C	LTR	0.42	25.2	C	LTR	0.52	22.2	C	LTR	0.51	27.0	C	LTR	0.64	29.8	C	LTR	0.66	30.5	C
WB	LT	0.58	28.0	C	LT	0.59	28.3	C	LT	0.43	20.6	C	LT	0.41	25.0	C	LT	0.56	27.5	C	LT	0.57	27.9	C
NB	LT	0.91	80.2	F	LT	1.16	207.9	F	LT	0.65	22.8	C	LT	0.80	41.1	D	LT	0.72	38.5	D	LT	0.87	66.2	E
SB	TR	0.49	24.9	C	TR	0.58	32.2	D	TR	0.42	15.7	B	TR	0.50	26.1	C	TR	0.55	26.5	C	TR	0.66	35.3	D
	Int.		36.6	D	Int.		65.4	D	Int.		20.2	C	Int.		29.0	C	Int.		29.6	C	Int.		37.0	D
24. Commerce Avenue & Westchester Avenue																								
EB	LT	0.43	19.2	B	LT	0.46	27.2	C	LT	0.28	16.9	B	LT	0.30	24.0	C	LT	0.44	19.4	B	LT	0.48	27.5	C
WB	LT	0.32	17.6	B	LT	0.34	24.9	C	LT	0.26	16.8	B	LT	0.28	23.8	C	LT	0.31	17.4	B	LT	0.34	24.7	C
	R	0.33	18.3	B	R	0.36	25.7	C	R	0.21	16.3	B	R	0.23	23.1	C	R	0.29	17.4	B	R	0.32	24.9	C
NB	LTR	0.58	39.1	D	LTR	0.60	41.3	D	LTR	0.54	21.2	C	LTR	0.54	23.8	C	LTR	0.61	36.4	D	LTR	0.61	38.3	D
SB	LTR	0.68	47.4	D	LTR	0.70	50.7	D	LTR	0.64	24.4	C	LTR	0.66	28.1	C	LTR	0.74	52.0	D	LTR	0.75	53.7	D
	Int.		33.1	C	Int.		38.1	D	Int.		20.7	C	Int.		25.2	C	Int.		34.4	C	Int.		38.7	D
26. East Tremont Avenue & HRP East																								
EB	T	0.49	29.3	C	T	0.22	7.3	A	T	0.59	31.0	C	T	0.27	7.6	A	T	0.98	57.6	E	T	0.44	9.1	A
WB	T	0.67	12.3	B	T	0.73	13.7	B	T	0.45	9.2	A	T	0.48	9.5	A	T	0.64	11.8	B	T	0.66	12.2	B
SB	LR	0.61	38.5	D	LR	0.64	39.4	D	LR	0.35	31.8	C	LR	0.39	32.5	C	LR	0.49	34.4	C	LR	0.52	35.4	D
	Int.		18.8	B	Int.		15.3	B	Int.		18.3	B	Int.		10.8	B	Int.		30.5	C	Int.		13.0	B
27. East Tremont Avenue & Ericson Place																								
EB	LT	0.38	14.2	B	LT	0.40	14.4	B	LT	0.42	14.6	B	LT	0.45	15.0	B	LT	0.69	19.7	B	LT	0.73	20.8	C
WB	T	0.98	58.3	E	T	1.02	69.3	E	T	0.69	33.7	C	T	0.72	34.7	C	T	0.88	43.3	D	T	0.91	46.8	D
NB	LTR	0.96	54.3	D	LTR	1.08	87.4	F	LTR	0.73	34.2	C	LTR	0.79	37.1	D	LTR	1.02	70.2	E	LTR	1.07	82.9	F
			46.9	D			64.5	E			27.2	C			28.6	C			43.2	D			48.7	D
29. HRP Service Road & East-West Road																								
EB	R				R	0.12	28.4	C	R				R	0.34	30.9	C	R				R	0.48	33.0	C
SB	T				T	0.88	38.5	D	T				T	0.50	25.6	C	T				T	0.78	32.2	C
	R				R	0.48	11.4	B	R				R	0.22	8.4	A	R				R	0.15	7.8	A
SB	TR				TR	0.79	40.6	D	TR				TR	0.58	32.1	C	TR				TR	0.89	49.9	D
	Int.				Int.		32.5	C	Int.				Int.		25.5	C	Int.				Int.		35.5	D

Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity; Def = De Facto.

Table 14-30
Existing and 2028 No-Action with HRP Improvements Conditions
Level of Service Analysis
Unsignalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	Existing				2028 No-Action				Existing				2028 No-Action				Existing				2028 No-Action			
	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
14. Project Driveway & Marconi Street																								
EB	LTR	0.85	74.5	F					LTR	0.71	49.2	E					LTR	0.68	42.6	E				
WB	LTR	0.10	68.1	F					LTR	0.20	42.3	E					LTR	0.00	0.0	A				
NB	LTR	0.11	8.3	A					LTR	0.07	9.4	A					LTR	0.17	11.7	B				
SB	LTR	0.00	10.6	B					LTR	0.01	13.3	B					LTR	0.00	8.3	A				
17. Waters Place & HRP Southbound Off-Ramp *																								
SB	R	0.99	49.6	E	R	0.47	14.5	B	R	0.26	9.5	A	R	0.16	9.4	A	R	0.47	13.4	B	R	0.37	12.7	B
19. Waters Place & Westchester Avenue *																								
EB	R	0.18	8.1	A	R	0.19	8.3	A	R	0.10	8.1	A	R	0.12	8.2	A	R	0.06	8.0	A	R	0.07	8.1	A
20. Westchester Avenue & Waters Avenue																								
EB	LR	0.66	21.6	C	LR	0.86	47.2	E	LR	0.27	11.4	B	LR	0.30	12.1	B	LR	0.51	12.9	B	LR	0.56	14.3	B
NB	LT	0.31	10.8	B	LT	0.42	12.3	B	LT	0.11	9.2	A	LT	0.14	9.5	A	LT	0.10	8.8	A	LT	0.12	9.0	A
22. Blondell Avenue & Westchester Avenue *																								
WB	R	0.07	8.3	A	R	0.11	8.6	A	R	0.12	8.6	A	R	0.15	8.8	A	R	0.11	8.6	A	R	0.12	8.7	A
24. Commerce Avenue & Westchester Avenue *																								
EB	R	0.24	12.6	B	R	0.26	13.2	B	R	0.33	13.8	B	R	0.36	14.8	B	R	0.29	12.9	B	R	0.32	13.8	B
25. East Tremont Avenue & Tan Place **																								
28. Roebling Avenue and Ericson Place/HRP East																								
WB	LR	0.14	9.2	A	LR	0.14	9.4	A	LR	0.05	7.9	A	LR	0.05	8.0	A	LR	0.07	9.3	A	LR	0.07	9.4	A
NB	TR	0.56	13.3	B	TR	0.59	14.3	B	TR	0.39	10.1	B	TR	0.41	10.4	B	TR	0.69	17.6	C	TR	0.72	18.8	C
SB	LT	0.22	9.4	A	LT	0.23	9.5	A	LT	0.18	8.7	A	LT	0.19	8.9	A	LT	0.25	10.0	B	LT	0.27	10.3	B
30. BPC Roundabout																								
EB	TR	0.04	4.3	A	TR	0.04	4.2	A	TR	0.05	4.8	A	TR	0.04	4.7	A	TR	0.08	4.8	A	TR	0.07	4.6	A
WB	LT	0.09	4.5	A	LT	0.09	4.5	A	LT	0.11	5.1	A	LT	0.11	5.1	A	LT	0.15	4.9	A	LT	0.15	4.9	A
NB	LR	0.17	4.8	A	LR	0.12	4.4	A	LR	0.13	4.9	A	LR	0.11	4.8	A	LR	0.10	4.6	A	LR	0.09	4.4	A
Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity. *Channelized Right Turn analyzed as Stop Controlled. **No traffic control.																								

Based on the analysis results presented in **Tables 14-29 and 14-30**, the majority of the approaches/lane-groups are projected to operate at the same LOS as in the Existing conditions. The following approaches/lane-groups are expected to operate at a deteriorated LOS when compared to the existing conditions:

2. Pelham Parkway (Westbound) and Williamsbridge Road

- Westbound left-turn/through would deteriorate to LOS E with a v/c ratio of 1.05 and a delay of 67.6 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.10 and a delay of 86.4 spv during the weekday PM peak hour.
- Southbound left-turn/through/right-turn would deteriorate to LOS E with a v/c ratio of 0.99 and a delay of 59.5 spv during the weekday AM peak hour.

3. & 4. Pelham Parkway (Eastbound) and Williamsbridge Road

- Eastbound service road right-turn would deteriorate to LOS F with a v/c ratio of 0.93 and a delay of 81.2 during the weekday PM peak hour.

6. Pelham Parkway (Westbound) and Eastchester Road

- Westbound left-turn would deteriorate to LOS F with a v/c ratio of 0.99 and a delay of 89.8 spv during the weekday PM peak hour.
- Westbound left-turn/through would deteriorate to LOS F with a v/c ratio of 1.24 and a delay of 159.8 spv during the weekday PM peak hour.

7. & 8. Pelham Parkway (Eastbound) and Eastchester Road

- Eastbound mainline left-turn/through would deteriorate to LOS D with a v/c ratio of 1.00 and a delay of 53.1 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.08 and a delay of 86.4 spv during the weekday PM peak hour.
- Eastbound service road through/right-turn will deteriorate to LOS F with a v/c ratio of 1.14 and a delay of 113.0 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.17 and a delay of 133.2 spv during the weekday PM peak hour.

9. Morris Park Avenue and Eastchester Road

- Eastbound left-turn would deteriorate to LOS E with a v/c ratio of 0.80 and a delay of 62.2 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 1.03 and a delay of 103.1 spv during the weekday PM peak hour.
- Eastbound right-turn would deteriorate to LOS D with a v/c ratio of 0.71 and a delay of 49.9 spv during the weekday AM peak hour; to LOS D with a v/c ratio of 0.67 and a delay of 48.4 spv during the weekday midday peak hour; and to LOS D with a v/c ratio of 0.70 and a delay of 49.4 spv during the weekday PM peak hour.
- Northbound left-turn would deteriorate to LOS E with a v/c ratio of 0.80 and a delay of 68.6 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 0.96 and a delay of 93.4 during the weekday PM peak hour.
- Southbound left-turn/through/right-turn would deteriorate to LOS F with a v/c ratio of 1.21 and a delay of 146.0 spv during the weekday AM peak hour; to LOS F with a v/c ratio of 1.14 and a delay of 118.4 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 1.17 and a delay of 130.2 spv during the weekday PM peak hour.

Bronx Psychiatric Center Land Use Improvement Project

10. Waters Place and Eastchester Road

- Southbound de facto left-turn would deteriorate to LOS D with a v/c ratio of 0.84 and a delay of 48.7 spv during the weekday AM peak hour; to LOS F with a v/c ratio of 1.09 and a delay of 108.5 spv during the weekday midday peak hour; and to LOS D with a v/c ratio of 0.84 and a delay of 45.1 spv during the weekday PM peak hour.
- Northbound through/right-turn would deteriorate to LOS D with a v/c ratio of 0.98 and a delay of 47.1 spv during the weekday AM peak hour.

12. Williamsbridge Road and Eastchester Road

- Southbound through/right-turn would deteriorate to LOS E with a v/c ratio of 1.04 and a delay of 71.6 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 1.10 and a delay of 92.2 spv during the weekday PM peak hour.

13. East Tremont Avenue and Silver Street

- Southbound right-turn would deteriorate to LOS F with a v/c ratio of 1.19 and a delay of 135.4 spv during the weekday midday peak hour.

14. Project Driveway and Marconi Street (Signalized)

- Eastbound left-turn/through/right-turn would operate at LOS D with a v/c ratio of 0.67 and a delay of 45.4 spv during the weekday AM peak hour; at LOS E with a v/c ratio of 0.86 and a delay of 69.4 spv during the weekday midday peak hour; and at LOS D with a v/c ratio of 0.69 and a delay of 47.0 spv during the weekday PM peak hour.
- Westbound left-turn/through/right-turn would operate at LOS F with a v/c ratio of 1.45 and a delay of 253.6 spv during the weekday AM peak hour; and at LOS E with a v/c ratio of 0.82 and a delay of 57.9 spv during the weekday midday peak hour.
- Northbound de facto left-turn would operate at LOS F with a v/c ratio of 1.11 and a delay of 158.3 spv during the weekday PM peak hour.
- Southbound left-turn/through/right-turn would operate at LOS F with a v/c ratio of 1.17 and a delay of 115.5 spv during the weekday midday peak hour; and at LOS F with a v/c ratio of 1.23 and a delay of 136.6 spv during the weekday PM peak hour.

15. Waters Place and Marconi Street

- Eastbound de facto left-turn would deteriorate to LOS F with a v/c ratio of 1.07 and a delay of 94.7 spv during the weekday midday peak hour.
- Southbound right-turn would deteriorate to LOS F with a v/c ratio of 1.10 and a delay of 105.2 spv during the weekday midday peak hour.

18. Westchester Avenue, Ericson Place, and Middletown Road

- Westbound left-turn/through would deteriorate to LOS F with a v/c ratio of 1.34 and a delay of 462.5 spv during the weekday AM peak hour; to LOS F with a v/c ratio of 1.17 and a delay of 421.3 spv during the weekday midday peak hour; and to LOS F with a v/c ratio of 1.14 and a delay of 385.0 spv during the weekday PM peak hour.

19. Waters Place and Westchester Avenue

- Northbound left-turn/through/right-turn would deteriorate to LOS E with a v/c ratio of 0.67 and a delay of 61.1 spv during the weekday PM peak hour.

20. Waters Avenue and Westchester Avenue

- Eastbound left-turn/right-turn would deteriorate to LOS E with a v/c ratio of 0.86 and a delay of 47.2 spv during the weekday AM peak hour.

22. Blondell Avenue and Westchester Avenue

- Northbound left-turn/through would deteriorate to LOS D with a v/c ratio of 0.72 and a delay of 54.0 spv during the weekday AM peak hour; and to LOS D with a v/c ratio of 0.69 and a delay of 51.1 spv during the weekday PM peak hour.

23. East Tremont Avenue and Westchester Avenue

- Northbound left-turn/through would deteriorate to LOS E with a v/c ratio of 0.87 and a delay of 66.2 spv during the weekday PM peak hour.

27. East Tremont Avenue and Ericson Place

- Westbound through would deteriorate to LOS D with a v/c ratio of 0.91 and a delay of 46.8 spv during the weekday PM peak hour.
- Northbound left-turn/through/right-turn would deteriorate to LOS F with a v/c ratio of 1.08 and a delay of 87.4 spv during the weekday AM peak hour; and to LOS F with a v/c ratio of 1.07 and a delay of 82.9 spv during the weekday PM peak hour.

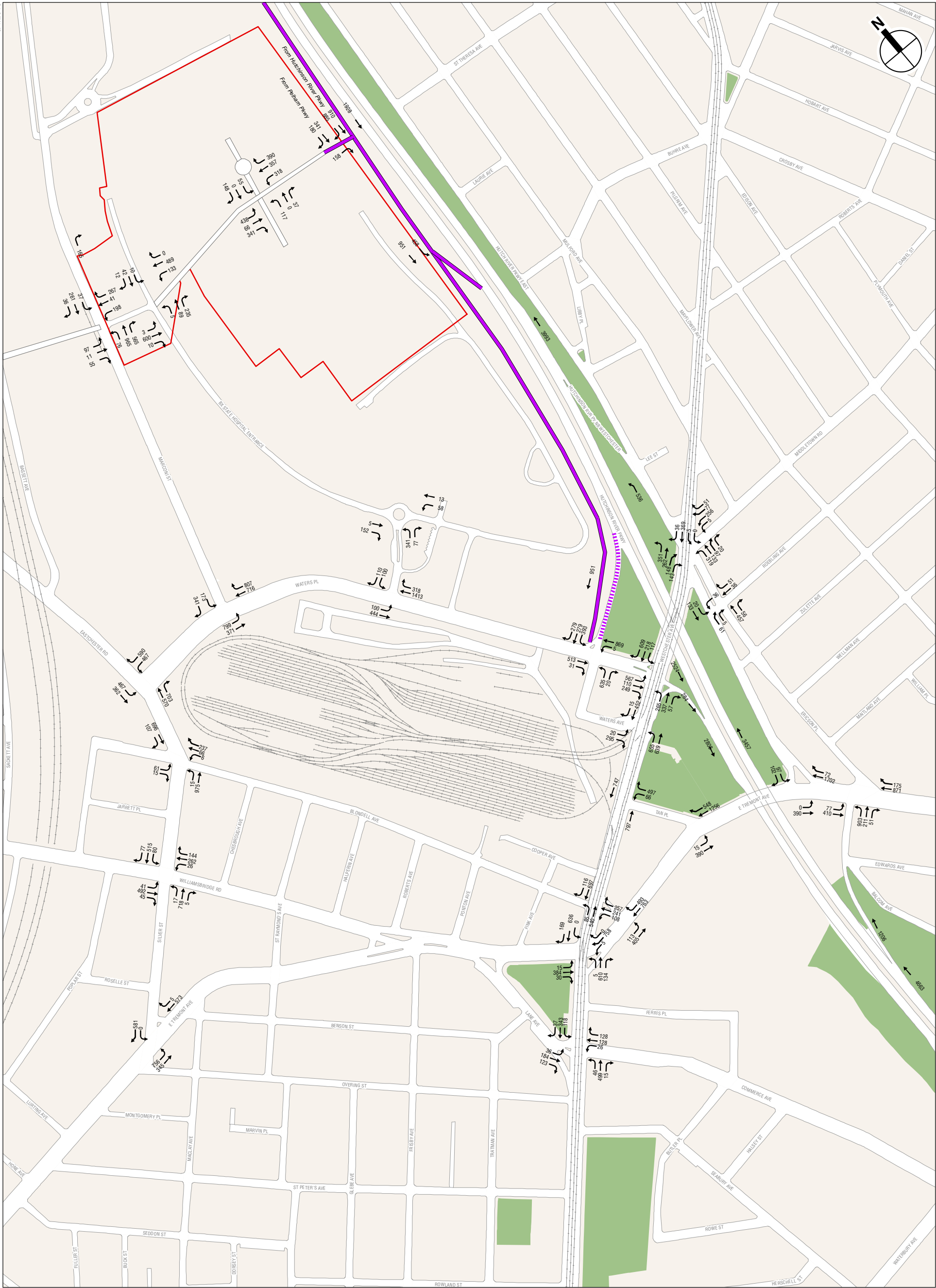
THE FUTURE WITH THE PROPOSED PROJECT (WITH HRP IMPROVEMENTS)**2028 WITH-ACTION**

As described above under the 2028 No-Action with HRP Improvements condition, the reconfiguration of the HRP on- and off-ramps would reroute vehicle traffic away from intersections along Waters Place. The anticipated traffic diversion patterns as a result of the HRP Improvements were also applied to the proposed project's Phase II full build-out project-generated vehicle trips (see **Figures 14-5A through 14-7B**).

The 2028 With-Action with HRP Improvements condition traffic volumes are shown in **Figures 14-30A through 14-32B** for the weekday AM, midday, and PM peak hours. The 2028 With-Action with HRP Improvements condition traffic volumes were constructed by adding the project-generated vehicle trips shown in **Figures 14-5A through 14-7B**.

In addition, because the East-West Road bisecting the project site would be mapped into a public street if it is connected to the new service road as part of the potential HRP Improvements, the two future signalized intersections on the East-West Road—at the BPC west access road and at the North-South Spine Road—are also included in this With-Action analysis. It should be noted that the geometric assumptions at these two new intersections are based on a preliminary conceptual roadway design of the East-West Road, in accordance with NYCDOT design standards, but will be subject to further refinements if it is ultimately mapped into the City right-of-way (ROW).

A summary of the 2028 With-Action with HRP Improvements condition traffic analysis results by lane group is presented in **Table 14-31**.



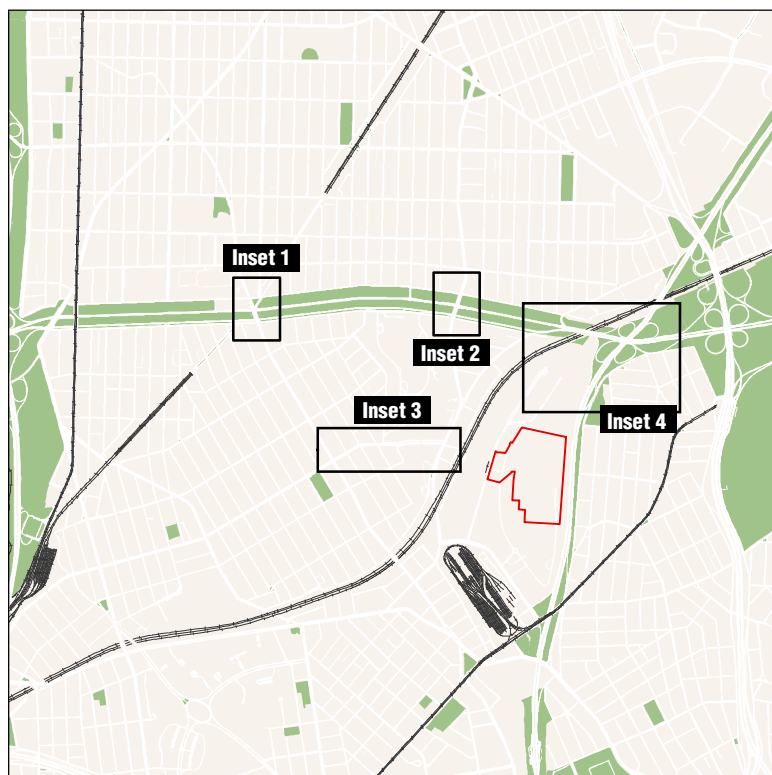
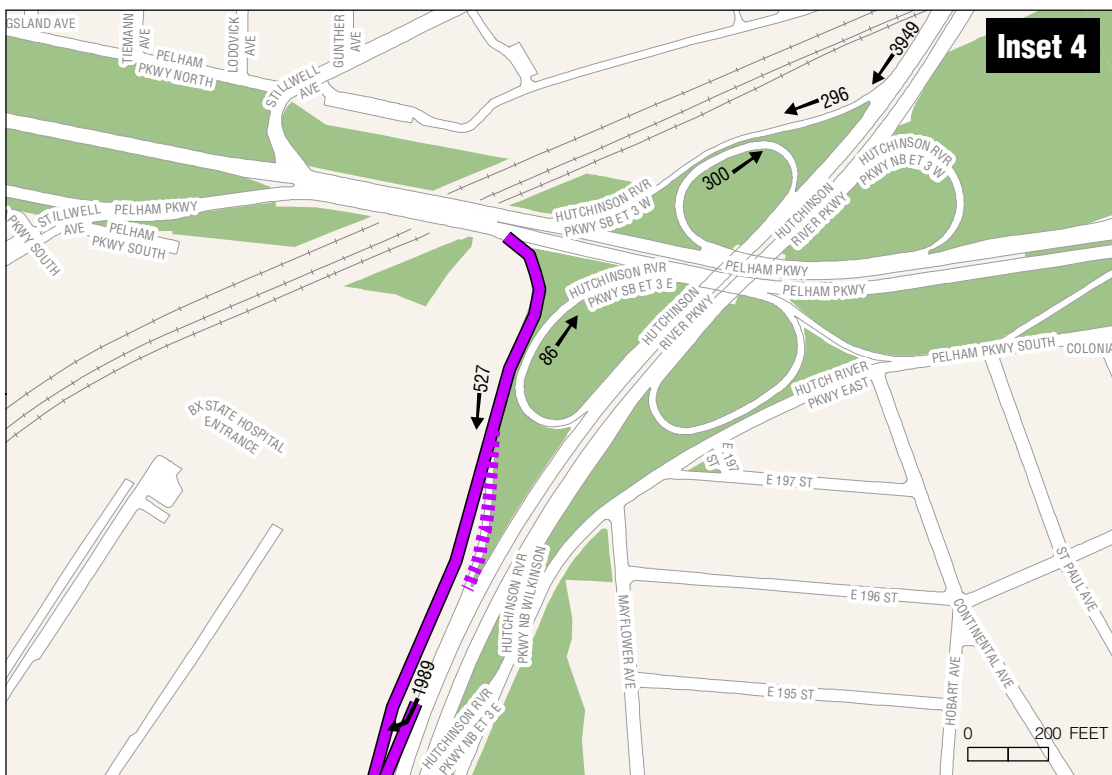
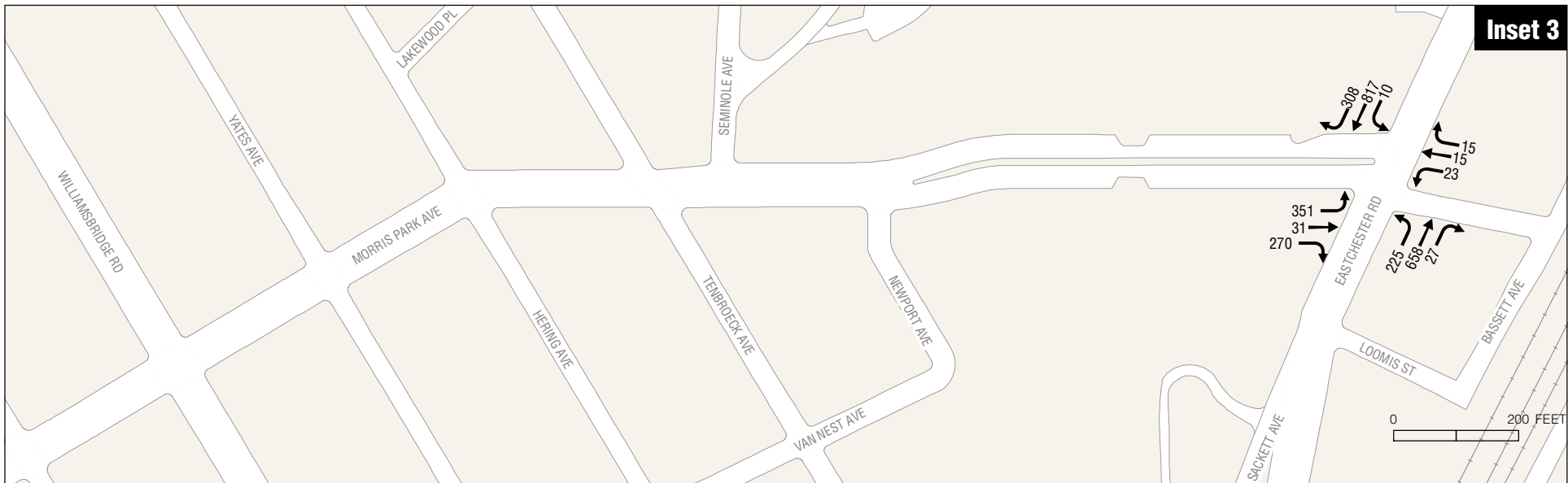
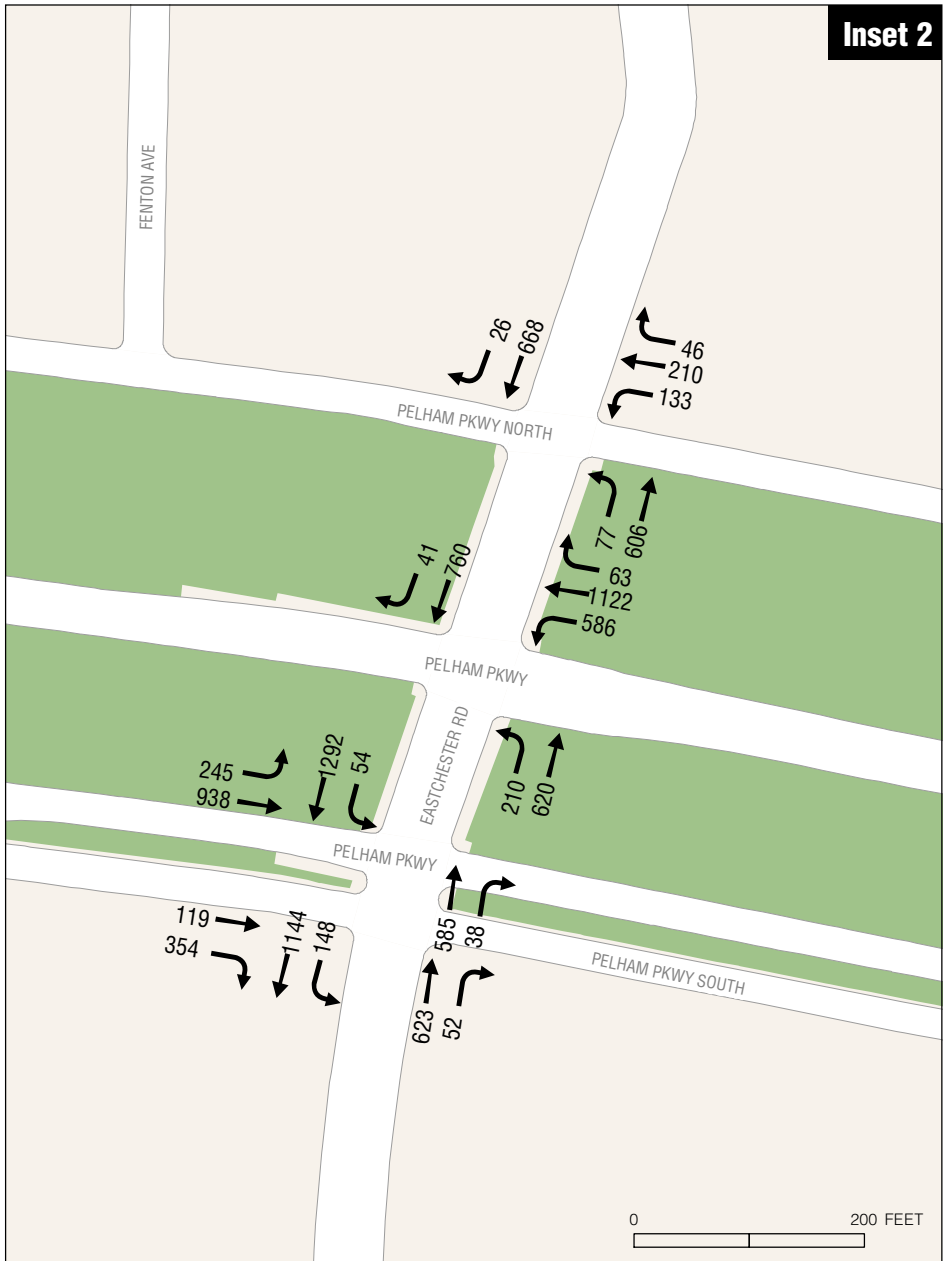
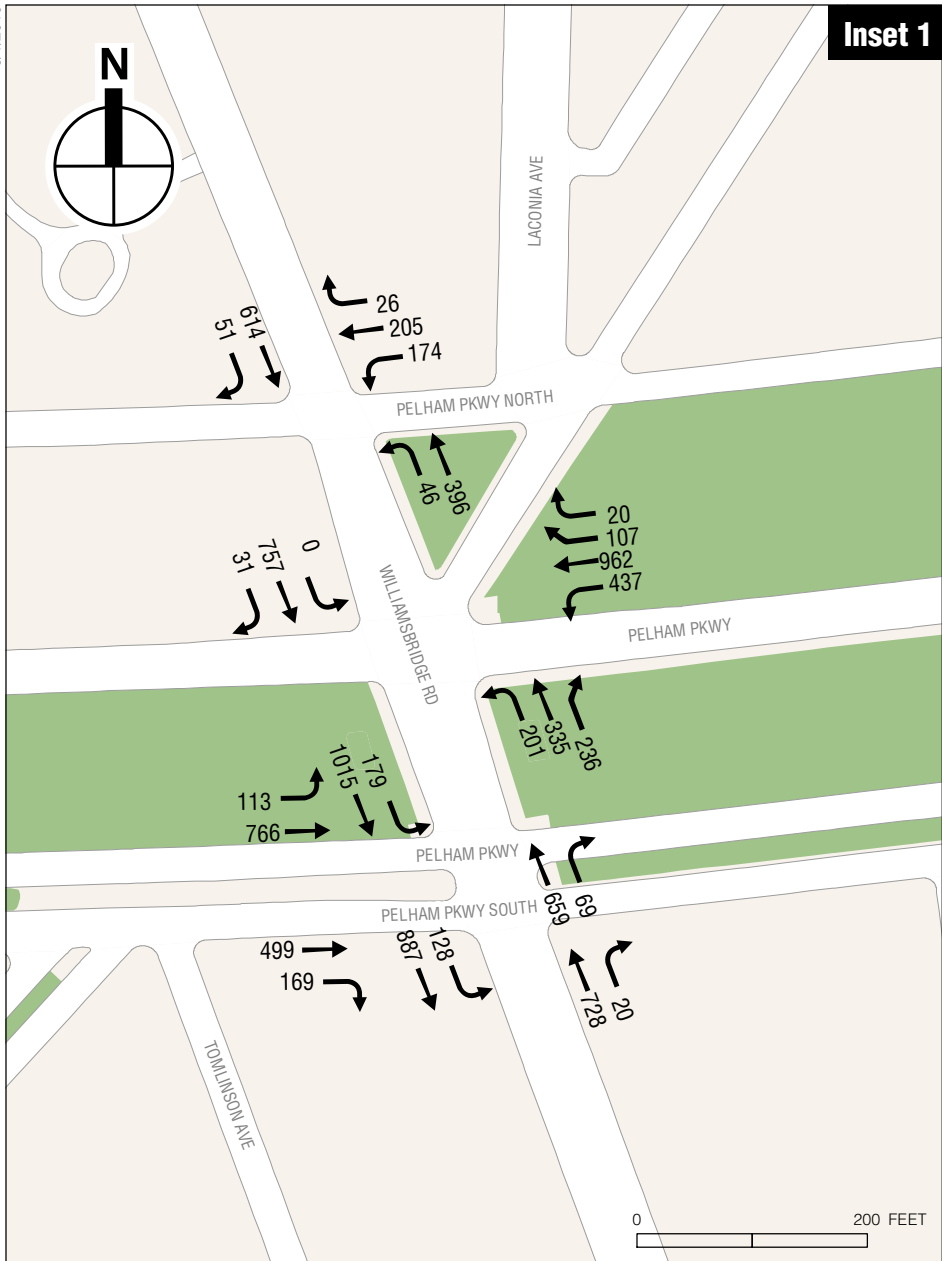
Project Site

Hutchinson River Parkway Improvement (Proposed Roadway)*

Hutchinson River Parkway Improvement (Removal of Existing Ramp)*

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

2028 With-Action Traffic Volumes (With HRP Improvements)
 Weekday AM Peak Hour
Figure 14-30A

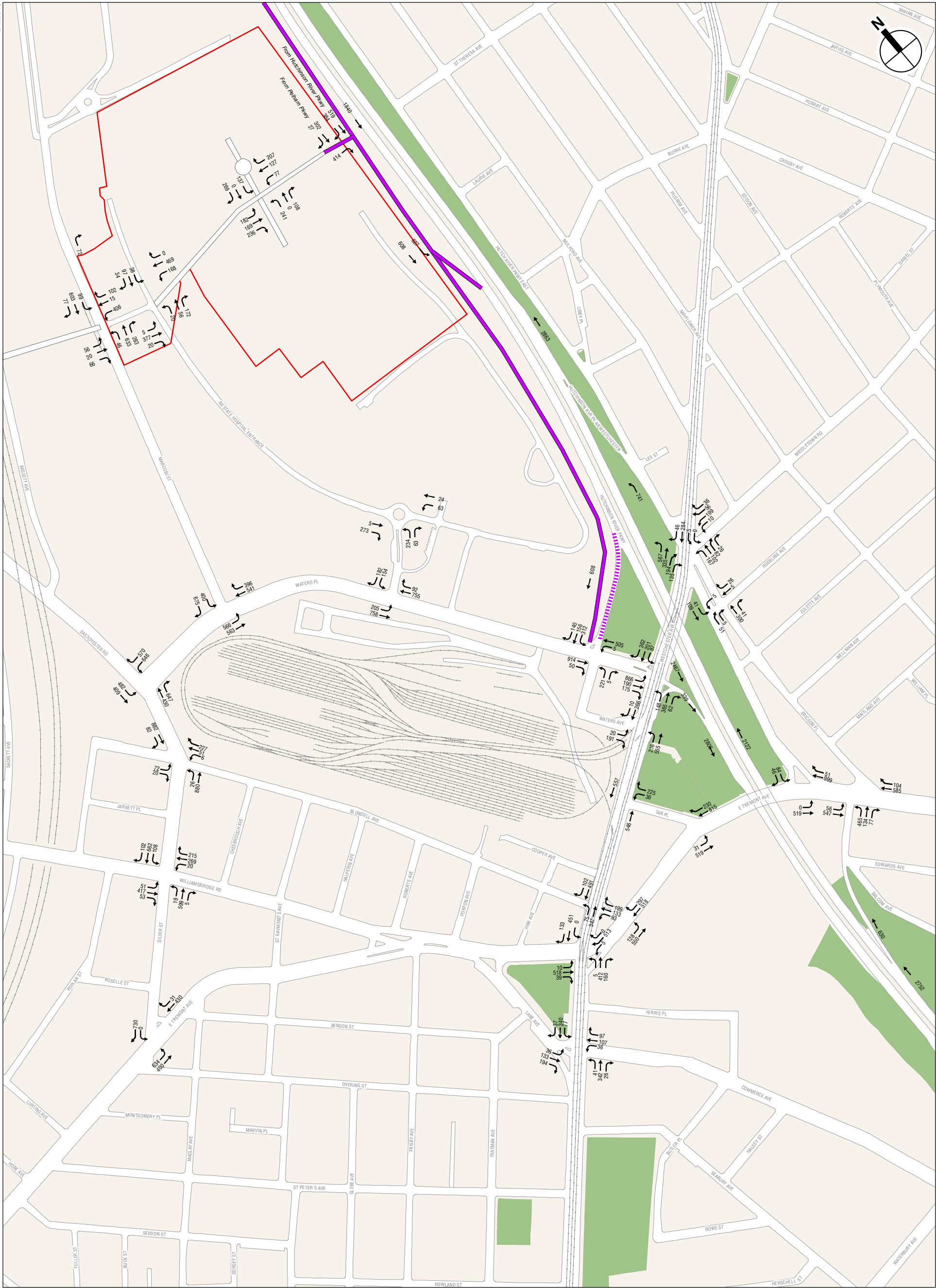


- Project Site
- Hutchinson River Parkway Improvement* (Proposed Roadway)
- Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

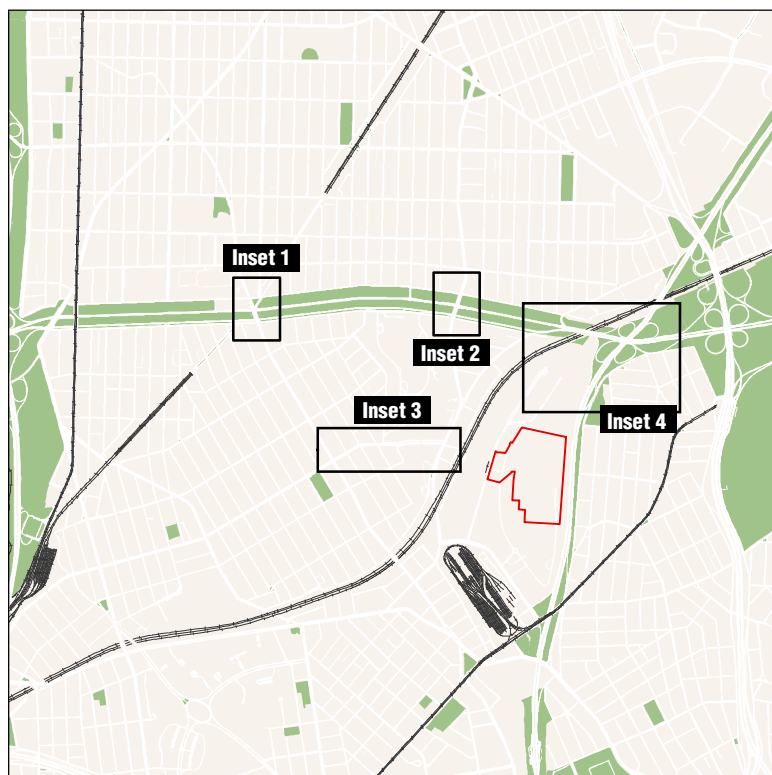
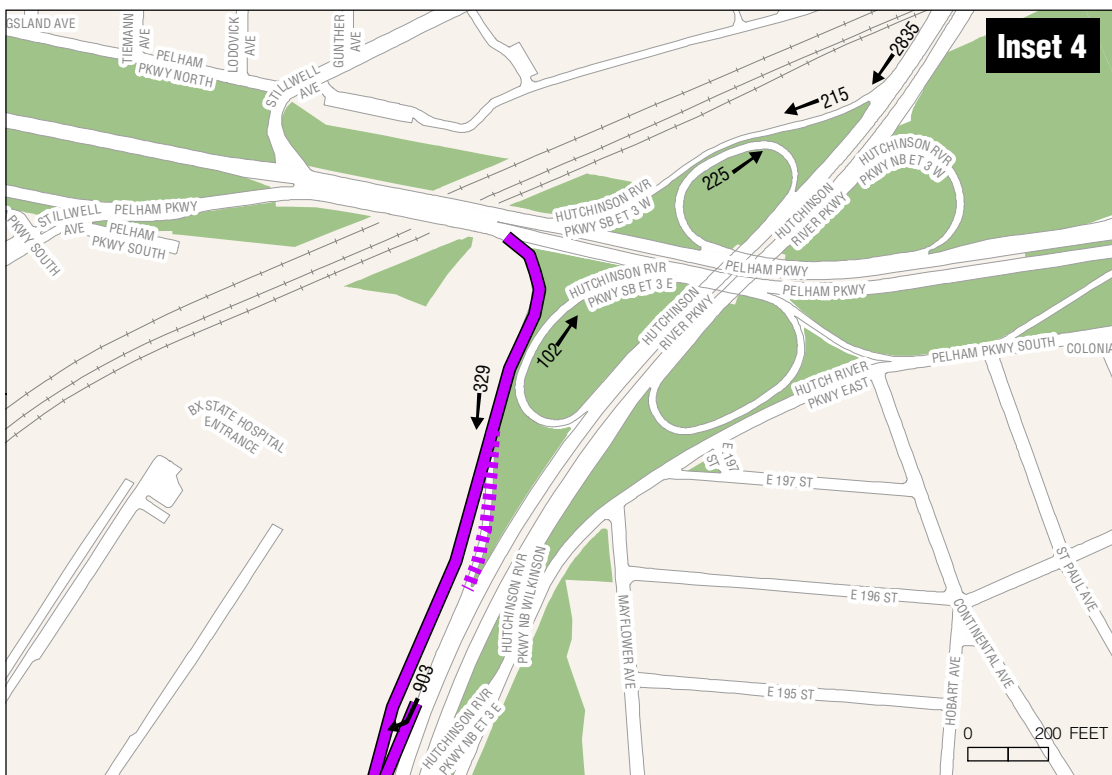
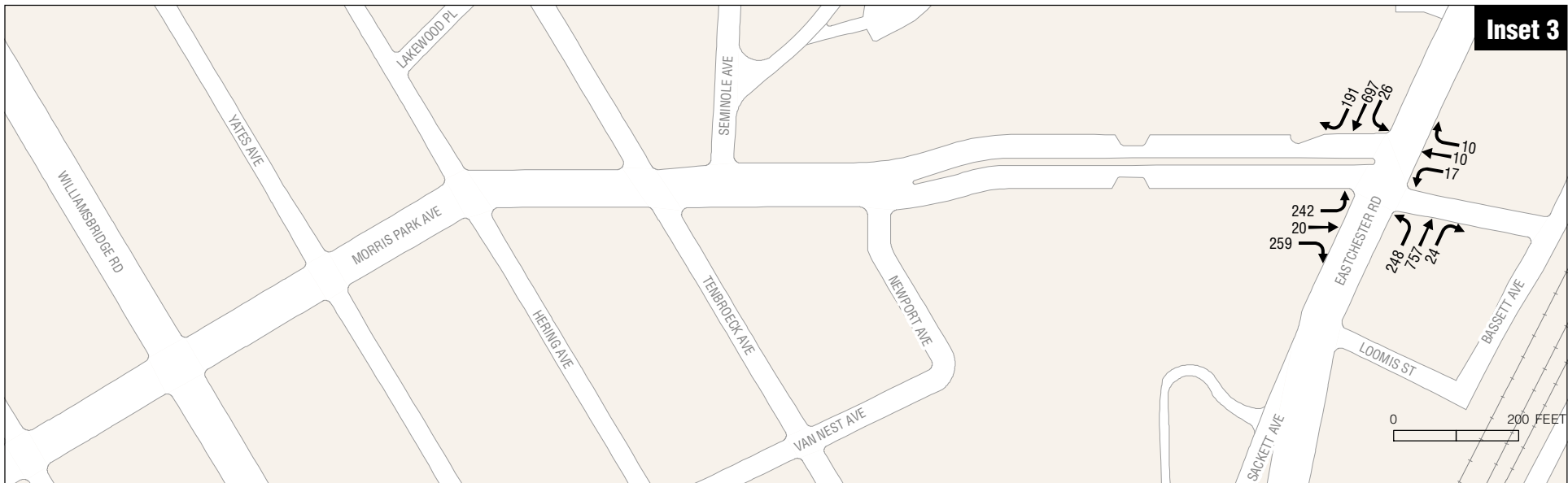
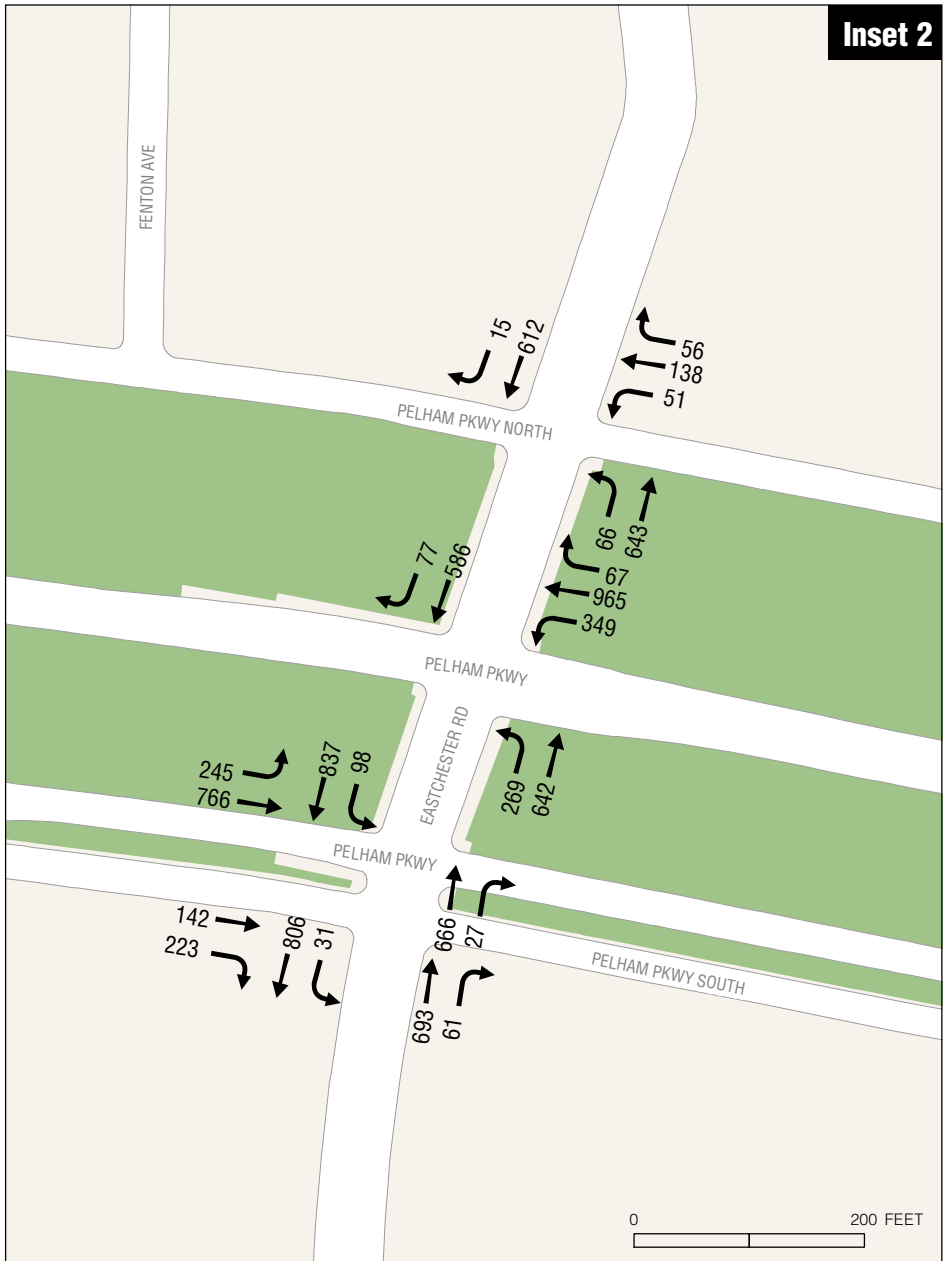
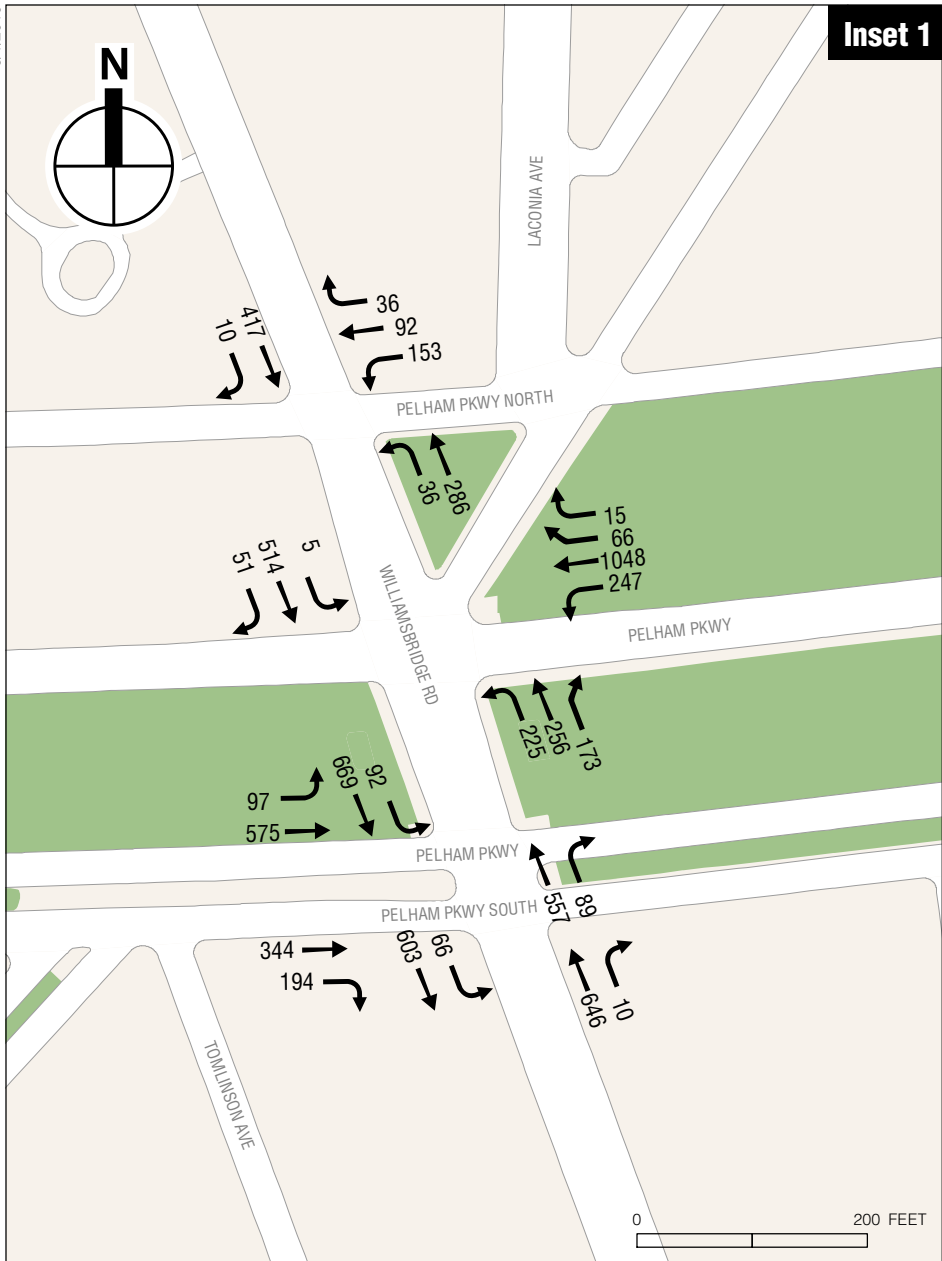
BRONX PSYCHIATRIC CENTER LAND USE IMPROVEMENT PROJECT

2028 With-Action Traffic Volumes (With HRP Improvements)
Weekday AM Peak Hour
Figure 14-30B

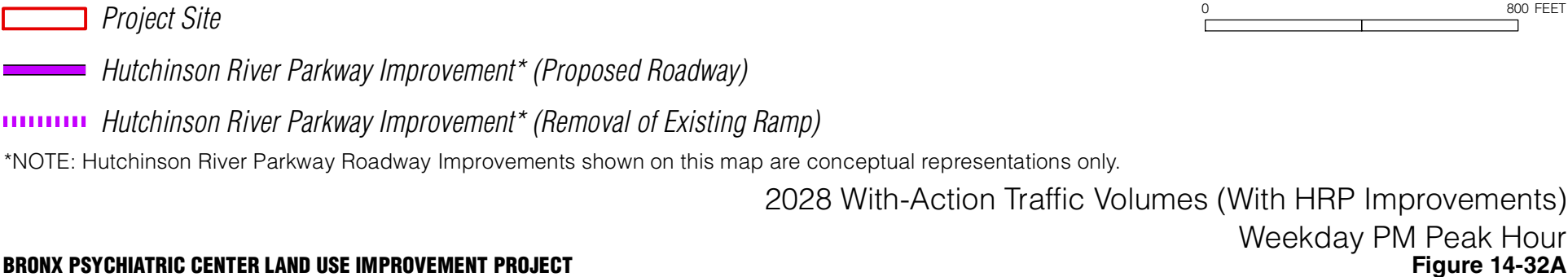


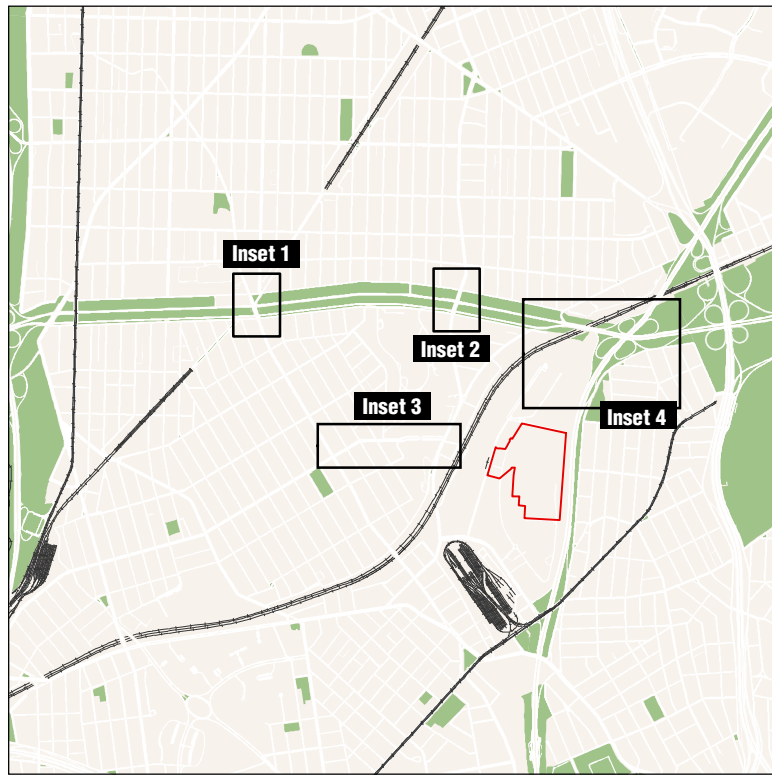
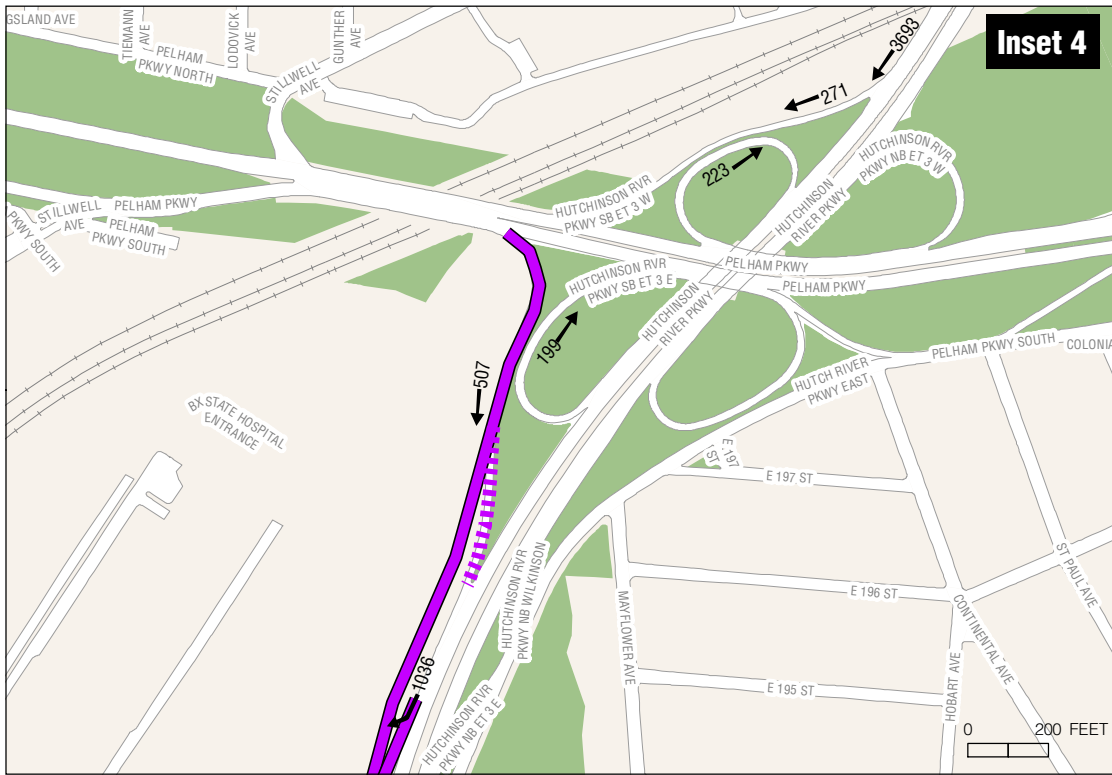
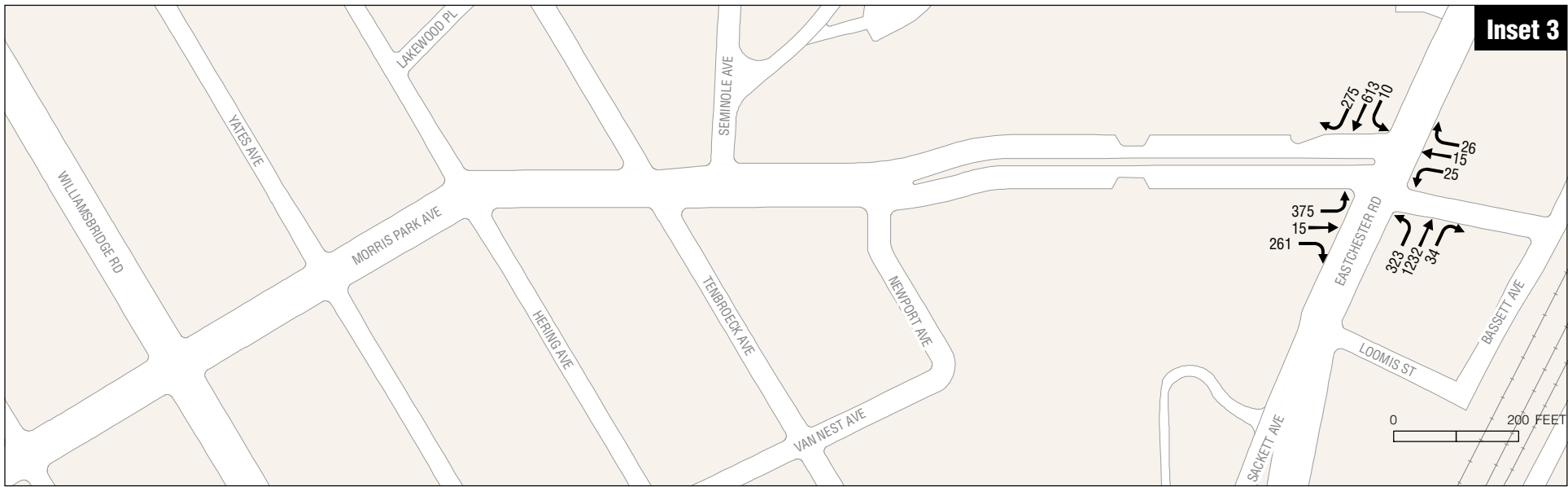
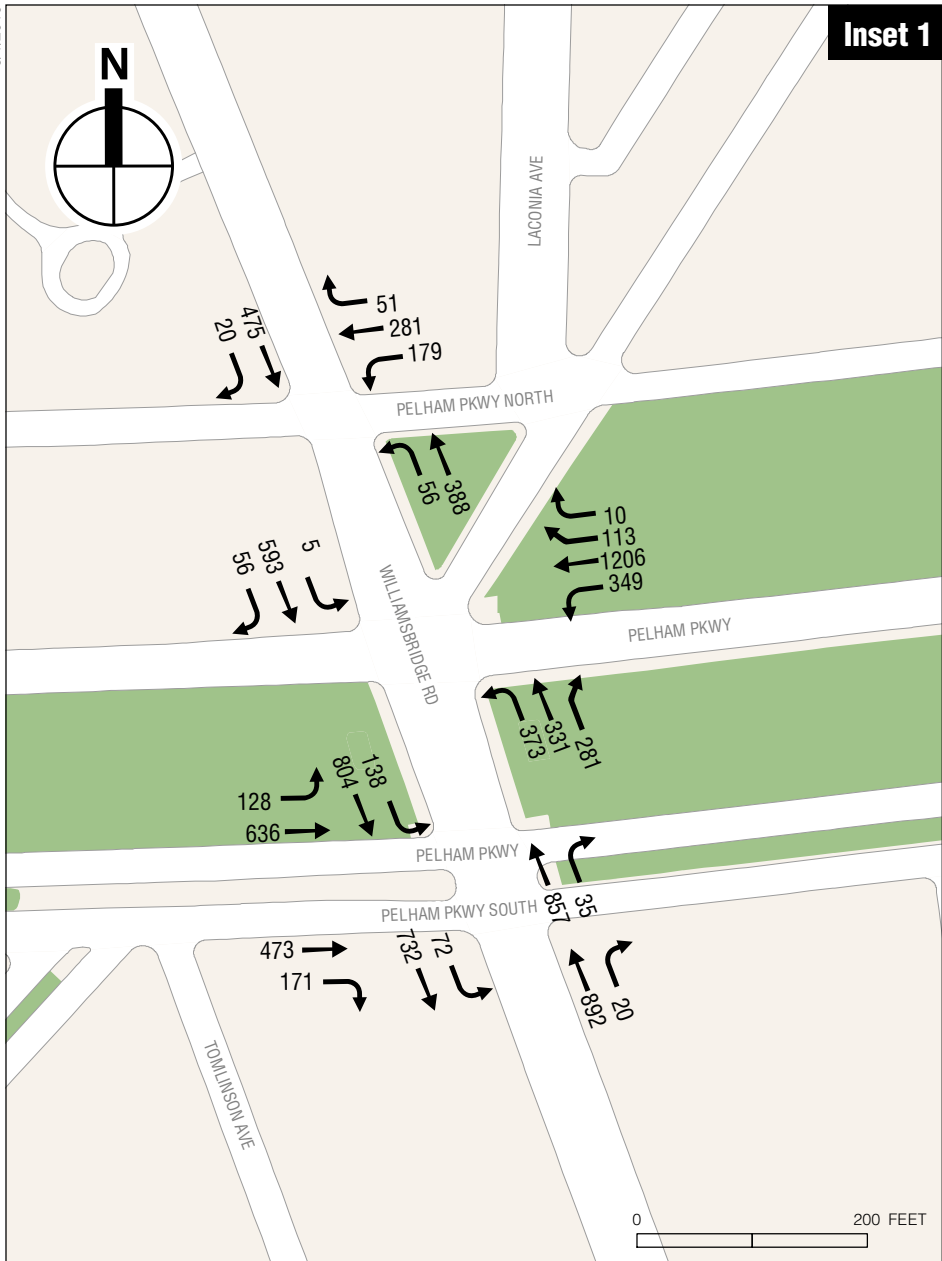
*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

2028 With-Action Traffic Volumes (With HRP Improvements)
Weekday Midday Peak Hour
Figure 14-31A



- Project Site
- Hutchinson River Parkway Improvement* (Proposed Roadway)
- Hutchinson River Parkway Improvement* (Removal of Existing Ramp)





- Project Site
- Hutchinson River Parkway Improvement* (Proposed Roadway)
- Hutchinson River Parkway Improvement* (Removal of Existing Ramp)

*NOTE: Hutchinson River Parkway Roadway Improvements shown on this map are conceptual representations only.

BRONX PSYCHIATRIC CENTER LAND USE IMPROVEMENT PROJECT

2028 With-Action Traffic Volumes (With HRP Improvements)
Weekday PM Peak Hour
Figure 14-32B

Table 14-31

**Summary of 2028 With-Action with HRP Improvements
Traffic Analysis Results**

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
Signalized Intersections			
Lane Groups at LOS A/B/C	68	85	62
Lane Groups at LOS D	17	18	23
Lane Groups at LOS E	10	6	6
Lane Groups at LOS F	32	17	35
Total	127	126	126
Lane Groups with v/c \geq 0.90	40	21	41
Unsignalized Intersections			
Lane Groups at LOS A/B/C	9	12	11
Lane Groups at LOS D	0	0	1
Lane Groups at LOS E	1	0	0
Lane Groups at LOS F	2	0	0
Total	12	12	12
Lane Groups with v/c \geq 0.90	3	0	0
Notes: LOS = Level of service; v/c = volume-to-capacity ratio.			

As described above under the 2023 With-Action without HRP Improvements condition, the proposed project would reconfigure the intersection of the Project Driveway and Marconi Street and these geometric and signal timing/phasing changes have also been incorporated into the traffic analysis presented below. The proposed conceptual intersection design is presented in **Figure 14-26** and the proposed signal timing/phasing assumptions are summarized in **Table 14-32**.

Table 14-32

**Marconi Street and Project Driveway—
2028 With-Action Signal Timing/Phasing Plan**

Signal Timing and Phasing Plan												
Intersection	Signal Timing and Phasing Plan											
Marconi Street and Project Driveway	Weekday AM				Weekday Midday				Weekday PM			
	Phase	Green	Amber	Red	Phase	Green	Amber	Red	Phase	Green	Amber	Red
	WB/NB-R	10	3	2	WB/NB-R	18	3	2	WB/NB-R	16	3	2
	EB/WB-TR	23	3	2	EB/WB-TR	21	3	2	EB/WB-TR	21	3	2
	NB/SB	42	3	2	NB/SB	36	3	2	NB/SB	38	3	2
	Cycle Length = 90 Seconds				Cycle Length = 90 Seconds				Cycle Length = 90 Seconds			
Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left-turn; T = Through; R = Right-turn												

SIGNIFICANT ADVERSE IMPACTS

Details on LOS, v/c ratios, and average delays are presented in **Tables 14-33 and 14-34**. As discussed below, significant adverse traffic impacts were identified at 42 approaches/lane groups (at 18 different intersections), 21 approaches/lane groups (at 10 different intersections), and 33 approaches/lane groups (at 17 different intersections), during the weekday AM, midday, and PM peak hours, respectively. Potential measures that could be implemented to mitigate these significant adverse traffic impacts are discussed in Chapter 22, “Mitigation.”

Table 14-33
2028 No-Action and With-Action with HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action			
	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
1. Pelham Parkway North & Williamsbridge Road																								
WB	L	0.27	22.7	C	L	0.27	22.7	C	L	0.29	23.1	C	L	0.29	23.1	C	L	0.32	23.5	C	L	0.32	23.5	C
	LTR	0.30	22.3	C	LTR	0.30	22.3	C	LTR	0.16	20.8	C	LTR	0.16	20.8	C	LTR	0.35	22.9	C	LTR	0.35	22.9	C
NB	LT	0.36	12.4	B	LT	0.36	12.4	B	LT	0.22	10.9	B	LT	0.22	10.9	B	LT	0.31	11.8	B	LT	0.31	11.8	B
SB	TR	0.52	14.3	B	TR	0.52	14.3	B	TR	0.31	11.7	B	TR	0.31	11.7	B	TR	0.38	12.5	B	TR	0.38	12.5	B
	Int.	15.9	B		Int.	15.9	B		Int.	14.3	B		Int.	14.3	B		Int.	15.9	B		Int.	15.9	B	
2. Pelham Parkway (Westbound) & Williamsbridge Road & Esplanade																								
WB	LT	1.05	67.6	E	LT	1.05	68.5	E	LT	0.95	44.2	D	LT	0.95	44.7	D	LT	1.10	86.4	F	LT	1.10	86.9	F
	R	0.37	27.0	C	R	0.37	27.0	C	R	0.22	24.2	C	R	0.22	24.2	C	R	0.32	25.9	C	R	0.32	25.9	C
NB	L	0.33	23.0	C	L	0.33	23.0	C	L	0.34	18.8	B	L	0.34	18.8	B	L	0.46	24.0	C	L	0.46	24.0	C
	T	0.35	10.6	B	T	0.35	10.6	B	T	0.25	9.7	A	T	0.25	9.7	A	T	0.49	12.2	B	T	0.49	12.2	B
SB	LTR	0.99	59.5	E	LTR	0.99	59.5	E	LTR	0.72	33.9	C	LTR	0.72	33.9	C	LTR	0.87	42.5	D	LTR	0.87	42.5	D
	Int.	50.8	D		Int.	51.2	D		Int.	33.4	C		Int.	33.6	C		Int.	53.8	D		Int.	54.0	D	
3. & 4. Pelham Parkway (Eastbound) & Williamsbridge Road																								
EB (ML)	LT	1.17	124.0	F	LT	1.28	172.3	F+	LT	1.01	70.6	E	LT	1.01	70.6	E	LT	1.09	94.6	F	LT	1.09	94.6	F
EB (SR)	TR	0.85	44.8	D	TR	0.86	45.4	D	TR	0.49	32.1	C	TR	0.49	32.2	C	TR	0.74	38.7	D	TR	0.74	38.8	D
	R	0.78	51.5	D	R	0.78	51.5	D	R	0.87	66.4	E	R	0.87	66.4	E	R	0.93	81.2	F	R	0.93	81.2	F
NB	T	0.84	40.4	D	T	0.84	40.4	D	T	0.68	32.6	C	T	0.68	32.6	C	T	1.05	78.3	E	T	1.05	78.3	E
	R	0.32	27.9	C	R	0.32	27.9	C	R	0.32	27.8	C	R	0.32	27.8	C	R	0.18	25.3	C	R	0.18	25.3	C
SB	L	0.47	11.7	B	L	0.47	11.7	B	L	0.23	7.9	A	L	0.23	7.9	A	L	0.32	11.1	B	L	0.32	11.1	B
	LT	0.57	10.0	A	LT	0.57	10.0	A	LT	0.36	7.5	A	LT	0.36	7.5	A	LT	0.50	9.1	A	LT	0.50	9.1	A
	Int.	50.4	D		Int.	63.9	E		Int.	37.7	D		Int.	37.7	D		Int.	55.5	E		Int.	55.5	E	
5. Pelham Parkway North & Eastchester Road																								
WB	LTR	0.62	33.5	C	LTR	0.62	33.5	C	LTR	0.37	29.1	C	LTR	0.37	29.1	C	LTR	0.65	42.3	D	LTR	0.65	42.3	D
NB	LT	0.37	8.4	A	LT	0.41	8.9	A	LT	0.34	8.2	A	LT	0.42	9.0	A	LT	0.47	11.8	B	LT	0.57	13.4	B
SB	TR	0.66	31.4	C	TR	0.81	37.2	D	TR	0.68	31.7	C	TR	0.82	37.8	D	TR	0.65	39.5	D	TR	0.73	42.3	D
	Int.	22.8	C		Int.	25.2	C		Int.	21.1	C		Int.	23.7	C		Int.	28.0	C		Int.	28.7	C	
6. Pelham Parkway (Westbound) & Eastchester Road																								
WB	L	0.61	27.0	C	L	0.61	27.0	C	L	0.60	26.8	C	L	0.60	26.8	C	L	0.99	89.8	F	L	0.99	89.9	F
	LT	0.83	30.4	C	LT	0.83	30.4	C	LT	0.64	24.8	C	LT	0.64	24.8	C	LT	1.24	159.8	F	LT	1.24	159.8	F
NB	R	0.13	18.8	B	R	0.13	18.8	B	R	0.14	18.9	B	R	0.14	18.9	B	R	0.28	39.3	D	R	0.28	39.3	D
	L	0.49	29.0	C	L	0.52	32.3	C	L	0.66	32.8	C	L	0.73	39.4	D	L	0.54	26.2	C	L	0.55	26.6	C
	T	0.39	14.7	B	T	0.43	15.2	B	T	0.39	14.7	B	T	0.48	15.9	B	T	0.36	9.3	A	T	0.45	10.2	B
SB	TR	0.70	32.7	C	TR	0.84	38.3	D	TR	0.61	30.4	C	TR	0.74	33.7	C	TR	0.86	54.5	D	TR	0.96	66.9	E+
	Int.	27.4	C		Int.	29.0	C		Int.	24.9	C		Int.	26.3	C		Int.	83.5	F		Int.	82.4	F	
7. & 8. Pelham Parkway (Eastbound) & Eastchester Road																								
EB (ML)	LT	1.00	53.1	D	LT	1.07	74.9	E+	LT	0.87	34.2	C	LT	0.87	34.2	C	LT	1.08	86.4	F	LT	1.08	86.4	F
EB (SR)	TR	1.14	113.0	F	TR	1.15	117.0	F+	TR	0.83	39.6	D	TR	0.84	40.7	D	TR	1.17	133.2	F	TR	1.18	136.5	F+
NB	TR	0.87	39.9	D	TR	0.96	51.3	D+	TR	0.74	32.1	C	TR	0.89	41.5	D	TR	0.56	28.0	C	TR	0.67	30.2	C
	L	0.54	32.2	C	L	0.58	35.5	D	L	0.33	22.8	C	L	0.36	27.6	C	L	0.56	40.6	D	L	0.63	49.9	D+
SB	LT	0.77	22.3	C	LT	0.88	27.8	C	LT	0.52	16.6	B	LT	0.61	18.1	B	LT	0.56	19.7	B	LT	0.62	21.0	C
	Int.	48.6	D		Int.	59.2	E		Int.	29.6	C		Int.	32.2	C		Int.	62.2	E		Int.	61.7	E	

Bronx Psychiatric Center Land Use Improvement Project

Table 14-33 (cont'd)
2028 No-Action and With-Action with HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int.	Weekday AM								Weekday Midday								Weekday PM							
	2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action			
	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
9. Morris Park Avenue & Eastchester Road																								
EB	L	0.93	78.9	E	L	0.93	78.2	E	L	0.80	62.2	E	L	0.80	62.6	E	L	1.03	103.1	F	L	1.04	106.2	F+
	LT	0.48	41.7	D	LT	0.48	41.7	D	LT	0.24	35.7	D	LT	0.24	35.7	D	LT	0.54	44.2	D	LT	0.55	44.5	D
	R	0.71	49.9	D	R	0.80	56.3	E+	R	0.67	48.4	D	R	0.78	55.3	E+	R	0.70	49.4	D	R	0.83	59.9	E+
WB	LTR	0.24	35.8	D	LTR	0.26	36.3	D	LTR	0.14	33.7	C	LTR	0.15	33.8	C	LTR	0.25	35.7	D	LTR	0.27	36.1	D
NB	L	0.81	71.2	E	L	0.88	80.1	F+	L	0.80	68.6	E	L	0.94	90.4	F+	L	0.96	93.4	F	L	1.25	190.0	F+
	TR	0.45	18.7	B	TR	0.49	19.5	B	TR	0.47	19.0	B	TR	0.56	20.8	C	TR	0.77	26.5	C	TR	0.90	34.0	C
SB	LTR	1.21	146.0	F	LTR	1.36	209.4	F+	LTR	1.14	118.4	F	LTR	1.34	201.7	F+	LTR	1.17	130.2	F	LTR	1.41	235.9	F+
	Int.		84.8	F	Int.		113.2	F	Int.		68.5	E	Int.		102.5	F	Int.		71.0	E	Int.		111.3	F
10. Waters Place & Eastchester Road																								
WB	L	1.06	93.8	F	L	1.36	212.0	F+	L	0.81	38.4	D	L	1.22	144.3	F+	L	1.25	162.8	F	L	2.37	654.9	F+
	R	0.92	43.7	D	R	1.10	90.4	F+	R	0.62	22.1	C	R	0.90	39.5	D	R	0.82	32.2	C	R	1.25	149.1	F+
NB	TR	0.98	47.1	D	TR	1.28	158.4	F+	TR	0.90	35.9	D	TR	1.14	99.4	F+	TR	0.84	29.4	C	TR	0.97	44.2	D
SB	DefL	0.84	48.7	D	DefL	1.37	216.3	F+	DefL	1.09	108.5	F	DefL	1.85	432.5	F+	DefL	0.84	45.1	D	DefL	1.23	155.8	F+
	T	0.49	10.9	B	T	0.49	10.9	B	T	0.59	17.4	B	T	0.59	17.4	B	T	0.58	12.4	B	T	0.58	12.4	B
	Int.		48.7	D	Int.		145.3	F	Int.		40.4	D	Int.		136.3	F	Int.		56.5	E	Int.		249.4	F
11. Blondell Avenue & Eastchester Road																								
EB	LR	0.25	19.0	B	LR	0.25	19.0	B	LR	0.29	19.6	B	LR	0.29	19.6	B	LR	0.34	20.9	C	LR	0.34	20.9	C
WB	LTR	0.62	25.7	C	LTR	0.62	25.7	C	LTR	0.51	22.6	C	LTR	0.51	22.6	C	LTR	0.61	25.3	C	LTR	0.61	25.3	C
NB	LT	0.63	19.9	B	LT	0.86	28.7	C	LT	0.59	19.0	B	LT	0.76	23.4	C	LT	0.50	17.5	B	LT	0.66	20.7	C
SB	TR	0.58	18.8	B	TR	0.67	20.7	C	TR	0.59	18.9	B	TR	0.76	23.2	C	TR	0.64	19.9	B	TR	0.99	44.0	D
	Int.		20.5	C	Int.		24.9	C	Int.		19.6	B	Int.		23.0	C	Int.		20.2	C	Int.		33.6	C
12. Williamsbridge Road & Eastchester Road																								
EB	LTR	0.57	20.6	C	LTR	0.57	20.6	C	LTR	0.54	20.2	C	LTR	0.54	20.3	C	LTR	0.57	20.8	C	LTR	0.57	20.8	C
WB	LTR	0.46	18.8	B	LTR	0.46	18.9	B	LTR	0.56	20.6	C	LTR	0.57	20.8	C	LTR	0.60	21.4	C	LTR	0.61	21.4	C
NB	LTR	0.80	30.9	C	LTR	1.23	141.6	F+	LTR	0.75	28.4	C	LTR	1.27	160.5	F+	LTR	0.68	25.4	C	LTR	1.26	160.3	F+
SB	L	0.31	19.0	B	L	0.54	30.3	C	L	0.41	21.0	C	L	0.61	31.4	C	L	0.35	19.4	B	L	0.43	22.2	C
	TR	0.90	40.8	D	TR	1.07	81.1	F+	TR	1.04	71.6	E	TR	1.43	229.2	F+	TR	1.10	92.2	F	TR	1.89	430.8	F+
	Int.		27.5	C	Int.		72.8	E+	Int.		35.7	D	Int.		119.6	F	Int.		41.3	D	Int.		201.5	F
13. East Tremont Avenue & Silver Street																								
EB	L	0.76	32.0	C	L	1.17	123.0	F+	L	0.59	18.6	B	L	0.86	31.0	C	L	0.65	28.7	C	L	0.83	39.0	D
	T	0.42	8.6	A	T	0.42	8.6	A	T	0.47	9.9	A	T	0.47	9.9	A	T	0.53	10.1	B	T	0.53	10.1	B
WB	TR	0.65	36.2	D	TR	0.65	36.2	D	TR	0.67	34.9	C	TR	0.67	34.9	C	TR	0.73	38.9	D	TR	0.73	38.9	D
SB	R	1.20	149.5	F	R	1.45	253.4	F+	R	1.19	135.4	F	R	1.68	346.8	F+	R	1.40	232.7	F	R	2.52	730.3	F+
	Int.		61.1	E	Int.		120.4	F	Int.		54.7	D	Int.		133.7	F	Int.		86.5	F	Int.		313.6	F
14. Project Driveway & Marconi Street																								
EB	LTR	0.67	45.4	D	LTR	0.74	48.0	D	LTR	0.86	69.4	E	LTR	0.60	39.6	D	LTR	0.69	47.0	D	LTR	0.65	42.0	D
WB	LTR	1.45	253.6	F	LTR	0.66	47.0	D	LTR	0.82	57.9	E	LTR	0.88	51.7	D	LTR	0.38	34.1	C	LTR	1.40	226.3	F+
					TR	0.60	24.4	C					TR	0.26	14.5	B				TR	0.15	14.3	B	
NB	LTR	0.81	27.2	C	LT	0.90	31.6	C	LTR	0.61	21.5	C	LT	0.75	28.1	C	DefL	1.11	158.3	F	DefL	1.11	159.3	F
					R	0.91	32.0	C					R	0.40	8.6	A				T	0.52	21.9	C	
SB	LTR	0.46	19.1	B	LTR	0.40	17.0	B	LTR	1.17	115.5	F	LTR	1.12	97.7	F	LTR	1.23	136.6	F	LTR	0.17	6.5	A
	Int.		82.5	F	Int.		31.1	C	Int.		72.0	E	Int.		51.2	D	Int.		104.7	F	Int.		126.7	F

Table 14-33 (cont'd)
2028 No-Action and With-Action with HRP Improvements Conditions
Level of Service Analysis: Signalized Intersections

Int	Weekday AM								Weekday Midday								Weekday PM							
	2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action			
	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
15. Waters Place & Marconi Street																								
EB	L	1.28	163.4	F	L	3.18	1019.0	F+	DefL	1.07	94.7	F	DefL	2.36	656.3	F+	DefL	0.78	36.8	D	DefL	1.78	388.9	F+
WB	LT	0.44	10.4	B	LT	1.04	71.4	E+	LT	0.44	11.1	B	T	0.59	13.6	B	LT	0.47	11.6	B	T	0.60	13.7	B
SB	TR	0.69	21.4	C	TR	1.06	66.8	E+	TR	0.50	17.9	B	TR	0.74	23.2	C	TR	0.51	17.9	B	TR	0.76	23.5	C
	L	0.28	26.4	C	L	0.46	29.8	C	L	0.60	33.1	C	L	0.90	53.9	D+	L	0.80	256.8	F	L	1.31	485.1	F+
	R	0.64	35.8	D	R	1.11	111.2	F+	R	1.10	105.2	F	R	1.90	448.8	F+	R	1.25	503.7	F	R	2.53	1085.0	F+
	Int.		47.7	D	Int.		301.6	F	Int.		48.3	D	Int.		230.9	F	Int.		159.2	F	Int.		414.9	F
16. Waters Place & BPC Driveway																								
EB	LT	0.52	17.2	B	DefL	1.38	251.9	F+	LT	0.59	18.0	B	LT	1.23	138.4	F+	LT	0.73	21.3	C	LT	1.49	249.6	F+
WB	T				T	0.70	22.9	C	T				T				T				T			
SB	TR	0.83	24.6	C	TR	1.38	200.0	F+	TR	0.47	15.7	B	TR	0.64	18.8	B	TR	0.51	16.4	B	TR	0.63	18.4	B
	L	0.07	17.5	B	L	0.20	19.0	B	L	0.07	17.5	B	L	0.31	20.5	C	L	0.08	17.6	B	L	0.52	24.1	C
	LR	0.13	18.2	B	LR	0.30	20.5	C	LR	0.14	18.4	B	LR	0.45	23.5	C	LR	0.21	19.2	B	LR	0.82	37.7	D
	Int.		22.3	C	Int.		154.4	F	Int.		17.0	B	Int.		71.0	E	Int.		19.0	B	Int.		124.7	F
17. Waters Place & Fink Avenue/HRP Southbound Off-Ramp																								
EB	TR	0.38	17.6	B	TR	0.50	19.3	B	TR	0.61	21.2	C	TR	0.83	28.2	C	TR	0.69	90.9	F	TR	1.10	273.4	F+
WB	LT	0.54	20.0	B	LT	0.75	24.9	C	LT	0.34	17.1	B	LT	0.42	18.1	B	LT	0.27	16.3	B	LT	0.33	17.0	B
NB	LR	1.31	188.4	F	LR	2.84	864.2	F+	LR	0.42	20.3	C	LR	0.72	31.5	C	LR	0.57	27.4	C	LR	0.87	53.7	D+
SB	L	0.59	22.2	C	L	0.63	23.4	C	L	0.38	18.2	B	L	0.46	19.4	B	L	0.51	20.3	C	L	0.66	24.2	C
	T	0.41	18.6	B	T	0.57	22.7	C	T	0.21	15.9	B	T	0.21	15.9	B	T	0.47	19.4	B	T	0.59	22.7	C
	Int.		46.8	D	Int.		236.1	F	Int.		19.2	B	Int.		24.2	C	Int.		49.6	D	Int.		147.8	F
18. Westchester Avenue & Ericson Place/Middletown Road																								
EB	DefL	1.46	600.5	F	DefL	2.19	951.8	F+	DefL	1.61	611.9	F	DefL	2.61	1066.0	F+	LTR	1.54	562.0	F	DefL	3.26	1332.0	F+
WB	TR	0.89	105.2	F	TR	0.93	124.5	F+	TR	1.07	197.2	F	TR	1.13	218.9	F+	LT	1.16	213.5	F	TR	1.26	253.6	F+
NB	LT	1.34	462.5	F	LT	1.49	524.9	F+	LT	1.17	421.3	F	LT	1.19	428.4	F+	LT	1.14	385.0	F	LT	1.15	388.8	F+
SB	LTR	0.98	117.7	F	LTR	1.14	173.7	F+	LTR	0.66	45.6	D	LTR	0.72	49.3	D	LTR	0.96	98.2	F	LTR	0.99	114.8	F+
	LTR	1.10	154.4	F	LTR	1.20	195.2	F+	LTR	1.05	150.0	F	LTR	1.15	190.8	F+	LTR	1.13	171.6	F	LTR	1.35	272.1	F+
	Int.		240.9	F	Int.		348.3	F	Int.		271.4	F	Int.		431.2	F	Int.		253.1	F	Int.		532.2	F
19. Waters Place & Westchester Avenue																								
EB	LT	0.50	19.3	B	LT	0.60	21.0	C	LT	0.67	22.5	C	LT	0.87	30.5	C	LT	0.78	174.2	F	LT	1.16	348.3	F+
NB	LTR	1.60	333.6	F	DefL	4.14	1466.0	F+	LTR	0.91	43.6	D	DefL	0.94	79.2	E+	LTR	0.67	61.1	E	LTR	0.81	113.6	F+
					TR	1.14	280.1	F					TR	1.13	112.1	F+								
SB	LTR	1.06	155.1	F	LTR	1.20	207.1	F+	LTR	0.81	30.4	C	LTR	0.81	29.5	C	LTR	0.69	24.2	C	LTR	0.72	25.5	C
	Int.		157.7	F	Int.		326.3	F	Int.		30.5	C	Int.		48.4	D	Int.		101.3	F	Int.		218.7	F
21. Tan Place & Westchester Avenue																								
WB	L	0.15	18.5	B	L	0.15	18.5	B	L	0.08	17.6	B	L	0.08	17.6	B	L	0.07	17.5	B	L	0.07	17.5	B
NB	R	0.68	29.8	C	R	1.04	76.3	E+	R	0.38	21.9	C	R	0.50	24.3	C	R	0.40	22.1	C	R	0.45	23.0	C
SB	T	0.68	70.5	E	T	1.13	258.2	F+	T	0.54	17.8	B	T	0.67	21.0	C	T	0.53	23.7	C	T	0.60	26.0	C
	T	0.56	21.2	C	T	0.60	22.3	C	T	0.57	18.4	B	T	0.65	20.1	C	T	0.59	17.9	B	T	0.70	20.2	C
	Int.		38.9	D	Int.		129.1	F	Int.		18.7	B	Int.		21.1	C	Int.		20.4	C	Int.		22.5	C
22. Blondell Avenue & Westchester Avenue																								
WB	L	0.18	22.0	C	L	0.18	22.0	C	L	0.16	21.8	C	L	0.16	21.8	C	L	0.28	23.5	C	L	0.28	23.5	C
	T	0.35	24.5	C	T	0.35	24.5	C	T	0.19	22.2	C	T	0.19	22.2	C	T	0.25	23.1	C	T	0.25	23.1	C
NB	LT	0.72	54.0	D	LT	0.97	142.3	F+	LT	0.74	36.3	D	LT	0.84	43.5	D	LT	0.69	51.1	D	LT	0.77	65.4	E+
SB	TR	0.78	38.9	D	TR	0.83	42.8	D	TR	0.51	26.3	C	TR	0.57	27.6	C	TR	0.66	33.0	C	TR	0.77	38.2	D
	Int.		40.1	D	Int.		74.5	E	Int.		29.0	C	Int.		32.3	C	Int.		36.5	D	Int.		43.4	D

Bronx Psychiatric Center Land Use Improvement Project

Table 14-33 (cont'd)
2028 No-Action and With-Action with HRP Improvements Conditions
Level of Service Analysis Signalized Intersections

Int	Weekday AM								Weekday Midday								Weekday PM							
	2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action			
	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
23. East Tremont Avenue & Westchester Avenue																								
EB	LTR	0.42	25.2	C	LTR	0.43	25.4	C	LTR	0.51	27.0	C	LTR	0.53	27.3	C	LTR	0.66	30.5	C	LTR	0.69	31.3	C
WB	LTR	0.59	28.3	C	LTR	0.59	28.4	C	LTR	0.41	25.0	C	LTR	0.42	25.1	C	LTR	0.57	27.9	C	LTR	0.57	27.9	C
NB	LT	1.16	207.9	F	LT	1.58	382.5	F+	LT	0.80	41.1	D	LT	0.88	49.3	D+	LT	0.87	66.2	E	LT	0.93	87.3	F+
SB	TR	0.58	32.2	C	TR	0.61	33.4	C	TR	0.50	26.1	C	TR	0.54	26.9	C	TR	0.66	35.3	E	TR	0.73	38.6	D
	Int.		65.4	E	Int.		118.4	F	Int.		29.0	C	Int.		31.2	C	Int.		37.0	D	Int.		41.9	D
24. Commerce Avenue & Westchester Avenue																								
EB	LT	0.46	27.2	C	LT	0.46	27.2	C	LT	0.30	24.0	C	LT	0.30	24.0	C	LT	0.48	27.5	C	LT	0.48	27.5	C
WB	LT	0.34	24.9	C	LT	0.34	24.9	C	LT	0.28	23.8	C	LT	0.28	23.8	C	LT	0.34	24.7	C	LT	0.34	24.7	C
	R	0.36	25.7	C	R	0.36	25.7	C	R	0.23	23.1	C	R	0.23	23.1	C	R	0.32	24.9	C	R	0.32	24.6	C
NB	LTR	0.60	41.3	D	LTR	0.80	58.8	E+	LTR	0.54	23.8	C	LTR	0.60	25.4	C	LTR	0.61	38.3	D	LTR	0.68	44.6	D
SB	LTR	0.70	50.7	D	DefL	0.82	222.7	F+	LTR	0.66	28.1	C	LTR	0.75	31.8	C	LTR	0.75	53.7	D	LTR	0.86	78.3	E+
	Int.		38.1	D	Int.		53.4	D	Int.		25.2	C	Int.		27.1	C	Int.		38.7	D	Int.		50.0	D
26. East Tremont Avenue & HRP East																								
EB	T	0.22	7.3	A	T	0.23	7.4	A	T	0.27	7.6	A	T	0.28	7.7	A	T	0.44	9.1	A	T	0.46	9.3	A
WB	T	0.73	13.7	B	T	0.90	21.6	C	T	0.48	9.5	A	T	0.55	10.4	B	T	0.66	12.2	B	T	0.70	12.9	B
SB	LR	0.64	39.4	D	LR	0.68	41.2	D	LR	0.39	32.5	C	LR	0.48	34.6	C	LR	0.52	35.4	D	LR	0.69	41.7	D
	Int.		15.3	B	Int.		21.2	C	Int.		10.8	B	Int.		11.8	B	Int.		13.0	B	Int.		14.6	B
27. East Tremont Avenue & Ericson Place																								
EB	LT	0.40	14.4	B	LT	0.42	14.8	B	LT	0.45	15.0	B	LT	0.49	15.6	B	LT	0.73	20.8	C	LT	0.80	23.6	C
WB	T	1.02	69.3	E	T	1.11	99.4	F+	T	0.72	34.7	C	T	0.77	36.6	D	T	0.91	46.8	D	T	0.94	50.4	D
NB	LTR	1.08	87.4	F	LTR	1.50	260.8	F+	LTR	0.79	37.1	D	LTR	0.93	50.5	D+	LTR	1.07	82.9	F	LTR	1.14	109.7	F+
	Int.		64.5	E	Int.		157.2	F	Int.		28.6	C	Int.		34.3	C	Int.		48.7	D	Int.		59.2	E
29. HRP Service Road & Connection Road																								
EB	R	0.12	28.4	C	R	0.28	30.1	C	R	0.34	30.9	C	R	0.73	39.6	D	R	0.48	33.0	C	R	1.24	154.8	F+
SB	T	0.88	38.5	D	T	0.88	38.5	D	T	0.50	25.6	C	T	0.50	25.6	C	T	0.78	32.2	C	T	0.78	32.2	C
	R	0.48	11.4	B	R	1.05	61.0	E+	R	0.22	8.4	A	R	0.46	11.0	B	R	0.15	7.8	A	R	0.28	9.0	A
SB	TR	0.79	40.6	D	TR	1.04	80.1	F+	TR	0.58	32.1	C	TR	0.63	33.6	C	TR	0.89	49.9	D	TR	0.97	62.6	E+
	Int.		32.5	C	Int.		54.8	D	Int.		25.5	C	Int.		27.3	C	Int.		35.5	D	Int.		75.0	E
33. East/West Road and OMH Road/Entrance to Building 3 and Retail																								
EB	L				L	0.01	19.6	B	L				L	0.04	24.3	C	L				L	0.09	25.4	C
WB	TR				TR	0.56	25.8	C	TR				TR	0.46	28.6	C	TR				TR	0.34	26.8	C
	L				L	0.48	20.1	C	L				L	0.36	14.1	B	L				L	0.68	20.2	B
NB	TR				TR	0.32	15.0	B	TR				TR	0.28	12.4	B	TR				TR	0.41	13.8	B
	LT				LT	0.14	16.9	B	LT				LT	0.14	19.5	B	LT				LT	0.08	18.8	B
R					R	0.41	20.7	C	R				R	0.37	22.9	C	R				R	0.32	22.0	C
SB	LTR				LTR	0.10	16.5	B	LTR				LTR	0.32	21.9	C	LTR				LTR	0.69	30.9	C
	Int.				Int.		20.5	C	Int.				Int.		19.8	B	Int.				Int.		21.2	C
34. East/West Road and Entrance to Buildings 4, 5, and 6 and Parker/Thompson Buildings																								
EB	L				L	0.51	29.3	C	L				L	0.35	34.9	C	L				L	0.34	39.3	D
WB	TR				TR	0.85	44.0	D	TR				TR	0.90	51.3	D	TR				TR	0.92	54.4	D
	L				L	0.71	37.9	D	L				L	0.35	37.2	D	L				L	0.27	40.1	D
NB	TR				TR	0.80	33.8	C	TR				TR	0.43	24.9	C	TR				TR	0.29	25.0	C
	L				L	0.51	38.2	D	L				L	0.90	61.0	E	L				L	1.30	178.0	F
SB	TR				TR	0.13	28.8	C	TR				TR	0.35	25.6	C	TR				TR	0.42	20.5	C
	LT				LT	0.22	30.6	C	LT				LT	0.55	32.2	C	LT				LT	0.62	27.9	C
R					R	0.22	10.9	B	R				R	0.51	15.6	B	R				R	0.72	19.3	B
	Int.				Int.		33.9	C	Int.				Int.		36.7	D	Int.				Int.		62.5	E

Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity; Def = De Facto; + denotes a significant adverse traffic impact

Table 14-34

**2028 No-Action and With-Action with HRP Improvements Conditions
Level of Service Analysis: Unsignalized Intersections**

Int.	Weekday AM								Weekday Midday								Weekday PM							
	2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action				2028 No-Action				2028 With-Action			
	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
17. Waters Place & HRP Southbound Off-Ramp *																								
SB	R	0.47	14.5	B	R	1.10	120.3	F+	R	0.16	9.4	A	R	0.29	14.6	B	R	0.37	12.7	B	R	0.62	26.4	D
19. Waters Place & Westchester Avenue *																								
EB	R	0.19	8.3	A	R	0.24	8.7	A	R	0.12	8.2	A	R	0.17	8.6	A	R	0.07	8.1	A	R	0.14	8.5	A
20. Westchester Avenue & Waters Avenue																								
EB	LR	0.86	47.2	E	LR	23.94	10782.0	F+	LR	0.30	12.1	B	LR	0.40	15.2	C	LR	0.56	14.3	B	LR	0.74	21.8	C
NB	LT	0.42	12.3	B	LT	0.96	46.1	E+	LT	0.14	9.5	A	LT	0.26	10.4	B	LT	0.12	9.0	A	LT	0.20	9.7	A
22. Blondell Avenue & Westchester Avenue *																								
WB	R	0.11	8.6	A	R	0.33	10.5	B	R	0.15	8.8	A	R	0.23	9.3	A	R	0.12	8.7	A	R	0.16	8.9	A
24. Commerce Avenue & Westchester Avenue *																								
EB	R	0.26	13.2	B	R	0.26	13.5	B	R	0.36	14.8	B	R	0.38	15.4	C	R	0.32	13.8	B	R	0.34	14.7	B
25. East Tremont Avenue & Tan Place **																								
28. Roebling Avenue and Ericson Place/HRP East																								
WB	LR	0.14	9.4	A	LR	0.15	9.7	A	LR	0.05	8.0	A	LR	0.05	8.2	A	LR	0.07	9.4	A	LR	0.07	9.6	A
NB	TR	0.59	14.3	B	TR	0.71	18.2	C	TR	0.41	10.4	B	TR	0.45	11.1	B	TR	0.72	18.8	C	TR	0.76	21.2	C
SB	LT	0.23	9.5	A	LT	0.26	9.9	A	LT	0.19	8.9	A	LT	0.23	9.2	A	LT	0.27	10.3	B	LT	0.36	11.4	B
30. BPC Roundabout																								
EB	TR	0.04	4.2	A	TR	0.20	5.8	A	TR	0.04	4.7	A	TR	0.36	8.5	B	TR	0.07	4.6	A	TR	0.76	19.2	C
WB	LT	0.09	4.5	A	LT	0.12	6.8	A	LT	0.11	5.1	A	LT	0.14	6.8	A	LT	0.15	4.9	A	LT	0.19	6.4	A
NB	LR	0.12	4.4	A	LR	0.45	8.3	A	LR	0.11	4.8	A	LR	0.34	7.5	A	LR	0.09	4.4	A	LR	0.28	6.5	A
Notes: L = Left-turn; T = Through; R = Right-turn; LOS = Level of Service; EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; Int. = Intersection; v/c = Volume/Capacity; + denotes a significant adverse traffic impact * Channelized Right Turn analyzed as Stop Controlled. ** No traffic control.																								

Bronx Psychiatric Center Land Use Improvement Project

3 & 4. Pelham Parkway (Eastbound) and Williamsbridge Road

- Eastbound mainline left-turn/through would deteriorate within LOS F (from a v/c ratio of 1.17 and 124.0 spv of delay to a v/c ratio of 1.28 and 172.3 spv of delay) during the weekday AM peak hour.

6. Pelham Parkway (Westbound) and Eastchester Road

- Southbound through/right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.86 and 54.5 spv of delay to a v/c ratio of 0.96 and 66.9 spv of delay) during the weekday PM peak hour.

7. & 8. Pelham Parkway (Eastbound) and Eastchester Road

- Eastbound mainline left-turn/through would deteriorate from LOS D to LOS E (from a v/c ratio of 1.00 and 53.1 spv of delay to a v/c ratio of 1.07 and 74.9 spv of delay) during the weekday AM peak hour.
- Eastbound service road through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.14 and 113.0 spv of delay to a v/c ratio of 1.15 and 117.0 spv of delay) during the weekday AM peak hour and within LOS F (from a v/c ratio of 1.17 and 133.2 spv of delay to a v/c ratio of 1.18 and 136.5 spv of delay) during the weekday PM peak hour.
- Northbound through/right-turn would deteriorate within LOS D (from a v/c ratio of 0.87 and 39.9 spv of delay to a v/c ratio of 0.96 and 51.3 spv of delay) during the weekday AM peak hour.
- Southbound left-turn would deteriorate within LOS D (from a v/c ratio of 0.56 and 40.6 spv of delay to a v/c ratio of 0.63 and 49.9 spv of delay) during the weekday PM peak hour.

9. Morris Park Avenue and Eastchester Road

- Eastbound left-turn would deteriorate within LOS F (from a v/c ratio of 1.03 and 103.1 spv of delay to a v/c ratio of 1.04 and 106.2 spv of delay) during the weekday PM peak hour.
- Eastbound right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.71 and 49.9 spv of delay to a v/c ratio of 0.80 and 56.3 spv of delay) during the weekday AM peak hour; from LOS D to LOS E (from a v/c ratio of 0.67 and 48.8 spv of delay to a v/c ratio of 0.78 and 55.3 spv of delay) during the weekday midday peak hour; and from LOS D to LOS E (from a v/c ratio of 0.70 and 49.4 spv of delay to a v/c ratio of 0.83 and 59.9 spv of delay) during the weekday PM peak hour.
- Northbound left-turn would deteriorate from LOS E to LOS F (from a v/c ratio of 0.81 and 71.2 spv of delay to a v/c ratio of 0.88 and 80.1 spv of delay) during the weekday AM peak hour; from LOS E to LOS F (from a v/c ratio of 0.80 and 68.6 spv of delay to a v/c ratio of 0.94 and 90.4 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 0.96 and 93.4 spv of delay to a v/c ratio of 1.25 and 190.0 spv of delay) during the weekday PM peak hour.
- Southbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.21 and 146.0 spv of delay to a v/c ratio of 1.36 and 209.4 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.14 and 118.4 spv of delay to a v/c ratio of 1.34 and 201.7 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.17 and 130.2 spv of delay to a v/c ratio of 1.41 and 235.9 spv of delay) during the weekday PM peak hour.

10. Waters Place and Eastchester Road

- Westbound left-turn would deteriorate within LOS F (from a v/c ratio of 1.06 and 93.8 spv of delay to a v/c ratio of 1.36 and 212.0 spv of delay) during the weekday AM peak hour; from LOS D to LOS F (from a v/c ratio of 0.81 and 38.4 spv of delay to a v/c ratio of 1.22 and 144.3 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.25 and 162.8 spv of delay to a v/c ratio of 2.37 and 654.9 spv of delay) during the weekday PM peak hour.
- Westbound right-turn would deteriorate from LOS D to LOS F (from a v/c ratio of 0.92 and 43.7 spv of delay to a v/c ratio of 1.10 and 90.4 spv of delay) during the weekday AM peak hour; and from LOS C to LOS F (from a v/c ratio of 0.82 and 32.2 spv of delay to a v/c ratio of 1.25 and 149.1 spv of delay) during the weekday PM peak hour.
- Northbound through/right-turn would deteriorate from LOS D to LOS F (from a v/c ratio of 0.98 and 47.1 spv of delay to a v/c ratio of 1.28 and 158.4 spv of delay) during the weekday AM peak hour; and from LOS D to LOS F (from a v/c ratio of 0.90 and 35.9 spv of delay to a v/c ratio of 1.14 and 99.4 spv of delay) during the weekday midday peak hour.
- Southbound de facto left-turn would deteriorate from LOS D to LOS F (from a v/c ratio of 0.84 and 48.7 spv of delay to a v/c ratio of 1.37 and 216.3 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.09 and 108.5 spv of delay to a v/c ratio of 1.85 and 432.5 spv of delay) during the weekday midday peak hour; and from LOS D to LOS F (from a v/c ratio of 0.84 and 45.1 spv of delay to a v/c ratio of 1.23 and 155.8 spv of delay) during the weekday PM peak hour.

12. Williamsbridge Road and Eastchester Road

- Northbound left-turn/through/right-turn would deteriorate from LOS C to LOS F (from a v/c ratio of 0.80 and 30.9 spv of delay to a v/c ratio of 1.23 and 141.6 spv of delay) during the weekday AM peak hour; from LOS C to LOS F (from a v/c ratio of 0.75 and 28.4 spv of delay to a v/c ratio of 1.27 and 160.5 spv of delay) during the weekday midday peak hour; and from LOS C to LOS F (from a v/c ratio of 0.68 and 25.4 spv of delay to a v/c ratio of 1.26 and 160.3 spv of delay) during the weekday PM peak hour.
- Southbound through/right-turn would deteriorate from LOS D to LOS F (from a v/c ratio of 0.90 and 40.8 spv of delay to a v/c ratio of 1.07 and 81.1 spv of delay) during the weekday AM peak hour; from LOS E to LOS F (from a v/c ratio of 1.04 and 71.6 spv of delay to a v/c ratio of 1.43 and 229.2 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.10 and 92.2 spv of delay to a v/c ratio of 1.89 and 430.8 spv of delay).

13. East Tremont Avenue and Silver Street

- Eastbound left-turn would deteriorate from LOS C to LOS F (from a v/c ratio of 0.76 and 32.0 spv of delay to a v/c ratio of 1.17 and 123.0 spv of delay) during the weekday AM peak hour.
- Southbound right-turn would deteriorate within LOS F (from a v/c ratio of 1.20 and 149.5 spv of delay to a v/c ratio of 1.45 and 253.4 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.19 and 135.4 spv of delay to a v/c ratio of 1.68 and 346.8 spv of delay) during the midday peak hour; and within LOS F (from a v/c ratio of 1.40 and 232.7 spv of delay to a v/c ratio of 2.52 and 730.3 spv of delay) during the weekday PM peak hour.

Bronx Psychiatric Center Land Use Improvement Project

14. Project Driveway and Marconi Street

- Westbound left-turn/through/right-turn would deteriorate from a left-turn/through/right-turn at LOS C with a v/c ratio of 0.38 and 34.1 spv of delay to a left-turn at LOS F with a v/c ratio of 1.40 and 226.3 spv of delay during the weekday PM peak hour.

15. Waters Place and Marconi Street

- Eastbound left-turn would deteriorate within LOS F (from a v/c ratio of 1.28 and 163.4 spv of delay to a v/c ratio of 3.18 and 1019.0 spv of delay) during the weekday AM peak hour.
- Eastbound de facto left-turn would deteriorate within LOS F (from a v/c ratio of 1.07 and 94.7 spv of delay to a v/c ratio of 2.36 and 656.3 spv of delay) during the weekday midday peak hour and from LOS D to LOS F (from a v/c ratio of 0.78 and 36.8 spv of delay to a v/c ratio of 1.78 and 388.9 spv of delay) during the weekday PM peak hour.
- Eastbound left-turn/through would deteriorate from LOS B to LOS E (from a v/c ratio of 0.44 and 10.4 spv of delay to a v/c ratio of 1.04 and 71.4 spv of delay) during the weekday AM peak hour.
- Westbound through/right-turn would deteriorate from LOS C to LOS E (from a v/c ratio of 0.69 and 21.4 spv of delay to a v/c ratio of 1.06 and 66.8 spv of delay) during the weekday AM peak hour.
- Southbound left-turn would deteriorate from LOS C to LOS D (from a v/c ratio of 0.60 and 33.1 spv of delay to a v/c ratio of 0.90 and 53.9 spv of delay) during the weekday midday peak hour and within LOS F (from a v/c ratio of 0.80 and 256.8 spv of delay to a v/c ratio of 1.30 and 485.1 spv of delay) during the PM peak hour.
- Southbound right-turn would deteriorate from LOS D to LOS F (from a v/c ratio of 0.64 and 35.8 spv of delay to a v/c ratio of 1.11 and 111.2 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.10 and 105.2 spv of delay to a v/c ratio of 1.90 and 448.8 spv of delay) during the midday peak hour; and within LOS F (from a v/c ratio of 1.25 and 503.7 spv of delay to a v/c ratio of 2.53 and 1085.0 spv of delay) during the PM peak hour.

16. Waters Place and BPC Driveway

- Eastbound left-turn/through would deteriorate to a de facto left-turn from LOS B to LOS F (from a v/c ratio of 0.52 and 17.2 spv of delay to a v/c ratio of 1.38 and 251.9 spv of delay) during the weekday AM peak hour.
- Eastbound left-turn/through would deteriorate from LOS B to LOS F (from a v/c ratio of 0.59 and 18.0 spv of delay to a v/c ratio of 1.23 and 138.4 spv of delay) during the weekday midday peak hour and from LOS C to LOS F (from a v/c ratio of 0.73 and 21.3 spv of delay to a v/c ratio of 1.49 and 249.6 spv of delay) during the weekday PM peak hour.
- Westbound through/right-turn would deteriorate from LOS C to LOS F (from a v/c ratio of 0.83 and 24.6 spv of delay to a v/c ratio of 1.38 and 200.0 spv of delay) during the weekday AM peak hour.

17. Waters Place and Fink Avenue/Hutchinson River Parkway Southbound Off-Ramp

- Eastbound through/right-turn would deteriorate within LOS F (from a v/c ratio of 0.69 and 90.9 spv of delay to a v/c ratio of 1.10 and 273.4 spv of delay) during the weekday PM peak hour.
- Northbound left-turn/right-turn would deteriorate within LOS F (from a v/c ratio of 1.31 and 188.4 spv of delay to a v/c ratio of 2.84 and 864.2 spv of delay) during the weekday AM peak

- hour and from LOS C to LOS D (from a v/c ratio of 0.57 and 27.4 spv of delay to a v/c ratio of 0.87 and 53.7 spv of delay) during the weekday PM peak hour.
- Southbound channelized right-turn (unsignalized) would deteriorate from LOS B to LOS F (from a v/c ratio of 0.47 and 14.5 spv of delay to a v/c ratio of 1.10 and 120.3 spv of delay) during the weekday AM peak hour.

18. Westchester Avenue and Ericson Place/Middletown Road

- Eastbound de facto left would deteriorate within LOS F (from a v/c ratio of 1.46 and 300.5 spv of delay to a v/c ratio of 2.19 and 951.8 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.61 and 611.9 spv of delay to a v/c ratio of 2.61 and 1066.0 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.54 and 562.0 spv of delay to a v/c ratio of 3.26 and 1332.0 spv of delay) during the weekday PM peak hour.
- Eastbound through/right-turn would deteriorate from LOS E to LOS F (from a v/c ratio of 0.89 and 105.2 spv of delay to a v/c ratio of 0.93 and 124.5 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.10 and 205.2 spv of delay to a v/c ratio of 1.16 and 228.5 spv of delay) during the weekday midday peak hour and within LOS F (from a v/c ratio of 1.16 and 213.5 spv of delay to a v/c ratio of 1.26 and 253.6 spv of delay) during the weekday PM peak hour.
- Westbound left-turn/through would deteriorate within LOS F (from a v/c ratio of 1.34 and 462.5 spv of delay to a v/c ratio of 1.49 and 524.9 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.17 and 421.3 spv of delay to a v/c ratio of 1.14 and 385.0 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.15 and 388.8 spv of delay to a v/c ratio of 1.17 and 401.4 spv of delay) during the weekday PM peak hour.
- Northbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 0.98 and 117.7 spv of delay to a v/c ratio of 1.14 and 173.7 spv of delay) during the weekday AM peak hour and within LOS F (from a v/c ratio of 0.96 and 98.2 spv of delay to a v/c ratio of 0.99 and 114.8 spv of delay) during the weekday PM peak hour.
- Southbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.10 and 154.4 spv of delay to a v/c ratio of 1.20 and 195.2 spv of delay) during the weekday AM peak hour; within LOS F (from a v/c ratio of 1.05 and 150.0 spv of delay to a v/c ratio of 1.16 and 190.8 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.13 and 171.6 spv of delay to a v/c ratio of 1.35 and 272.1 spv of delay) during the weekday PM peak hour.

19. Waters Place and Westchester Avenue

- Eastbound left-turn/through would deteriorate within LOS F (from a v/c ratio of 0.78 and 174.2 spv of delay to a v/c ratio of 1.16 and 348.3 spv of delay) during the weekday PM peak hour.
- Northbound de facto left-turn would deteriorate within LOS F (from a v/c ratio of 1.60 and 333.6 spv of delay to a v/c ratio of 4.14 and 1466.0 spv of delay) during the weekday AM peak hour.
- Northbound left-turn/through/right-turn would deteriorate from LOS D to a de facto left-turn at LOS E (from a v/c ratio of 0.91 and 43.6 spv of delay to a v/c ratio of 0.94 and 79.2 spv of delay) and to a through/right-turn at LOS F (from a v/c ratio of 0.91 and 43.6 spv of delay to a v/c ratio of 1.13 and 112.1 spv of delay) during the weekday midday peak hour.
- Northbound left-turn/through/right-turn would deteriorate from LOS E to LOS F (from a v/c ratio of 0.67 and 61.1 spv of delay to a v/c ratio of 0.81 and 113.6 spv of delay) during the weekday PM peak hour.

Bronx Psychiatric Center Land Use Improvement Project

- Southbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.06 and 155.1 spv of delay to a v/c ratio of 1.20 and 207.1 spv of delay) during the weekday AM peak hour.

20. Westchester Avenue and Waters Avenue

- Eastbound left-turn/right-turn deteriorates from LOS E to LOS F (from a v/c ratio of 0.86 and 47.2 spv of delay to a v/c ratio of 23.9 and 10782.0 spv of delay) during the weekday AM peak hour.
- Northbound left-turn/through would deteriorate from LOS B to LOS E (from a v/c ratio of 0.42 and 12.3 spv of delay to a v/c ratio of 0.96 and 46.1 spv of delay) during the weekday AM peak hour.

21. Tan Place and Westchester Avenue

- Westbound right-turn would deteriorate from LOS C to LOS E (from a v/c ratio of 0.68 and 29.8 spv of delay to a v/c ratio of 1.04 and 76.3 spv of delay) during the weekday AM peak hour.
- Northbound through would deteriorate from LOS E to LOS F (from a v/c ratio of 0.68 and 70.5 spv of delay to a v/c ratio of 1.13 and 258.2 spv of delay) during the weekday AM peak hour.

22. Blondell Avenue and Westchester Avenue

- Northbound left-turn/through would deteriorate from LOS D to LOS F (from a v/c ratio of 0.72 and 54.0 spv of delay to a v/c ratio of 0.97 and 142.3 spv of delay) during the weekday AM peak hour and from LOS D to LOS E (from a v/c ratio of 0.69 and 51.1 spv of delay to a v/c ratio of 0.77 and 65.4 spv of delay) during the weekday PM peak hour.

23. East Tremont Avenue and Westchester Avenue

- Northbound left-turn/through would deteriorate within LOS F (from a v/c ratio of 1.16 and 207.9 spv of delay to a v/c ratio of 1.58 and 382.5 spv of delay) during the weekday AM peak hour; within LOS D (from a v/c ratio of 0.80 and 41.1 spv of delay to a v/c ratio of 0.88 and 49.3 spv of delay) during the weekday midday peak hour; and from LOS E to LOS F (from a v/c ratio of 0.87 and 66.2 spv of delay to a v/c ratio of 0.93 and 87.3 spv of delay) during the weekday PM peak hour.

24. Commerce Avenue and Westchester Avenue

- Northbound left-turn/through/right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.60 and 41.3 spv of delay to a v/c ratio of 0.80 and 58.8 spv of delay) during the weekday AM peak hour.
- Southbound left-turn/through/right-turn would deteriorate from LOS D to a de facto left-turn at LOS F (from a v/c ratio of 0.70 and 50.7 spv of delay to a v/c ratio of 0.82 and 222.7 spv of delay) during the weekday AM peak hour.
- Southbound left-turn/through/right-turn would deteriorate from LOS D to LOS E (from a v/c ratio of 0.75 and 53.7 spv of delay to a v/c ratio of 0.86 and 78.3 spv of delay) during the weekday PM peak hour.

27. East Tremont Avenue and Ericson Place

- Westbound through would deteriorate from LOS E to LOS F (from a v/c ratio of 1.02 and 69.3 spv of delay to a v/c ratio of 1.11 and 99.4 spv of delay) during the weekday AM peak hour.
- Northbound left-turn/through/right-turn would deteriorate within LOS F (from a v/c ratio of 1.08 and 87.4 spv of delay to a v/c ratio of 1.50 and 260.8 spv of delay) during the weekday AM peak

hour; within LOS D (from a v/c ratio of 0.79 and 37.1 spv of delay to a v/c ratio of 0.93 and 50.5 spv of delay) during the weekday midday peak hour; and within LOS F (from a v/c ratio of 1.07 and 82.9 spv of delay to a v/c ratio of 1.14 and 109.7 spv of delay) during the weekday PM peak hour.

29. HRP Service Road and East-West Road

- Eastbound right-turn would deteriorate from LOS C to LOS F (from a v/c ratio of 0.48 and 33.0 spv of delay to a v/c ratio of 1.24 and 154.8 spv of delay) during the weekday PM peak hour.
- Southbound right-turn would deteriorate from LOS B to LOS E (from a v/c ratio of 0.48 and 11.4 spv of delay to a v/c ratio of 1.05 and 61.0 spv of delay) during the weekday AM peak hour.
- Southbound through/right-turn would deteriorate from LOS D to LOS F (from a v/c ratio of 0.79 and 40.6 spv of delay to a v/c ratio of 1.04 and 80.1 spv of delay) during the weekday AM peak hour and from LOS D to LOS E (from a v/c ratio of 0.89 and 49.9 spv of delay to a v/c ratio of 0.97 and 62.6 spv of delay) during the weekday PM peak hour.

E. DETAILED TRAFFIC ANALYSIS: HUTCHINSON RIVER PARKWAY

EXISTING CONDITIONS

ROADWAY NETWORK AND TRAFFIC STUDY AREA

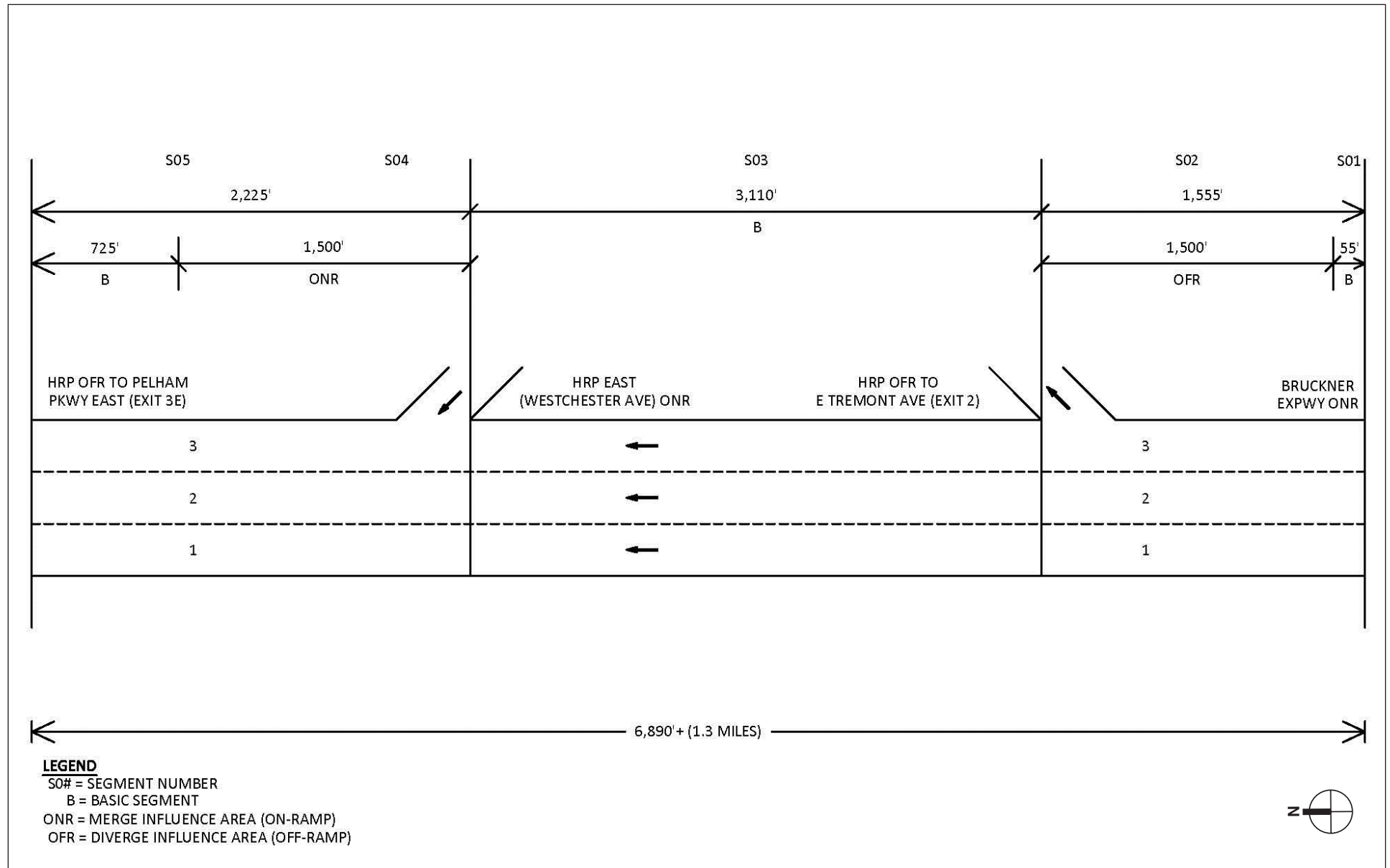
The traffic study area for the northbound and southbound HRP traffic analysis extends from the Bruckner Expressway to the Pelham Parkway Interchanges. The northbound segment begins south of the HRP Off-Ramp to East Tremont Avenue (Exit 2) and ends north of the HRP On-Ramp from Pelham Parkway East. The southbound segment begins north of the HRP Off-Ramp to Waters Place (Exit 2) and ends north of the HRP On-Ramp from Westchester Avenue/Waters Place. **Figures 14-33 and 14-34** illustrate the northbound and southbound roadway segment configurations. Both segments are 1.3 miles in length.

TRAFFIC CONDITIONS

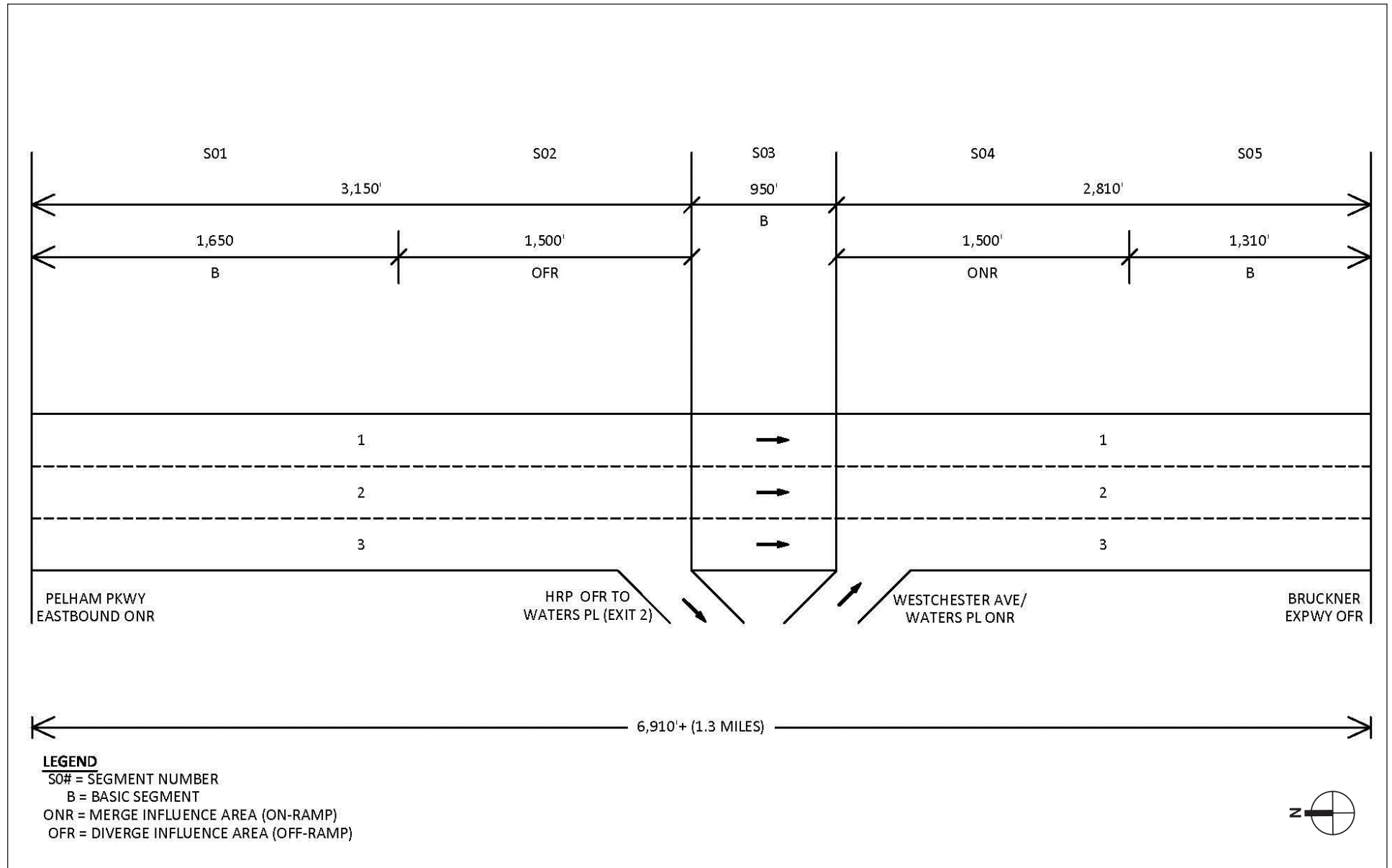
The existing conditions FREEVAL analyses were based on the ATR data obtained as shown in **Tables 14-35 and 14-36** for northbound and southbound directions, respectively. The three peak periods analyzed are 7:00-9:30 AM, 12:00-2:00 PM and 4:00-6:30 PM.

LEVELS OF SERVICE

The average and busiest 15-minute MOEs resulting from the existing conditions FREEVAL analyses are summarized in **Tables 14-37 through 14-39** in the northbound direction and **Tables 14-40 through 14-42** in the southbound direction for the typical weekday AM, midday, and PM peak periods.



Northbound Hutchinson River Parkway Diagram and Segmentation
 Existing Condition



Southbound Hutchinson River Parkway Diagram and Segmentation
Existing Condition

Figure 14-34

Bronx Psychiatric Center Land Use Improvement Project

Table 14-35
Northbound HRP ATR Volumes

Start Time	S01		S02		S03	S04		S05
	Average Mid-Weekday*	Hourly Demand (15min vol*4)	Average Mid-Weekday*	Hourly Demand (15min vol*4)	Hourly Demand (15min vol*4)	Average Mid-Weekday*	Hourly Demand (15min vol*4)	Hourly Demand (15min vol*4)
7:00	729	2,916	154	616	2,300	90	360	2,660
7:15	888	3,552	163	652	2,900	93	372	3,272
7:30	977	3,908	191	764	3,144	97	388	3,532
7:45	1,077	4,308	203	812	3,496	114	456	3,952
8:00	1,077	4,308	192	768	3,540	106	424	3,964
8:15	1,038	4,152	204	816	3,336	99	396	3,732
8:30	1,055	4,220	211	844	3,376	100	400	3,776
8:45	984	3,936	215	860	3,076	85	340	3,416
9:00	917	3,668	186	744	2,924	84	336	3,260
9:15	850	3,400	170	680	2,720	78	312	3,032
12:00	620	2,480	113	452	2,028	111	444	2,472
12:15	647	2,588	120	480	2,108	123	492	2,600
12:30	657	2,628	113	452	2,176	113	452	2,628
12:45	593	2,372	120	480	1,892	112	448	2,340
13:00	652	2,608	120	480	2,128	114	456	2,584
13:15	643	2,572	116	464	2,108	112	448	2,556
13:30	665	2,660	113	452	2,208	108	432	2,640
13:45	682	2,728	120	480	2,248	117	468	2,716
16:00	918	3,672	121	484	3,188	146	584	3,772
16:15	927	3,708	157	628	3,080	149	596	3,676
16:30	902	3,608	147	588	3,020	152	608	3,628
16:45	910	3,640	151	604	3,036	152	608	3,644
17:00	908	3,632	144	576	3,056	158	632	3,688
17:15	950	3,800	146	584	3,216	153	612	3,828
17:30	901	3,604	141	564	3,040	136	544	3,584
17:45	885	3,540	140	560	2,980	137	548	3,528
18:00	855	3,420	121	484	2,936	133	532	3,468
18:15	845	3,380	119	476	2,904	144	576	3,480

Table 14-36
Southbound HRP ATR Volumes

Start Time	S01		S02		S03	S04		S05
	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)
7:00	884	3,536	273	1,092	2,444	66	264	2,708
7:15	934	3,736	337	1,348	2,388	75	300	2,688
7:30	907	3,628	378	1,512	2,116	80	320	2,436
7:45	888	3,552	399	1,596	1,956	69	276	2,232
8:00	851	3,404	358	1,432	1,972	77	308	2,280
8:15	847	3,388	337	1,348	2,040	73	292	2,332
8:30	820	3,280	316	1,264	2,016	74	296	2,312
8:45	774	3,096	302	1,208	1,888	78	312	2,200
9:00	703	2,812	221	884	1,928	83	332	2,260
9:15	646	2,584	197	788	1,796	88	352	2,148
12:00	574	2,296	135	540	1,756	105	420	2,176
12:15	632	2,528	152	608	1,920	111	444	2,364
12:30	640	2,560	156	624	1,936	100	400	2,336
12:45	626	2,504	146	584	1,920	107	428	2,348
13:00	677	2,708	166	664	2,044	118	472	2,516
13:15	686	2,744	151	604	2,140	121	484	2,624
13:30	664	2,656	160	640	2,016	109	436	2,452
13:45	633	2,532	147	588	1,944	117	468	2,412
16:00	838	3,352	197	788	2,564	140	560	3,124
16:15	841	3,364	203	812	2,552	134	536	3,088
16:30	836	3,344	180	720	2,624	154	616	3,240
16:45	849	3,396	191	764	2,632	144	576	3,208
17:00	845	3,380	189	756	2,624	157	628	3,252
17:15	893	3,572	222	888	2,684	140	560	3,244
17:30	847	3,388	209	836	2,552	150	600	3,152
17:45	856	3,424	194	776	2,648	135	540	3,188
18:00	835	3,340	173	692	2,648	136	544	3,192
18:15	844	3,376	153	612	2,764	133	532	3,296

Table 14-37
Existing Northbound HRP Traffic Operations Summary
Weekday AM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (MPH)		Density (PC/MI/LN)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.66	0.66	55.0	55.0	24.2	27.2	D	N/A	Globally Undersaturated		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.66	0.66	50.0	50.0	26.6	28.3	D	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.55	0.55	54.9	54.9	19.5	22.2	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.61	0.61	51.1	50.8	23.6	23.1	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.61	0.61	54.4	54.3	22.2	25.3	C	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (7:45-8:00 AM)		Travel Time (min)		
					Average (7:00-9:30 AM)	Busiest Period (7:45-8:00 AM)	Average (7:00-9:30 AM)	Busiest Period (7:45-8:00 AM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					52.7	52.6	22.3	25.3	C	N/A	1.4	1.5	1.5

Table 14-38
Existing Northbound HRP Traffic Operations Summary
Weekday Midday Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.42	0.42	55.0	55.0	16.3	17.2	B	N/A	Globally Undersaturated		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.49	0.49	51.1	51.1	20.7	21.4	C	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.49	0.49	54.9	54.9	19.2	20.3	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.57	0.57	51.1	51.0	23.7	21.7	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.57	0.57	54.4	54.3	22.3	23.4	C	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (1:45-2:00 PM)		Travel Time (min)		
					Average (12:00-2:00 PM)	Busiest Period (1:45-2:00 PM)	Average (12:00-2:00 PM)	Busiest Period (1:45-2:00 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.3	0.57	0.57	53.1	53.1	20.8	21.9	C	N/A

Bronx Psychiatric Center Land Use Improvement Project

Table 14-39
Existing Northbound HRP Traffic Operations Summary
Weekday PM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.59	0.59	55.0	55.0	22.7	24.0	C	N/A	Globally Undersaturated		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.59	0.59	50.3	50.3	24.8	25.4	C	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.50	0.50	54.9	54.9	19.2	20.3	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.59	0.59	51.1	50.9	24.6	22.8	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.59	0.59	54.4	54.3	23.1	24.4	C	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (5:15–5:30 PM)		Travel Time (min)		
					Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.3	0.59	0.59	52.8	52.7	22.0	23.3	C	N/A

Table 14-40
Existing Southbound HRP Traffic Operations Summary
Weekday AM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to Waters PI (Exit 2)	1650	0.56	0.56	55.0	55.0	20.3	23.0	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to Waters PI Influence Area	1500	0.56	0.56	49.0	49.1	22.8	26.0	C/F*	N/A			
S03	Basic Segment: Waters PI OFR and Westchester Ave/Waters PI ONR	950	0.36	0.36	54.2	54.2	12.8	14.9	B	N/A			
S04	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.40	0.40	51.8	51.6	15.4	17.2	B	N/A			
S05	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.40	0.40	54.7	54.6	14.6	16.7	B	N/A			
All NB Segments		6,910											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway East to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (7:15–7:30 AM)		Travel Time (min)		
					Average (7:00–9:30 AM)	Busiest Period (7:15–7:30 AM)	Average (7:00–9:30 AM)	Busiest Period (7:15–7:30 AM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.31	0.56	0.56	52.6	52.6	17.7	20.1	C	N/A
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-41
Existing Southbound HRP Traffic Operations Summary
Weekday Midday Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to Waters PI (Exit 2)	1650	0.42	0.42	55.0	55.0	16.0	17.1	B	N/A	Globally Undersaturated		
S02	Diverge: HRP OFR to Waters PI Influence Area	1500	0.42	0.42	49.8	49.9	17.7	19.5	B	N/A			
S03	Basic Segment: Waters PI OFR and Westchester Ave/Waters PI ONR	950	0.33	0.33	54.3	54.3	12.4	13.5	B	N/A			
S04	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.40	0.40	51.7	51.6	16.0	17.6	B	N/A			
S05	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.40	0.40	54.7	54.7	15.1	16.5	B	N/A			
All NB Segments		6,910											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway East to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (1:15–1:30 PM)		Travel Time (min)		
					Average (12:00-2:00 PM)	Busiest Period (1:15–1:30 PM)	Average (12:00-2:00 PM)	Busiest Period (1:15–1:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.31	0.42	0.42	52.9	52.9	15.7	17.0	B	N/A

Table 14-42
Existing Southbound HRP Traffic Operations Summary
Weekday PM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to Waters PI (Exit 2)	1650	0.54	0.54	55.0	55.0	20.9	22.0	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to Waters PI Influence Area	1500	0.54	0.54	50.0	49.8	23.0	24.1	C/F*	N/A			
S03	Basic Segment: Waters PI OFR and Westchester Ave/Waters PI ONR	950	0.40	0.40	54.3	54.3	16.4	16.7	B	N/A			
S04	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.49	0.49	51.3	51.3	21.1	20.5	C	N/A			
S05	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.49	0.49	54.6	54.6	19.8	20.1	C	N/A			
All NB Segments		6,910											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway East to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (5:15–5:30 PM)		Travel Time (min)		
					Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					52.8	52.8	20.6	21.3	C	N/A	1.4	1.5	1.5
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Bronx Psychiatric Center Redevelopment

The results of the existing conditions traffic operations analyses are summarized as follows:

- Northbound HRP: During the peak 15 minutes of the weekday AM peak period, each northbound segment on the HRP operates at LOS D or better and the northbound HRP as a whole operates at LOS C. During the peak 15 minutes of the weekday midday peak period, each northbound segment on the HRP operates at LOS C or better and the northbound HRP as a whole operates at LOS C as well. During the peak 15 minutes of the weekday PM peak period, each northbound segment on the HRP operates at LOS C and the northbound HRP as a whole operates at LOS C.
- Southbound HRP: During the peak 15 minutes of the weekday AM peak period, each southbound segment on the HRP operates at LOS C or better and the southbound HRP as a whole operates at LOS C. During the peak 15 minutes of the weekday midday peak period, each southbound segment on the HRP operates at LOS B and the southbound HRP as a whole operates at LOS B as well. During the peak 15 minutes of the weekday PM peak period, each southbound segment on the HRP operates at LOS C or better and the southbound HRP as a whole operates at LOS C.

THE FUTURE WITHOUT THE PROPOSED PROJECT (WITHOUT HRP IMPROVEMENTS)

2023 NO-ACTION

The 2023 No-Action without HRP Improvements condition traffic volumes were projected by adding the existing traffic volumes to the following: background growth and incremental trips generated by No-Action projects not assumed in the background growth in the area. **Table 14-43** and **Table 14-44** present the northbound and southbound ATR volumes. Segment and overall MOEs for the weekday AM, midday, and PM peak hours are presented in **Tables 14-45 through 14-47** for the northbound direction; and in **Tables 14-48 through 14-50** for the southbound direction.

Table 14-43
2023 No-Action without HRP Improvements
Northbound HRP ATR Volumes

Start Time	S01		S02		S03	S04		S05
	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)
7:00	741	3,023	157	685	2,338	91	380	2,717
7:15	903	3,673	166	725	2,948	95	392	3,340
7:30	993	4,046	194	850	3,196	99	409	3,605
7:45	1,095	4,457	206	903	3,553	116	481	4,034
8:00	1,095	4,453	195	854	3,598	108	447	4,045
8:15	1,055	4,299	207	908	3,391	101	418	3,808
8:30	1,072	4,370	214	939	3,431	102	422	3,853
8:45	1,000	4,083	219	957	3,126	86	359	3,485
9:00	932	3,800	189	828	2,972	85	354	3,326
9:15	864	3,521	173	757	2,765	79	329	3,094
12:00	630	2,549	115	488	2,061	113	509	2,570
12:15	658	2,661	122	518	2,143	125	564	2,707
12:30	668	2,700	115	488	2,212	115	518	2,730
12:45	603	2,441	122	518	1,923	114	514	2,437
13:00	663	2,681	122	518	2,163	116	523	2,686
13:15	654	2,644	118	501	2,143	114	514	2,656
13:30	676	2,732	115	488	2,244	110	495	2,739
13:45	693	2,803	122	518	2,285	119	536	2,821
16:00	933	3,740	123	500	3,240	148	657	3,897
16:15	942	3,779	160	649	3,131	151	670	3,801
16:30	917	3,677	149	607	3,070	154	684	3,753
16:45	925	3,710	153	624	3,086	154	684	3,769
17:00	923	3,701	146	595	3,106	161	711	3,817
17:15	966	3,872	148	603	3,269	156	688	3,957
17:30	916	3,673	143	583	3,090	138	612	3,702
17:45	900	3,607	142	579	3,029	139	616	3,645
18:00	869	3,484	123	500	2,984	135	598	3,582
18:15	859	3,443	121	492	2,952	146	648	3,599

Table 14-44
2023 No-Action without HRP Improvements
Southbound HRP ATR Volumes

Start Time	S01		S02		S03	S04		S05
	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)	Average Mid-Weekday*	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)
7:00	898	3,581	277	1,097	2,484	67	294	2,778
7:15	949	3,782	343	1,355	2,427	76	334	2,761
7:30	922	3,670	384	1,519	2,151	81	356	2,507
7:45	903	3,592	406	1,604	1,988	70	307	2,295
8:00	865	3,443	364	1,439	2,004	78	343	2,347
8:15	861	3,428	343	1,355	2,073	74	325	2,399
8:30	833	3,319	321	1,270	2,049	75	330	2,379
8:45	787	3,133	307	1,214	1,919	79	347	2,266
9:00	715	2,848	225	888	1,960	84	370	2,329
9:15	657	2,617	200	792	1,825	89	392	2,217
12:00	583	2,386	137	601	1,785	107	474	2,259
12:15	642	2,628	154	677	1,951	113	501	2,453
12:30	650	2,662	159	695	1,968	102	452	2,419
12:45	636	2,602	148	650	1,951	109	483	2,435
13:00	688	2,817	169	739	2,078	120	533	2,610
13:15	697	2,847	153	672	2,175	123	546	2,721
13:30	675	2,761	163	712	2,049	111	492	2,541
13:45	643	2,630	149	655	1,976	119	528	2,504
16:00	852	3,439	200	833	2,606	142	621	3,227
16:15	855	3,452	206	858	2,594	136	594	3,188
16:30	850	3,428	183	761	2,667	157	683	3,350
16:45	863	3,483	194	808	2,675	146	638	3,313
17:00	859	3,466	192	799	2,667	160	696	3,363
17:15	908	3,667	226	939	2,728	142	621	3,349
17:30	861	3,478	212	884	2,594	152	665	3,259
17:45	870	3,512	197	820	2,691	137	598	3,290
18:00	849	3,423	176	731	2,691	138	603	3,294
18:15	858	3,456	156	647	2,809	135	589	3,399

Bronx Psychiatric Center Redevelopment

Table 14-45
2023 No-Action without HRP Improvements Northbound HRP Traffic Operations Summary
Weekday AM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (MPH)		Density (PC/MI/LN)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.69	0.69	55.0	55.0	25.0	28.1	D/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.69	0.69	49.9	49.9	27.6	29.2	D/F*	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.55	0.56	54.9	54.9	19.9	22.5	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.63	0.63	51.0	50.7	24.1	23.6	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.63	0.63	54.3	54.3	22.6	25.9	C	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (7:45-8:00 AM)		Travel Time (min)		
					Average (7:00-9:30 AM)	Busiest Period (7:45-8:00 AM)	Average (7:00-9:30 AM)	Busiest Period (7:45-8:00 AM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					52.6	52.5	22.8	25.9	C	N/A	1.42	1.5	1.49
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-46
2023 No-Action without HRP Improvements Northbound HRP Traffic Operations Summary
Weekday Midday Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.43	0.43	55.0	55.0	16.7	17.7	B	N/A	Globally Undersaturated		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.43	0.43	50.1	50.1	18.4	20.2	C	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.35	0.35	54.9	54.9	13.6	14.4	B	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.43	0.43	51.6	51.6	17.9	17.8	B	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.43	0.43	54.5	54.4	16.9	17.9	B	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (1:45-2:00 PM)		Travel Time (min)		
					Average (12:00-2:00 PM)	Busiest Period (1:45-2:00 PM)	Average (12:00-2:00 PM)	Busiest Period (1:45-2:00 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
		1.30	0.43	0.43	52.8	52.8	15.9	16.9	B	N/A	1.42	1.5	1.48

Table 14-47

**2023 No-Action without HRP Improvements Northbound HRP Traffic Operations Summary
Weekday PM Peak Period**

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.60	0.60	55.0	55.0	23.1	24.4	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.60	0.60	50.3	50.3	25.3	25.8	C/F*	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.50	0.50	54.9	54.9	19.6	20.6	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.61	0.61	51.0	50.8	25.5	23.6	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.61	0.61	54.3	54.3	23.9	25.2	C	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (5:15–5:30 PM)		Travel Time (min)		
					Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.30	0.61	0.61	52.7	52.7	22.6	23.8	C	N/A
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-48

**2023 No-Action without HRP Improvements Southbound HRP Traffic Operations Summary
Weekday AM Peak Period**

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to Waters Pl (Exit 2)	1650	0.57	0.57	55.0	55.0	20.6	23.3	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to Waters Pl Influence Area	1500	0.57	0.57	49.0	49.1	23.1	26.2	C/F*	N/A			
S03	Basic Segment: Waters Pl OFR and Westchester Ave/Waters Pl ONR	950	0.37	0.37	54.2	54.2	13.0	15.2	B	N/A			
S04	Merge: ONR from Westchester Ave/Waters Pl Influence Area	1500	0.42	0.42	51.7	51.5	15.9	17.6	B	N/A			
S05	Basic Segment: s/o Westchester Ave/Waters Pl ONR	1310	0.42	0.42	54.7	54.6	15.0	17.1	B	N/A			
All NB Segments		6,910											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway East to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (7:15–7:30 AM)		Travel Time (min)		
					Average (7:00–9:30 AM)	Busiest Period (7:15–7:30 AM)	Average (7:00–9:30 AM)	Busiest Period (7:15–7:30 AM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.31	0.57	0.57	52.6	52.6	18.0	20.5	C	N/A
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-49
2023 No-Action without HRP Improvements Southbound HRP Traffic Operations Summary
Weekday Midday Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to Waters PI (Exit 2)	1650	0.43	0.43	55.0	55.0	16.6	17.8	B	N/A	Globally Undersaturated		
S02	Diverge: HRP OFR to Waters PI Influence Area	1500	0.43	0.43	49.7	49.9	18.4	20.2	C	N/A			
S03	Basic Segment: Waters PI OFR and Westchester Ave/Waters PI ONR	950	0.33	0.33	54.3	54.3	12.6	13.8	B	N/A			
S04	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.42	0.42	51.7	51.6	16.6	18.2	B	N/A			
S05	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.42	0.42	54.7	54.6	15.7	17.1	B	N/A			
All NB Segments		6,910											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway East to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (1:15–1:30 PM)		Travel Time (min)		
					Average (12:00-2:00 PM)	Busiest Period (1:15–1:30 PM)	Average (12:00-2:00 PM)	Busiest Period (1:15–1:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.31	0.43	0.43	52.8	52.8	16.3	17.6	B	N/A

Table 14-50
2023 No-Action without HRP Improvements Southbound HRP Traffic Operations Summary
Weekday PM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to Waters PI (Exit 2)	1650	0.55	0.55	55.0	55.0	21.4	22.6	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to Waters PI Influence Area	1500	0.55	0.55	49.9	49.8	23.6	24.7	C/F*	N/A			
S03	Basic Segment: Waters PI OFR and Westchester Ave/Waters PI ONR	950	0.42	0.42	54.3	54.3	16.7	17.0	B	N/A			
S04	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.51	0.51	51.3	51.2	21.8	21.1	C	N/A			
S05	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.51	0.51	54.6	54.6	20.4	20.7	C	N/A			
All NB Segments		6,910											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway East to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (1:45-2:00 PM)		Travel Time (min)		
					Average (4:00-6:30 PM)	Busiest Period (5:15-5:30 PM)	Average (4:00-6:30 PM)	Busiest Period (5:15-5:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					52.8	52.7	21.1	21.9	C	N/A	1.43	1.5	1.49
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

The 2023 No-Action without HRP Improvements condition HRP analyses are summarized as follows:

- Northbound HRP: During the peak 15 minutes of the weekday AM peak period, each northbound segment on the HRP is projected to operate at LOS D or better and the northbound HRP as a whole is projected to operate at LOS C. During the peak 15 minutes of the weekday midday peak period, each northbound segment on the HRP is projected to operate at LOS C or better and the northbound HRP as a whole is projected to operate at LOS B. During the peak 15 minutes of the weekday PM peak period, each northbound segment on the HRP is projected to operate at LOS C and the northbound HRP as a whole is projected to operate at LOS C.
- Southbound HRP: During the peak 15 minutes of the weekday AM peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS C. During the peak 15 minutes of the weekday midday peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS B. During the peak 15 minutes of the weekday PM peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS C.

THE FUTURE WITH THE PROPOSED PROJECT (WITHOUT HRP IMPROVEMENTS)

2023 WITH-ACTION

The 2023 With-Action without HRP Improvements condition traffic volumes were constructed by adding the 2023 No-Action without HRP Improvements condition traffic volumes to the Phase I completion project-generated vehicle trips. **Tables 14-51 and 14-52** present the northbound and southbound ATR volumes. Segment and overall MOEs for the weekday AM, midday, and PM peak hours are presented in **Tables 14-53 through 14-55** for the northbound direction; and in **Tables 14-56 through 14-58** for the southbound direction.

Table 14-51
2023 With-Action without HRP Improvements
Northbound HRP ATR Volumes

Time	S01	S02	S03	S04	S05
	Hourly Demand (15min Vol* 4)	Hourly Demand (15min Vol* 4)	Hourly Demand (15min Vol* 4)	Hourly Demand (15min Vol* 4)	Hourly Demand (15min Vol* 4)
7:00	3,160	822	2,338	429	2,767
7:15	3,817	870	2,948	443	3,391
7:30	4,215	1,019	3,196	462	3,658
7:45	4,637	1,083	3,553	543	4,097
8:00	4,623	1,025	3,598	505	4,103
8:15	4,479	1,089	3,391	472	3,863
8:30	4,557	1,126	3,431	477	3,908
8:45	4,274	1,147	3,126	405	3,532
9:00	3,965	993	2,972	400	3,372
9:15	3,672	907	2,765	372	3,136
12:00	2,612	551	2,061	622	2,684
12:15	2,728	585	2,143	690	2,832
12:30	2,763	551	2,212	634	2,845
12:45	2,508	585	1,923	628	2,551
13:00	2,748	585	2,163	639	2,802
13:15	2,708	566	2,143	628	2,771
13:30	2,795	551	2,244	606	2,850
13:45	2,870	585	2,285	656	2,941
16:00	3,768	527	3,240	862	4,102
16:15	3,815	684	3,131	880	4,010
16:30	3,710	641	3,070	898	3,967
16:45	3,744	658	3,086	898	3,983
17:00	3,734	628	3,106	933	4,039
17:15	3,905	636	3,269	903	4,172
17:30	3,705	615	3,090	803	3,893
17:45	3,639	610	3,029	809	3,838
18:00	3,512	527	2,984	785	3,770
18:15	3,470	519	2,952	850	3,802

Table 14-52
2023 With-Action without HRP Improvements
Southbound HRP ATR Volumes

Time	S01	S02	S03	S04	S05
	Hourly Demand (15min Vol* 4)	Hourly Demand (15min Vol* 4)	Hourly Demand (15min Vol* 4)	Hourly Demand (15min Vol* 4)	Hourly Demand (15min Vol* 4)
7:00	3,819	1,335	2,484	326	2,810
7:15	4,075	1,648	2,427	370	2,797
7:30	3,999	1,848	2,151	395	2,546
7:45	3,939	1,951	1,988	341	2,329
8:00	3,755	1,750	2,004	380	2,384
8:15	3,721	1,648	2,073	360	2,434
8:30	3,594	1,545	2,049	365	2,414
8:45	3,395	1,476	1,919	385	2,304
9:00	3,040	1,080	1,960	410	2,369
9:15	2,789	963	1,825	434	2,260
12:00	2,500	715	1,785	565	2,349
12:15	2,757	805	1,951	597	2,548
12:30	2,794	826	1,968	538	2,506
12:45	2,725	773	1,951	575	2,527
13:00	2,957	879	2,078	635	2,712
13:15	2,975	800	2,175	651	2,826
13:30	2,897	848	2,049	586	2,635
13:45	2,755	779	1,976	629	2,605
16:00	3,534	928	2,606	785	3,391
16:15	3,550	956	2,594	751	3,345
16:30	3,515	848	2,667	864	3,531
16:45	3,575	900	2,675	807	3,483
17:00	3,557	890	2,667	880	3,547
17:15	3,774	1,046	2,728	785	3,513
17:30	3,578	984	2,594	841	3,435
17:45	3,605	914	2,691	757	3,448
18:00	3,506	815	2,691	763	3,454
18:15	3,530	721	2,809	746	3,555

Table 14-53

2023 With-Action without HRP Improvements Northbound HRP Traffic Operations Summary
Weekday AM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (MPH)		Density (PC/MI/LN)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.71	0.71	55.0	55.0	26.1	29.2	D/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.71	0.71	49.7	49.6	28.9	30.3	D/F*	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.56	0.56	54.9	54.9	19.9	22.6	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.64	0.64	51.0	50.7	24.5	24.1	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.64	0.64	54.3	54.3	23.0	26.3	D	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/lN)		Busiest Period LOS (7:45-8:00 AM)		Travel Time (min)		
					Average (7:00-9:30 AM)	Busiest Period (7:45-8:00 AM)	Average (7:00-9:30 AM)	Busiest Period (7:45-8:00 AM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.30	0.71	0.71	52.5	52.4	23.2	26.4	D	N/A
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-54

2023 With-Action without HRP Improvements Northbound HRP Traffic Operations Summary
Weekday Midday Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/lN)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.44	0.44	55.0	55.0	17.1	18.1	C	N/A	Globally Undersaturated		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.44	0.44	50.0	50.0	18.8	20.7	C	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.35	0.35	54.9	54.9	13.6	14.4	B	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.45	0.45	51.6	51.5	18.7	18.7	B	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.45	0.45	54.4	54.4	17.7	18.7	C	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/lN)		Busiest Period (1:45-2:00 PM)		Travel Time (min)		
					Average (12:00-2:00 PM)	Busiest Period (1:45-2:00 PM)	Average (12:00-2:00 PM)	Busiest Period (1:45-2:00 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
		1.30	0.45	0.45	52.8	52.8	16.3	17.2	B	N/A	1.42	1.5	1.48

Bronx Psychiatric Center Redevelopment

Table 14-55

**2023 With-Action without HRP Improvements Northbound HRP Traffic Operations Summary
Weekday PM Peak Period**

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.60	0.60	55.0	55.0	23.3	24.6	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1,500	0.60	0.60	50.3	50.2	25.6	26.1	C/F*	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3,110	0.50	0.50	54.9	54.9	19.6	20.6	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1,500	0.64	0.64	50.8	50.7	26.9	25.3	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.64	0.64	54.3	54.3	25.2	26.6	D	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (5:15–5:30 PM)		Travel Time (min)		
					Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.30	0.64	0.64	52.7	52.6	23.2	24.4	C	N/A
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-56

**2023 With-Action without HRP Improvements Southbound HRP Traffic Operations Summary
Weekday AM Peak Period**

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to Waters PI (Exit 2)	1650	0.61	0.61	55.0	55.0	22.2	25.1	D/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to Waters PI Influence Area	1500	0.61	0.61	48.6	48.7	25.1	28.3	D/F*	N/A			
S03	Basic Segment: Waters PI OFR and Westchester Ave/Waters PI ONR	950	0.37	0.37	54.1	54.1	13.1	15.2	B	N/A			
S04	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.42	0.42	51.7	51.5	16.1	17.9	B	N/A			
S05	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.42	0.42	54.7	54.6	15.3	17.3	B	N/A			
All NB Segments		6,910											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway Eastbound to Brucnker Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (7:15–7:30 AM)		Travel Time (min)		
					Average (7:00–9:30 AM)	Busiest Period (7:15–7:30 AM)	Average (7:00–9:30 AM)	Busiest Period (7:15–7:30 AM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					1.31	0.61	0.61	52.4	52.4	19.0	21.5	C	N/A
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-57

**2023 With-Action without HRP Improvements Southbound HRP Traffic Operations Summary
Weekday Midday Peak Period**

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to Waters PI (Exit 2)	1650	0.45	0.45	55.0	55.0	17.4	18.6	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to Waters PI Influence Area	1500	0.45	0.45	49.6	49.7	19.4	21.2	C/F*	N/A			
S03	Basic Segment: Waters PI OFR and Westchester Ave/Waters PI ONR	950	0.33	0.33	54.3	54.3	12.6	13.8	B	N/A			
S04	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.43	0.43	51.6	51.5	17.2	19.0	B	N/A			
S05	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.43	0.43	54.7	54.6	16.3	17.8	B	N/A			
All NB Segments		6,910											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway Eastbound to Brucnker Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (1:15–1:30 PM)		Travel Time (min)		
					Average (12:00–2:00 PM)	Busiest Period (1:15–1:30 PM)	Average (12:00–2:00 PM)	Busiest Period (1:15–1:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
					52.8	52.8	16.9	18.2	C	N/A	1.43	1.5	1.49
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-58

**2023 With-Action without HRP Improvements Southbound HRP Traffic Operations Summary
Weekday PM Peak Period**

Segment Level of Measures of Effectiveness (MOEs)												
Southbound Segment	Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
				Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01 Basic Segment: n/o HRP OFR to Waters PI (Exit 2)	1650	0.57	0.57	55.0	55.0	22.0	23.2	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02 Diverge: HRP OFR to Waters PI Influence Area	1500	0.57	0.57	49.8	49.6	24.3	25.4	C/F*	N/A			
S03 Basic Segment: Waters PI OFR and Westchester Ave/Waters PI ONR	950	0.42	0.42	54.3	54.3	16.7	17.0	B	N/A			
S04 Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.53	0.53	51.2	51.1	22.9	22.4	C	N/A			
S05 Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.53	0.53	54.6	54.6	21.5	21.7	C	N/A			
All NB Segments	6,910											
Facility Level Measures of Effectiveness (MOEs)												
SB HRP (Pelham Parkway Eastbound to Brucnker Expwy)	Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (5:15–5:30 PM)		Travel Time (min)		
				Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Density	Demand	60 mph Free Flow	Average	Busiest Period
				52.7	52.7	21.9	22.6	C	N/A	1.43	1.5	1.49
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.												

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Bronx Psychiatric Center Redevelopment

The 2023 With-Action without HRP Improvements condition HRP analyses are summarized as follows:

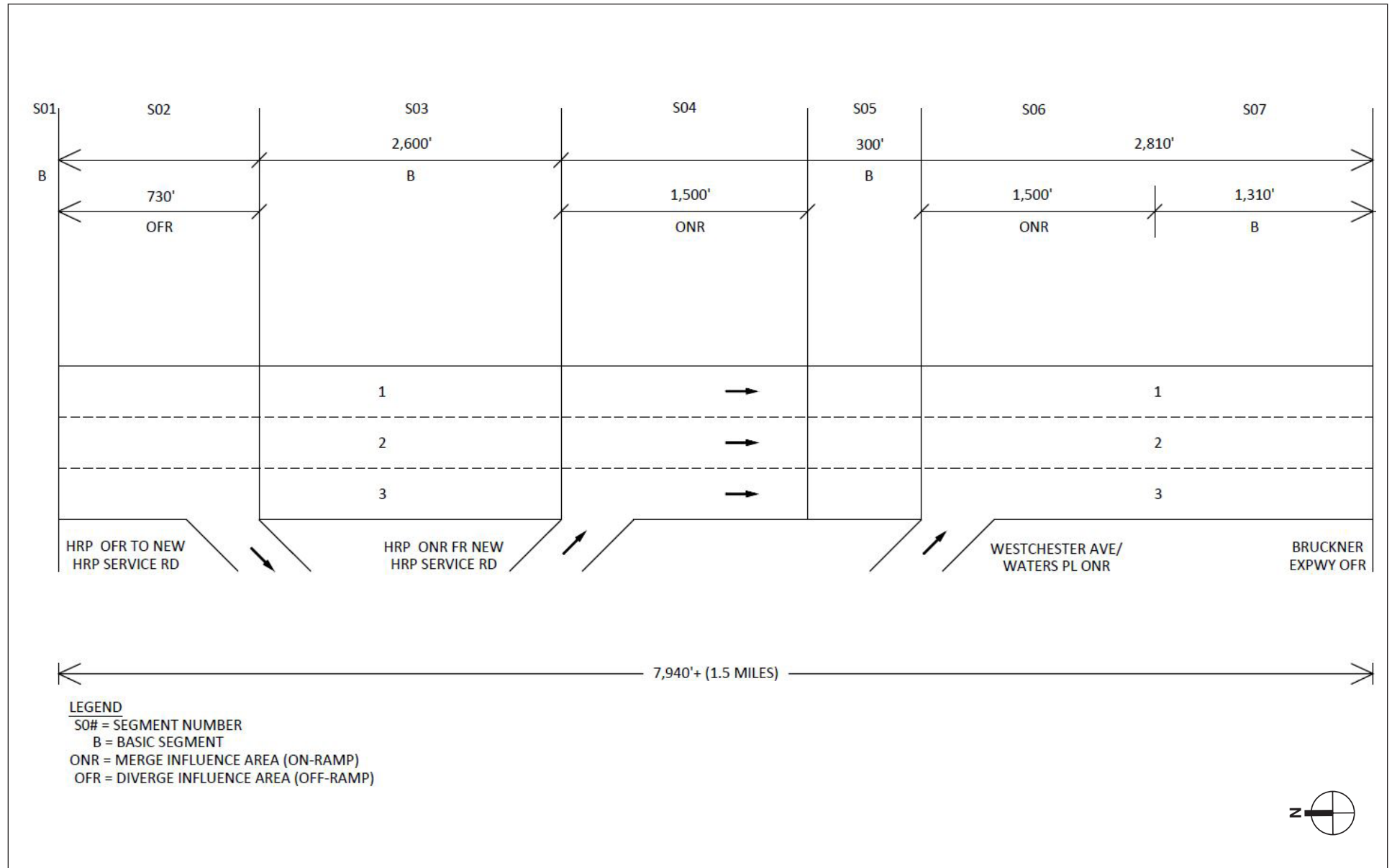
- Northbound HRP: During the peak 15 minutes of the weekday AM peak period, each northbound segment on the HRP is projected to operate at LOS D or better and the northbound HRP as a whole is projected to operate at LOS D. During the peak 15 minutes of the weekday midday peak period, each northbound segment on the HRP is projected to operate at LOS C or better and the northbound HRP as a whole is projected to operate at LOS B. During the peak 15 minutes of the weekday PM peak period, each northbound segment on the HRP is projected to operate at LOS D or better and the northbound HRP as a whole is projected to operate at LOS C.
- Southbound HRP: During the peak 15 minutes of the weekday AM peak period, each southbound segment on the HRP is projected to operate at LOS D or better and the southbound HRP as a whole is projected to operate at LOS C. During the peak 15 minutes of the weekday midday peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS C as well. During the peak 15 minutes of the weekday PM peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS C.

The above density-related analysis results from the FREEVAL highway analysis methodologies, do not indicate the potential for significant adverse traffic impacts for the analyzed HRP mainline and ramp segments. However, as noted above in **Tables 14-53 to 14-58**, some of the projected queues from adjacent intersections could extend beyond the corresponding analysis segments and actual conditions may be worse than the reported levels of service. These locations include the Northbound HRP mainline segment south of the East Tremont Avenue off-ramp (Exit 2) and the East Tremont Avenue off-ramp during the weekday AM and PM peak periods; and the Southbound HRP mainline segment north of the Waters Place off-ramp (Exit 2) and the Waters Place off-ramp during the weekday AM, midday, and PM peak periods. Based on consultations with NYCDOT, it was decided that the analysis results for these locations would be noted to disclose the potential of significant adverse traffic impacts, even though the levels of service indicate otherwise.

THE FUTURE WITHOUT THE PROPOSED PROJECT (WITH HRP IMPROVEMENTS)

2028 NO-ACTION

As stated, there is currently no funding or plan to construct the potential HRP improvements that were previously contemplated by NYCDOT. Absent other means of addressing traffic expected to be generated by Phase II of the proposed project, this second phase of the BPC redevelopment cannot proceed. Nonetheless, NYCDOT's preliminary design concepts on the potential HRP improvements were used for purposes of developing the assumed parameters for the analyses presented below. The construction of a new HRP on-ramp, off-ramp, and service road in the southbound direction would affect traffic operations on the southbound HRP. **Figure 14-35** illustrates the potential southbound configurations. The 2028 No-Action with HRP Improvements condition traffic volumes were projected by adding the existing traffic volumes to the following: background growth and incremental trips generated by No-Action projects not assumed in the background growth in the area.



Southbound Hutchinson River Parkway Diagram and Segmentation
With HRP Improvements Condition

These traffic volumes also account for the traffic diversions associated with the potential HRP improvements. It should be noted that the 2028 No-Action with HRP Improvements condition does not include the Phase I completion of the proposed project. **Tables 14-59 and 14-60** present the northbound and southbound ATR volumes. Segment and overall MOEs for the weekday AM, midday, and PM peak hours are presented in **Tables 14-61 through 14-63** for the northbound direction; and in **Tables 14-64 through 14-66** for the southbound direction.

Table 14-59
2028 No-Action with HRP Improvements
Northbound HRP ATR Volumes

Start Time	S01 Hourly Demand (15min Vol*4)	S02 Hourly Demand (15min Vol*4)	S03 Hourly Demand (15min Vol*4)	S04 Hourly Demand (15min Vol*4)	S05 Hourly Demand (15min Vol*4)
7:00	3042	689	2353	382	2735
7:15	3696	730	2966	395	3361
7:30	4071	855	3216	412	3628
7:45	4485	909	3576	484	4060
8:00	4481	859	3621	450	4071
8:15	4326	913	3412	420	3833
8:30	4398	945	3453	425	3878
8:45	4109	962	3146	361	3507
9:00	3824	833	2991	357	3348
9:15	3543	761	2782	331	3113
12:00	2565	491	2074	512	2586
12:15	2678	521	2156	567	2723
12:30	2717	491	2226	521	2747
12:45	2457	521	1935	516	2452
13:00	2698	521	2177	526	2702
13:15	2660	504	2156	516	2673
13:30	2750	491	2259	498	2757
13:45	2821	521	2299	539	2839
16:00	3764	503	3261	660	3921
16:15	3803	653	3151	674	3825
16:30	3700	611	3089	688	3777
16:45	3733	628	3106	688	3793
17:00	3725	599	3126	715	3841
17:15	3897	607	3290	692	3982
17:30	3696	586	3110	615	3725
17:45	3630	582	3048	620	3668
18:00	3506	503	3003	602	3605
18:15	3465	495	2971	651	3622

Table 14-60
2028 No-Action with HRP Improvements
Southbound HRP ATR Volumes

Time	S01 Hourly Demand (15min Vol * 4)	S02 Hourly Demand (15min Vol * 4)	S03 Hourly Demand (15min Vol * 4)	S04 Hourly Demand (15min Vol * 4)	S05 Hourly Demand (15min Vol * 4)	S06 Hourly Demand (15min Vol * 4)	S07 Hourly Demand (15min Vol * 4)
7:00	3337	1104	2233	314	2547	249	2796
7:15	3535	1363	2172	324	2496	283	2779
7:30	3386	1529	1856	365	2221	301	2523
7:45	3303	1614	1689	361	2050	260	2310
8:00	3112	1448	1664	408	2072	290	2362
8:15	3097	1363	1734	405	2139	275	2414
8:30	2968	1278	1689	425	2114	279	2394
8:45	2821	1222	1599	387	1986	294	2281
9:00	2546	894	1652	379	2031	313	2344
9:15	2334	797	1537	362	1899	332	2231
12:00	2128	605	1523	424	1947	326	2273
12:15	2364	681	1683	441	2124	344	2468
12:30	2369	699	1670	454	2124	310	2434
12:45	2312	654	1658	460	2118	332	2450
13:00	2504	743	1761	500	2261	366	2627
13:15	2522	676	1846	517	2363	375	2738
13:30	2449	717	1732	487	2219	338	2557
13:45	2288	658	1630	527	2157	363	2520
16:00	3022	838	2184	658	2842	405	3247
16:15	3015	864	2151	668	2819	388	3208
16:30	3011	766	2245	679	2924	447	3371
16:45	3070	813	2257	660	2917	417	3334
17:00	3029	804	2225	704	2929	455	3384
17:15	3243	944	2298	666	2964	405	3370
17:30	3086	889	2196	648	2844	435	3279
17:45	3157	825	2332	588	2920	391	3311
18:00	3088	736	2352	569	2921	394	3315
18:15	3105	651	2454	581	3035	385	3420

Table 14-61

2028 No-Action with HRP Improvements Northbound HRP Traffic Operations Summary
Weekday AM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.69	0.69	55.0	55.0	25.1	28.3	D/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1500	0.69	0.69	49.9	49.9	27.7	29.3	D/F*	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3110	0.56	0.56	54.9	54.9	19.9	22.7	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1500	0.63	0.63	51.0	50.7	24.2	23.7	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.63	0.63	54.3	54.3	22.7	26.0	C	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)					Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (7:45-8:00 AM)		Travel Time (min)		
					Average	Busiest Period	Average	Busiest Period			55 mph Free		Busiest
		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	(7:00-9:30 AM)	(7:45-8:00 AM)	(7:00-9:30 AM)	(7:45-8:00 AM)	Density	Demand	Flow	Average	Period
	1.30	0.69	0.69	52.6	52.5	22.9	26.1	D	N/A	1.42	1.5	1.49	
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-62

2028 No-Action with HRP Improvements Northbound HRP Traffic Operations Summary
Weekday Midday Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.43	0.43	55.0	55.0	16.8	17.8	B	N/A	Globally Undersaturated		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1500	0.43	0.43	50.1	50.1	18.5	20.3	C	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3110	0.35	0.35	54.9	54.9	13.6	14.5	B	N/A			
S04	Merge: ONR from HRP East Influence Area	1500	0.44	0.44	51.6	51.6	18.0	17.9	B	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.44	0.44	54.5	54.4	17.0	18.0	B	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)					Speed (mph)		Density (pc/mi/ln)		Busiest Period (1:45-2:00 PM)		Travel Time (min)		
					Average	Busiest Period	Average	Busiest Period	Density	Demand	55 mph Free Flow	Average	Busiest Period
		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	(12:00-2:00 PM)	(1:45-2:00 PM)	(12:00-2:00 PM)	(1:45-2:00 PM)					
		1.30	0.44	0.44	52.8	52.8	16.0	17.0	B	N/A	1.42	1.5	1.48

Bronx Psychiatric Center Redevelopment

Table 14-63
2028 No-Action with HRP Improvements Northbound HRP Traffic Operations Summary
Weekday PM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Northbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.60	0.60	55.0	55.0	23.3	24.6	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02	Diverge: HRP OFR to E. Tremont Ave Influence Area	1500	0.60	0.60	50.3	50.3	25.4	26.0	C/F*	N/A			
S03	Basic Segment: E. Tremont Ave OFR and HRP East ONR	3110	0.51	0.51	54.9	54.9	19.7	20.8	C	N/A			
S04	Merge: ONR from HRP East Influence Area	1500	0.61	0.61	51.0	50.8	25.6	23.8	C	N/A			
S05	Basic Segment: n/o HRP East ONR	725	0.61	0.61	54.3	54.3	24.0	25.4	C	N/A			
All NB Segments		6,890											
Facility Level Measures of Effectiveness (MOEs)													
NB HRP (Bruckner Expwy to Pelham Parkway East)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period (5:15–5:30 PM)		Travel Time (min)		
					Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Average (4:00–6:30 PM)	Busiest Period (5:15–5:30 PM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
					52.7	52.7	22.7	24.0	C	N/A	1.42	1.5	1.48
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.													

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-64
2028 No-Action with HRP Improvements Southbound HRP Traffic Operations Summary
Weekday AM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to new HRP Service Road	200	0.53	0.53	55.0	55.0	18.7	21.7	C	N/A	Globally Undersaturated		
S02	Diverge: OFR to new HRP Service Road	730	0.53	0.53	48.7	48.9	21.1	26.2	C	N/A			
S03	Basic Segment: n/o HRP ONR from new HRP Service Road	2600	0.33	0.33	54.6	54.6	11.0	13.4	B	N/A			
S04	Merge: ONR from new HRP Service Road	1500	0.38	0.38	52.0	51.9	14.0	14.3	B	N/A			
S05	Basic Segment: new HRP Service Rd ONR and Westchester Ave/Waters PI ONR	300	0.38	0.38	54.3	54.3	13.4	15.5	B	N/A			
S06	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.42	0.42	51.7	51.5	16.0	17.6	B	N/A			
S07	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.42	0.42	54.7	54.6	15.1	17.2	B	N/A			
All SB Segments		8,140											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway Eastbound to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (7:15-7:30 AM)		Travel Time (min)		
					Average (7:00-9:30 AM)	Busiest Period (7:15-7:30 AM)	Average (7:00-9:30 AM)	Busiest Period (7:15-7:30 AM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
					1.54	0.53	0.53	52.8	52.8	14.3	16.7	B	N/A
Note:* An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.													

Note:* An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.

Table 14-65

**2028 No-Action with HRP Improvements Southbound HRP Traffic Operations Summary
Weekday Midday Peak Period**

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to new HRP Service Road	200	0.38	0.38	55.0	55.0	14.8	15.7	B	N/A	Globally Undersaturated		
S02	Diverge: OFR to new HRP Service Road	730	0.38	0.38	49.5	49.7	16.4	19.6	B	N/A			
S03	Basic Segment: n/o HRP ONR from new HRP Service Road	2600	0.28	0.28	54.6	54.6	10.6	11.6	B	N/A			
S04	Merge: ONR from new HRP Service Road	1500	0.36	0.36	52.0	51.9	14.3	14.4	B	N/A			
S05	Basic Segment: new HRP Service Rd ONR and Westchester Ave/Waters PI ONR	300	0.36	0.36	54.3	54.3	13.7	14.9	B	N/A			
S06	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.42	0.42	51.7	51.5	16.7	17.8	B	N/A			
S07	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.42	0.42	54.7	54.6	15.8	17.2	B	N/A			
All SB Segments		8,140											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway Eastbound to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (1:15-1:30 PM)		Travel Time (min)		
					Average (12:00-2:00 PM)	Busiest Period (1:15-1:30 PM)	Average (12:00-2:00 PM)	Busiest Period (1:15-1:30 PM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
					1.54	0.42	0.42	52.9	52.9	14.0	15.2	B	N/A
Note: * An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.													

Table 14-66

**2028 No-Action with HRP Improvements Southbound HRP Traffic Operations Summary
Weekday PM Peak Period**

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to new HRP Service Road	200	0.49	0.49	55.0	55.0	19.0	19.9	C	N/A	Globally Undersaturated		
S02	Diverge: OFR to new HRP Service Road	730	0.49	0.49	49.7	49.6	21.0	23.7	C	N/A			
S03	Basic Segment: n/o HRP ONR from new HRP Service Road	2600	0.37	0.37	54.6	54.6	14.1	14.3	B	N/A			
S04	Merge: ONR from new HRP Service Road	1500	0.46	0.46	51.6	51.6	19.1	17.5	B	N/A			
S05	Basic Segment: new HRP Service Rd ONR and Westchester Ave/Waters PI ONR	300	0.46	0.46	54.2	54.2	18.2	18.5	C	N/A			
S06	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.51	0.51	51.2	51.2	22.0	20.6	C	N/A			
S07	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.51	0.51	54.6	54.6	20.6	20.9	C	N/A			
All SB Segments		8,140											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway Eastbound to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (5:15-5:30 PM)		Travel Time (min)		
					Average (4:00-6:30 PM)	Busiest Period (5:15-5:30 PM)	Average (4:00-6:30 PM)	Busiest Period (5:15-5:30 PM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
					1.54	0.51	0.51	52.8	52.7	18.4	18.8	C	N/A
Note: * An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.													

Bronx Psychiatric Center Redevelopment

The 2028 No-Action with HRP Improvements condition HRP analyses are summarized as follows:

- Northbound HRP: During the peak 15 minutes of the weekday AM peak period, each northbound segment on the HRP is project to operate at LOS D or better and the northbound HRP as a whole is projected to operate at LOS D. During the peak 15 minutes of the weekday midday peak period, each northbound segment on the HRP is projected to operate at LOS C or better and the northbound HRP as a whole is projected to operate at LOS B. During the peak 15 minutes of the weekday PM peak period, each northbound segment on the HRP is projected to operate at LOS C and the northbound HRP as a whole is projected to operate at LOS C.
- Southbound HRP: During the peak 15 minutes of the weekday AM peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS B. During the peak 15 minutes of the weekday midday peak period, each southbound segment on the HRP is projected to operate at LOS B or better and the southbound HRP as a whole is projected to operate at LOS B. During the peak 15 minutes of the weekday PM peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS C.

THE FUTURE WITH THE PROPOSED PROJECT (WITH HRP IMPROVEMENTS)

2028 WITH-ACTION

Similar to the above 2028 No-Action analyses, the 2028 With-Action condition assumes the completion of the potential HRP improvements, which would include a new HRP on-ramp, off-ramp, and service road in the southbound direction, providing direct access to the project site. These new freeway ramps would affect traffic operations on the southbound HRP. The 2028 With-Action with HRP Improvements condition traffic volumes were constructed by adding the 2028 No-Action with HRP Improvements condition traffic volumes to the Phase II full build-out project-generated vehicle trips with HRP Improvements. **Tables 14-67 and 14-68** present the northbound and southbound volumes. Segment and overall MOEs for the weekday AM, midday, and PM peak hours are presented in **Tables 14-69 through 14-71** for the northbound direction; and in **Tables 14-72 through 14-74** for the southbound direction.

Table 14-67
2028 With-Action with HRP Improvements
Northbound HRP ATR Volumes

8Start Time	S01	S02	S03	S04	S05
	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)	Hourly Demand (15min Vol*4)
7:00	3,293	940	2,353	464	2,817
7:15	3,962	995	2,966	480	3,446
7:30	4,382	1,166	3,216	500	3,716
7:45	4,816	1,240	3,576	588	4,164
8:00	4,794	1,173	3,621	547	4,168
8:15	4,658	1,246	3,412	511	3,923
8:30	4,742	1,289	3,453	516	3,969
8:45	4,459	1,313	3,146	439	3,585
9:00	4,127	1,136	2,991	433	3,424
9:15	3,820	1,038	2,782	402	3,185
12:00	2,674	600	2,074	714	2,788
12:15	2,793	637	2,156	791	2,947
12:30	2,826	600	2,226	727	2,952
12:45	2,572	637	1,935	720	2,655
13:00	2,814	637	2,177	733	2,910
13:15	2,772	616	2,156	720	2,876
13:30	2,859	600	2,259	694	2,953
13:45	2,937	637	2,299	752	3,052
16:00	3,806	545	3,261	1,059	4,320
16:15	3,858	707	3,151	1,081	4,231
16:30	3,751	662	3,089	1,103	4,192
16:45	3,786	680	3,106	1,103	4,208
17:00	3,775	649	3,126	1,146	4,272
17:15	3,947	658	3,290	1,110	4,399
17:30	3,745	635	3,110	986	4,096
17:45	3,679	631	3,048	994	4,042
18:00	3,548	545	3,003	965	3,968
18:15	3,507	536	2,971	1,045	4,015

Table 14-68
2028 With-Action with HRP Improvements
Southbound HRP ATR Volumes

Time	S01	S02	S03	S04	S05	S06	S07
	Hourly Demand (15 min Vol * 4)	Hourly Demand (15 min Vol * 4)	Hourly Demand (15 min Vol * 4)	Hourly Demand (15 min Vol * 4)	Hourly Demand (15 min Vol * 4)	Hourly Demand (15 min Vol * 4)	Hourly Demand (15 min Vol * 4)
7:00	3695	1462	2233	362	2595	249	2844
7:15	3976	1804	2172	374	2546	283	2829
7:30	3881	2024	1856	421	2277	301	2579
7:45	3826	2137	1689	416	2105	260	2365
8:00	3581	1917	1664	471	2135	290	2425
8:15	3538	1804	1734	467	2201	275	2476
8:30	3382	1692	1689	490	2179	279	2459
8:45	3217	1618	1599	446	2045	294	2340
9:00	2835	1183	1652	437	2089	313	2402
9:15	2592	1055	1537	418	1955	332	2287
12:00	2303	780	1523	579	2102	326	2428
12:15	2561	878	1683	603	2286	344	2630
12:30	2571	901	1670	620	2290	310	2600
12:45	2501	843	1658	629	2287	332	2619
13:00	2719	958	1761	683	2444	366	2810
13:15	2718	872	1846	707	2553	375	2928
13:30	2656	924	1732	666	2398	338	2736
13:45	2479	849	1630	720	2350	363	2713
16:00	3137	953	2184	981	3165	405	3570
16:15	3133	982	2151	996	3147	388	3536
16:30	3116	871	2245	1013	3258	447	3705
16:45	3181	924	2257	984	3241	417	3658
17:00	3139	914	2225	1050	3275	455	3730
17:15	3372	1073	2298	993	3291	405	3697
17:30	3208	1011	2196	966	3162	435	3597
17:45	3270	938	2332	877	3209	391	3600
18:00	3189	837	2352	849	3201	394	3595
18:15	3194	740	2454	866	3320	385	3705

Table 14-69

**2028 With-Action with HRP Improvements Northbound HRP Traffic Operations Summary
Weekday AM Peak Period**

Segment Level of Measures of Effectiveness (MOEs)												
Northbound Segment	Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
				Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01 Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.74	0.74	55.0	55.0	27.1	30.4	D/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02 Diverge: HRP OFR to E. Tremont Ave Influence Area	1500	0.74	0.74	49.5	49.4	30.1	31.5	D/F*	N/A			
S03 Basic Segment: E. Tremont Ave OFR and HRP East ONR	3110	0.56	0.56	54.9	54.9	20.0	22.7	C	N/A			
S04 Merge: ONR from HRP East Influence Area	1500	0.65	0.65	51.0	50.6	24.9	24.6	C	N/A			
S05 Basic Segment: n/o HRP East ONR	725	0.65	0.65	54.3	54.3	23.4	26.7	D	N/A			
All NB Segments	6,890											
Facility Level Measures of Effectiveness (MOEs)												
NB HRP (Bruckner Expwy to Pelham Parkway East)	Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (7:45-8:00 AM)		Travel Time (min)		
				Average (7:00-9:30 AM)	Busiest Period (7:45-8:00 AM)	Average (7:00-9:30 AM)	Busiest Period (7:45-8:00 AM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
				52.4	52.3	23.7	26.9	D	N/A	1.42	1.5	1.49
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.												

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-70

**2028 With-Action with HRP Improvements Northbound HRP Traffic Operations Summary
Weekday Midday Peak Period**

Segment Level of Measures of Effectiveness (MOEs)												
Northbound Segment	Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
				Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01 Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.45	0.45	55.0	55.0	17.5	18.5	C	N/A	Globally Undersaturated		
S02 Diverge: HRP OFR to E. Tremont Ave Influence Area	1500	0.45	0.45	49.9	50.0	19.3	21.1	C	N/A			
S03 Basic Segment: E. Tremont Ave OFR and HRP East ONR	3110	0.35	0.35	54.9	54.9	13.6	14.5	B	N/A			
S04 Merge: ONR from HRP East Influence Area	1500	0.47	0.47	51.5	51.4	19.4	19.5	B	N/A			
S05 Basic Segment: n/o HRP East ONR	725	0.47	0.47	54.4	54.4	18.4	19.4	C	N/A			
All NB Segments	6,890											
Facility Level Measures of Effectiveness (MOEs)												
NB HRP (Bruckner Expwy to Pelham Parkway East)	Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (1:45-2:00 PM)		Travel Time (min)		
				Average (12:00-2:00 PM)	Busiest Period (1:45-2:00 PM)	Average (12:00-2:00 PM)	Busiest Period (1:45-2:00 PM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
				52.7	52.7	16.7	17.6	B	N/A	1.42	1.5	1.48

Table 14-71

2028 With-Action with HRP Improvements Northbound HRP Traffic Operations Summary
Weekday PM Peak Period

Segment Level of Measures of Effectiveness (MOEs)												
Northbound Segment	Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
				Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01 Basic Segment: s/o HRP OFR to E. Tremont Ave (Exit 2)	55	0.61	0.61	55.0	55.0	23.6	24.9	C/F*	N/A	Globally Undersaturated But congestion noted due to queues extended from local intersections		
S02 Diverge: HRP OFR to E. Tremont Ave Influence Area	1500	0.61	0.61	50.2	50.2	25.8	26.3	C/F*	N/A			
S03 Basic Segment: E. Tremont Ave OFR and HRP East ONR	3110	0.51	0.51	54.9	54.9	19.7	20.8	C	N/A			
S04 Merge: ONR from HRP East Influence Area	1500	0.68	0.68	50.7	50.5	28.5	26.9	C	N/A			
S05 Basic Segment: n/o HRP East ONR	725	0.68	0.68	54.3	54.3	26.6	28.0	D	N/A			
All NB Segments	6,890											
Facility Level Measures of Effectiveness (MOEs)												
NB HRP (Bruckner Expwy to Pelham Parkway East)	Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (5:15-5:30 PM)		Travel Time (min)		
				Average (4:00-6:30 PM)	Busiest Period (5:15-5:30 PM)	Average (4:00-6:30 PM)	Busiest Period (5:15-5:30 PM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
	1.30	0.68	0.68	52.6	52.5	23.7	25.0	C	N/A	1.42	1.5	1.48
*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.												

*Off-ramp queue backing at time onto Hutchinson River Parkway mainline and associated effects not explicitly modeled in HCM.

Table 14-72

2028 With-Action with HRP Improvements Southbound HRP Traffic Operations Summary
Weekday AM Peak Period

Segment Level of Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to new HRP Service Road	200*	0.6	0.6	55.0	55.0	21.2	24.5	C	N/A	Globally Undersaturated		
S02	Diverge: OFR to new HRP Service Road	730	0.6	0.6	48.1	48.3	24.3	29.4	D	N/A			
S03	Basic Segment: n/o HRP ONR from new HRP Service Road	2600	0.33	0.33	55.0	54.6	11.0	13.4	B	N/A			
S04	Merge: ONR from new HRP Service Road	1500	0.33	0.33	52.0	51.8	14.4	14.7	B	N/A			
S05	Basic Segment: new HRP Service Rd ONR and Westchester Ave/Waters PI ONR	300	0.39	0.39	54.3	54.3	13.8	15.8	B	N/A			
S06	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.43	0.43	51.7	51.5	16.3	17.8	B	N/A			
S07	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.43	0.43	54.7	54.6	15.4	17.5	B	N/A			
All SB Segments		8,140											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway Eastbound to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (7:15-7:30 AM)		Travel Time (min)		
					Average (7:00-9:30 AM)	Busiest Period (7:15-7:30 AM)	Average (7:00-9:30 AM)	Busiest Period (7:15-7:30 AM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
					52.6	52.6	14.9	17.3	B	N/A	1.68	1.7	1.75
Note: * An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.													

Note: * An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.

Bronx Psychiatric Center Redevelopment

Table 14-73

2028 With-Action with HRP Improvements Southbound HRP Traffic Operations Summary
Weekday Midday Peak Period

Segment Level Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to new HRP Service Road	200*	0.41	0.41	55.0	55.0	16.0	17.0	B	N/A	Globally Undersaturated		
S02	Diverge: OFR to new HRP Service Road	730	0.41	0.41	49.3	49.4	17.9	21.1	C	N/A			
S03	Basic Segment: n/o HRP ONR from new HRP Service Road	2600	0.28	0.28	54.6	54.6	10.6	11.6	B	N/A			
S04	Merge: ONR from new HRP Service Road	1500	0.39	0.39	51.9	51.8	15.5	15.9	B	N/A			
S05	Basic Segment: new HRP Service Rd ONR and Westchester Ave/Waters PI ONR	300	0.39	0.39	54.3	54.2	14.8	16.2	B	N/A			
S06	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.45	0.45	51.6	51.4	17.9	18.7	B	N/A			
S07	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.45	0.45	54.7	54.6	16.9	18.4	C	N/A			
All SB Segments		8,140											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway Eastbound to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (1:15-1:30 PM)		Travel Time (min)		
					Average (12:00-2:00 PM)	Busiest Period (1:15-1:30 PM)	Average (12:00-2:00 PM)	Busiest Period (1:15-1:30 PM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
		1.54	0.45	0.45	52.8	52.8	14.8	16.1	B	N/A	1.68	1.7	1.75
Note: * An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.													

Note: * An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.

Table 14-74

2028 With-Action Southbound with HRP Improvements HRP Traffic Operations Summary
Weekday PM Peak Period

Segment Level Measures of Effectiveness (MOEs)													
Southbound Segment		Length (ft)	v/c Ratio	d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS		Traffic Flow Regime/Remarks		
					Average	Busiest Period	Average	Busiest Period	Density	Demand			
S01	Basic Segment: n/o HRP OFR to new HRP Service Road	200*	0.51	0.51	55.0	55.0	19.6	20.7	C	N/A	Globally Undersaturated		
S02	Diverge: OFR to new HRP Service Road	730	0.51	0.51	49.6	49.4	21.8	24.7	C	N/A			
S03	Basic Segment: n/o HRP ONR from new HRP Service Road	2600	0.37	0.37	54.6	54.6	14.1	14.3	B	N/A			
S04	Merge: ONR from new HRP Service Road	1500	0.50	0.50	51.4	51.4	21.2	19.9	B	N/A			
S05	Basic Segment: new HRP Service Rd ONR and Westchester Ave/Waters PI ONR	300	0.50	0.50	54.2	54.2	20.1	20.6	C	N/A			
S06	Merge: ONR from Westchester Ave/Waters PI Influence Area	1500	0.56	0.56	51.0	50.9	24.1	22.1	C	N/A			
S07	Basic Segment: s/o Westchester Ave/Waters PI ONR	1310	0.56	0.56	54.6	54.6	22.5	22.9	C	N/A			
All SB Segments		8,140											
Facility Level Measures of Effectiveness (MOEs)													
SB HRP (Pelham Parkway Eastbound to Bruckner Expwy)		Length (miles)	Maximum v/c Ratio	Maximum d/c Ratio	Speed (mph)		Density (pc/mi/ln)		Busiest Period LOS (5:15-5:30 PM)		Travel Time (min)		
					Average (4:00-6:30 PM)	Busiest Period (5:15-5:30 PM)	Average (4:00-6:30 PM)	Busiest Period (5:15-5:30 PM)	Density	Demand	55 mph Free Flow	Average	Busiest Period
		1.54	0.56	0.56	52.7	52.6	19.7	20.1	C	N/A	1.68	1.8	1.75
Note: * An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.													

Note: * An additional 200 feet of basic freeway segment was added prior to the Off-ramp as a dummy segment.

The 2028 With-Action with HRP Improvements condition HRP analyses are summarized as follows:

- Northbound HRP: During the peak 15 minutes of the weekday AM peak period, each northbound segment on the HRP is projected to operate at LOS D or better and the northbound HRP as a whole is projected to operate at LOS D. During the peak 15 minutes of the weekday midday peak period, each northbound segment on the HRP is projected to operate at LOS C or better and the northbound HRP as a whole is projected to operate at LOS B. During the peak 15 minutes of the weekday PM peak period, each northbound segment on the HRP is projected to operate at LOS D or better and the northbound HRP as a whole is projected to operate at LOS C.
- Southbound HRP: During the peak 15 minutes of the weekday AM peak period, each southbound segment on the HRP is projected to operate at LOS D or better and the southbound HRP as a whole is projected to operate at LOS B. During the peak 15 minutes of the weekday midday peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS B as well. During the peak 15 minutes of the weekday PM peak period, each southbound segment on the HRP is projected to operate at LOS C or better and the southbound HRP as a whole is projected to operate at LOS C.

The above density-related analysis results from the FREEVAL highway analysis methodologies do not indicate the potential for significant adverse traffic impacts for the analyzed HRP mainline and ramp segments. However, as noted above in **Tables 14-69 to 14-71**, some of the projected queues from adjacent intersections could extend beyond the corresponding analysis segments and actual conditions may be worse than the reported levels of service. These locations are the Northbound HRP mainline segment south of the East Tremont Avenue off-ramp (Exit 2) and the East Tremont Avenue off-ramp during the weekday AM and PM peak periods. Based on consultations with NYCDOT, it was decided that the analysis results for these locations would be noted to disclose the potential of significant adverse traffic impacts, even though the levels of service indicate otherwise.

F. DETAILED TRANSIT ANALYSIS

The project site is located near two NYCT No. 6 line subway stations: Middletown Road station and Westchester Square-East Tremont Avenue station. There are also numerous bus routes with stops near the project site, including the Bx4, Bx4A, Bx8, Bx12, Bx21, Bx24, Bx31, Bx40, and Bx42 bus routes. The Westchester Square-East Tremont Avenue Station is also served by a private shuttle provided by Hutchinson Metro Center. Therefore, it is assumed that most of the projected subway trips are served by the Westchester Square-East Tremont Avenue Station. These subway and bus facilities are illustrated in **Figure 14-1**.

A detailed analysis of transit operations during the critical weekday AM and PM peak periods is presented below. During other time periods, background transit ridership and station utilization, as well as project trip generation, are comparatively lower. Hence, potential transit impacts were only evaluated for the weekday AM and PM peak periods.

TRANSIT STUDY AREAS

SUBWAY SERVICE

The No. 6 subway line (Lexington Avenue Local and Express) operates between Pelham Bay Park, Bronx and Brooklyn Bridge-City Hall, Manhattan.

As discussed above in Section B, “Preliminary Analysis Methodology and Screening Assessment,” while the incremental subway trips would be greater than the *CEQR Technical Manual* analysis

Bronx Psychiatric Center Redevelopment

threshold of 200 peak hour trips made by subway during the weekday PM peak hour under the Phase II full build-out, they would be distributed to the Middletown Road and Westchester Square-East Tremont Avenue subway stations such that no subway station would incur 200 or more peak hour subway riders per station. Therefore, a detailed analysis of subway facilities is not warranted.

Also as discussed in Section B, “Preliminary Analysis Methodology and Screening Assessment,” while more than 200 peak hour incremental subway trips would be generated during the weekday PM peak hour under the Phase II full build-out, fewer than 200 peak hour incremental subway trips would pass through the peak load points (located at 125th Street and 59th Street) in the peak direction. As such, it was determined, in consultation with NYCT, that a subway line-haul analysis is also not warranted.

BUS SERVICE

Local bus routes serve both the project site (Bx24 and B21), as well as the Westchester Square–East Tremont Avenue Station (Bx4, Bx4A, Bx8, Bx12, Bx21, Bx24, Bx31, Bx40, Bx42). These routes provide bus service throughout much of the Bronx as well as Upper Manhattan.

Hutchinson Metro Center operates two shuttle bus routes serving its property. These include an internal circulation route that does not leave the property, as well as a shuttle route connecting the Westchester Square-East Tremont subway station to Hutchinson Metro Center. Service on these routes is provided roughly every 20 minutes, Monday through Saturday, 7:00 AM to 7:00 PM. Currently, these services operate below seated capacity (42 passengers for the Westchester Square-East Tremont shuttle) throughout the peak periods.

As discussed above in Section B, “Preliminary Analysis Methodology and Screening Assessment,” project-generated peak hour bus trips for both project phases would exceed the *CEQR Technical Manual* analysis thresholds for the Bx21 and Bx24 bus routes.

A brief overview of local bus service in the vicinity of the project area is provided below.

Bx4/4A

The Bx4 and Bx4A provide daily service between its southern terminus at The Hub (Westchester Avenue and Third Avenue) and the northern terminus at Westchester Square-East Tremont Avenue Station. Service operates between 5:00 AM and approximately 1:30 AM. The Bx4/4A travels primarily on Westchester Avenue, which runs roughly from northeast to southwest. The Bx4/4A operates using articulated buses with a guideline capacity of 85 passengers.

Bx8

The Bx8 provides daily service between a southern terminus at Tierney Place and Longstreet Avenue in Locust Point and its northern terminus at 226th Street and White Plains Road in Williamsbridge. Service is provided between approximately 5:30 AM and 11:00 PM. The Bx8 provides service primarily on Throgs Neck Boulevard, Westchester Avenue, East Tremont Avenue, Williamsbridge Road, and Bronxwood Avenue and connects with the No. 6 subway line at Buhre Avenue and Westchester Square. The Bx8 uses standard buses with a guideline capacity of 54 passengers.

Bx12

The Bx12 provides daily local service between the Pelham Bay Parkway No. 6 train station and Sedgwick Avenue and Webb Avenue in University Heights at all hours. The route is extended to Orchard Beach during the summer between 7:00 AM and 8:00 PM. The Bx12 travels along Pelham Parkway and mirrors the route of the Bx12 Select Bus Service (SBS), which makes fewer stops and features off-board fare-payment. The Bx12 serves the Bx12 SBS route between Bay Plaza Mall and Inwood, Manhattan, between roughly 10:00 PM and 6:00 AM when the SBS does

not run. The Bx12 stops at Pelham Parkway and Stillwell Avenue, and both the Bx12 and Bx12 SBS stop at Pelham Parkway and Eastchester Avenue. The Bx12 operates using articulated buses with a guideline capacity of 85 passengers.

Bx21

The Bx21 provides daily local service between its northern terminus at the Westchester Square No. 6 train Station and its southern terminus at East 136th St and Lincoln Avenue in Mott Haven. The Bx21 runs at all hours along Third Avenue, Boston Road, East Tremont Avenue, Morris Park Avenue, Eastchester Road, Waters Place, and Westchester Avenue. The Bx21 uses standard buses with a guideline capacity of 54 passengers.

Bx24

The Bx24 provides daily local service between Research Avenue and Ampere Avenue in Country Club to Marconi Street at Hutchinson Metro Center. The Bx24 operates between approximately 5:30 AM and 11:00 PM. The Bx24 is the only bus line to directly serve the project site, running along Marconi Street to its terminus at the Hutchinson Metro Center. The Bx24 provides service along Westchester Avenue, Williamsbridge Road, Silver Street, Eastchester Road, and Bruckner Boulevard. The Bx24 provides a direct link between the project site driveway and Westchester Square No. 6 train Subway Station. The Bx24 uses standard buses with a guideline capacity of 54 passengers.

Bx31

The Bx31 provides daily local service between Westchester Square and Katonah Avenue and Van Cortlandt Park East in Woodlawn. Bus service operates between approximately 4:40 AM and 1:45 AM. The Bx31 operates primarily on East Tremont Avenue, Williamsbridge Road, Eastchester Road, East 233rd Street, and Katonah Avenue. The Bx31 uses standard buses with a guideline capacity of 54 passengers.

Bx40/42

The Bx40 and Bx42 provide service at all hours between Throgs Neck and their western terminus at Cedar Avenue in Morris Heights. The Bx40 begins its route at Fort Schuyler and the Bx42 begins its route at Harding Avenue and Emerson Avenue. The two routes run concurrently from the intersection of East Tremont Avenue and Randall Avenue in Throgs Neck, travelling primarily along East Tremont Avenue, Valentine Avenue, Burnside Avenue and Sedgwick Avenue. The Bx40/42 operates using articulated buses with a guideline capacity of 85 passengers.

MTA MNR MORRIS PARK STATION

As discussed above in Section D, “Detailed Traffic Analysis”, under No-Action projects, the MTA has committed to initiating MNR service to a proposed new MNR Morris Park station intended to serve New Haven Line trains along existing Amtrak tracks, adjacent to the BPC, into Penn Station. The new MNR Morris Park Station is part of the Penn Station Access project that is currently undergoing its own environmental review. Based on previous discussions with the MTA, availability of that project’s ridership projections and completion of the MTA environmental review would be beyond the timeframe of this environmental review. Since the new MNR service is expected to shift trip-making away from autos and other transit modes, some of the proposed project’s potential project-related impacts and associated mitigation measures could be reduced with the MNR Morris Park station in place. However, since the ridership projections and completion date for the study are unknown at this time and an analysis of potential impacts from the proposed project without this mode of transportation available would yield more conservative findings, the new MNR Morris Park station was conservatively assumed not to be part of the No-Action condition analysis presented below.

BUS LINE-HAUL ANALYSIS

BUS LINE-HAUL ANALYSIS—EXISTING CONDITIONS

As shown in **Tables 14-75A and 14-75B**, two of the eight local bus routes are expected to experience 50 or more new trips in one direction through their maximum load points in either Phase I (2023) or Phase II (2028), and as such, under *CEQR* guidelines further analysis is warranted. These routes are the Bx21 and Bx24.

Table 14-75A
2023 Project Increment—Bus Trips By Route

Peak Hour	Alighting / Boarding	Person Trip - Bus (Accounts for Bus to Bus and Subway to Bus Transfers)																
		Bx4/4a		Bx8		Bx12		Bx21		Bx24		Bx31		Bx40		Bx42		Total
		EB	WB	NB	SB	EB	WB	EB (NB)	WB (SB)	EB	WB	NB	SB	EB	WB	EB	WB	
AM	Alighting	9	0	22	0	3	0	22	0	0	150	0	13	8	7	6	3	243
	Boarding	2	0	0	3	0	1	2	0	46	0	3	0	1	0	2	0	60
	Total	11	0	22	3	3	1	24	0	46	150	3	13	9	7	8	3	303
Midday	Alighting	3	0	7	0	0	0	6	0	0	78	0	4	3	1	3	0	105
	Boarding	0	3	0	8	0	0	0	7	77	0	5	0	3	2	3	0	108
	Total	3	3	7	8	0	0	6	7	77	78	5	4	6	3	6	0	213
PM	Alighting	2	0	5	0	0	0	4	0	0	58	0	3	2	1	1	0	76
	Boarding	0	9	0	22	0	2	0	21	156	0	13	0	8	6	6	2	245
	Total	2	9	5	22	0	2	4	21	156	58	13	3	10	7	7	2	321
Note: Bold Trip numbers indicate trips pass through maximum load point.																		

Note: Bold trip numbers indicate trips pass through maximum load point.

Table 14-75B
2028 Project Increment—Bus Trips By Route

Peak Hour	Alighting / Boarding	Person Trip - Bus (Accounts for Bus to Bus and Subway to Bus Transfers)																Total
		Bx4/4a		Bx8		Bx12		Bx21		Bx24		Bx31		Bx40		Bx42		
		EB	WB	NB	SB	EB	WB	EB (NB)	WB (SB)	EB	WB	NB	SB	EB	WB	EB	WB	
AM	Alighting	16	0	41	0	5	1	40	0	0	269	0	27	14	12	8	7	440
	Boarding	4	0	0	7	0	1	5	0	84	0	6	0	4	0	2	0	113
	Total	20	0	41	7	5	2	45	0	84	269	6	27	18	12	10	7	553
Midday	Alighting	4	0	11	0	0	0	9	0	0	121	0	7	3	3	3	0	161
	Boarding	0	5	0	14	0	2	0	12	129	0	11	0	5	3	3	1	185
	Total	4	5	11	14	0	2	9	12	129	121	11	7	8	6	6	1	346
PM	Alighting	5	0	9	0	1	0	7	0	0	99	0	8	4	1	3	0	137
	Boarding	0	17	0	42	1	5	0	42	292	0	28	0	15	11	10	7	470
	Total	5	17	9	42	2	5	7	42	292	99	28	8	19	12	13	7	607
Note: Bold trip numbers indicate trips pass through maximum load point.																		

Note: Bold trip numbers indicate trips pass through maximum load point.

Table 14-76 details existing operating conditions and capacity for local bus routes in the study area. The Bx21 and Bx24 are both expected to receive additional ridership given that they provide the most direct public bus connection to the Westchester Square-East Tremont Avenue subway station. Currently, the Bx21 and Bx24 operate with hourly available capacity ranging from -1 to 98 potential passengers depending on the time period. In existing conditions, buses are operating above guideline capacity in certain directions for the Bx8, Bx21, and Bx31 during the weekday AM peak hour.

BUS LINE-HAUL ANALYSIS—2023 NO-ACTION CONDITION

Peak hour volumes for the 2023 No-Action condition were generated by combining bus trips from discrete No-Action projects in the study area with estimated 2023 bus ridership grown from existing conditions bus ridership using the *CEQR Technical Manual* annual background growth rates. These volumes were used to conduct the 2023 No-Action condition bus line-haul analysis, the results of which are detailed in **Table 14-77**.

Table 14-76
Existing Conditions Weekday Local Bus Analysis

Peak Hour (1)	Route	Peak Direction	Maximum Load Point	Peak Hour Buses (2)	Peak Hour Passengers (3)	Average Passengers Per Bus	Available Capacity
AM	Bx4/4a	NB	Westchester Ave & Southern Blvd	8	306	38.3	374
	Bx4/4a	SB	Westchester Ave & Southern Blvd	11	816	74.2	119
	Bx8	NB	Williamsbridge Rd & Pierce Ave	6	332	55.3	-8
	Bx8	SB	Williamsbridge Rd and Pelham Pkwy N	6	407	67.8	-83
	Bx12	EB	E Fordham Rd & Third Avenue	6	377	62.8	133
	Bx12	WB	Pelham Pkwy & White Plains Rd	6	328	54.7	182
	Bx21	NB	Morris Park Ave & White Plains Rd	8	387	48.4	45
	Bx21	SB	Boston Rd & E 169 St	10	541	54.1	-1
	Bx24	EB	Research Ave & Ampere Ave	2	21	10.5	87
	Bx24	WB	Pelham Bay Station	2	45	22.5	63
	Bx31	NB	E 233 St & White Plains Rd	7	382	54.6	-4
	Bx31	SB	Eastchester Rd & Boston Rd	9	508	56.4	-22
PM	Bx40/42	EB	Sedgwick Ave and Cedar Ave	9	601	66.8	164
	Bx40/42	WB	E Tremont Ave & Randall Ave	10	690	69.0	160
	Bx4/4a	NB	Westchester Ave & Southern Blvd	8	470	58.8	210
	Bx4/4a	SB	Westchester Ave & Southern Blvd	8	300	37.5	380
	Bx8	NB	Williamsbridge Rd and Pelham Pkwy	5	220	44.0	50
	Bx8	SB	Crosby Ave & Westchester Ave	8	215	26.9	217
	Bx12	EB	E Fordham Rd & Third Avenue	6	444	74.0	66
	Bx12	WB	E Fordham Rd & Third Avenue	6	506	84.3	4
	Bx21	NB	3 Ave & E 149 St	8	342	42.8	90
	Bx21	SB	Morris Park Ave & White Plains Rd	8	350	43.8	82
	Bx24	EB	Pelham Bay Station	2	28	14.0	80
	Bx24	WB	Pelham Bay Station	2	10	5.0	98
	Bx31	NB	Eastchester Rd & Pelham Pkwy	6	318	53.0	6
	Bx31	SB	E 233 St & White Plains Rd	8	250	31.3	182
	Bx40/42	EB	E Tremont Ave & Southern Blvd	7	513	73.3	82
	Bx40/42	WB	E Tremont Ave & Webster Ave	8	596	74.5	84

Notes:

(1) Peak Hours: 7:30-8:30 AM and 4:00-5:00 PM.

(2) Based on most recent NYCT bus schedules and NYCT ridership data from 2011-2014.

(3) Available capacity per NYCT loading guidelines of 54 passengers per standard bus and 85 passengers per articulated bus.

Table 14-77
2023 No-Action Weekday Local Bus Analysis

Peak Hour (1)	Route	Direction	Maximum Load Point	2023 Peak Hour Passengers	No-Action Condition with Current Service Levels			No-Action Condition with Potential Service Changes		
					Peak Hour Buses (2)	Average Passengers Per Bus	Available Capacity (3)	Peak Hour Buses (4)	Average Passengers Per Bus	Available Capacity (3)
AM	Bx21	NB	Morris Park Ave & White Plains Rd	401	8	50	31	8	50	31
	Bx21	SB	Boston Rd & E 169 St	550	10	55	-10	11	50	44
	Bx24	EB	Research Ave & Ampere Ave	30	2	15	78	2	15	78
	Bx24	WB	Pelham Bay Station	115	2	58	-7	3	38	47
PM	Bx21	NB	3 Ave & E 149 St	350	8	44	82	8	44	82
	Bx21	SB	Morris Park Ave & White Plains Rd	362	8	45	70	8	45	70
	Bx24	EB	Pelham Bay Station	113	2	57	-5	3	38	49
	Bx24	WB	Pelham Bay Station	61	2	31	47	2	31	47
Notes: (1) Peak Hours: 7:30-8:30 AM and 4:00-5:00 PM. (2) Based on most recent NYCT bus schedules and NYCT ridership data from 2011-2014. (3) Available capacity per NYCT loading guidelines of 54 passengers per standard bus and 85 passengers per articulated bus. (4) Additional bus service added to meet loading guidelines.										

BUS LINE-HAUL ANALYSIS—2023 WITH-ACTION CONDITIONS

Peak hour bus trip volumes for the 2023 With-Action condition were calculated by adding the Phase I project-generated bus trip increments to the 2023 No-Action condition volumes. The With-Action analysis assumes that NYCT adds the necessary buses to rectify the capacity shortfalls identified in the No-Action condition. As shown in **Table 14-78**, the Bx24 is projected to experience capacity shortfalls in the 2023 With-Action condition. In the weekday AM peak hour, the westbound Bx24 is projected to exceed loading guidelines by 103 passengers, respectively. In the weekday PM peak hour, the Bx24 is projected to operate with a capacity shortfall of 107 passengers in the eastbound direction and 11 passengers in the westbound direction. The exceedance of these guideline capacities in these two instances constitutes a significant adverse bus line-haul impact. As in the 2023 No-Action condition, NYCT policy is to meet these loading guidelines where possible, and as such additional bus service would remedy the capacity shortfall and mitigate these significant adverse impacts.

Table 14-78
2023 With-Action Weekday Local Bus Analysis

Peak Hour (1)	Route	Direction	Maximum Load Point (MLP)	Peak Hour Buses (2)	No-Action Available Capacity (3)	Project Increment Through MLP	Available Capacity with Proposed Action
AM	Bx21	NB	Morris Park Ave & White Plains Rd	8	31	22	9
	Bx21	SB	Boston Rd & E 169 St	11	44	0	44
	Bx24	EB	Research Ave & Ampere Ave	2	78	46	32
	Bx24	WB	Pelham Bay Station	3	47	150	-103
PM	Bx21	NB	3 Ave & E 149 St	8	82	4	78
	Bx21	SB	Morris Park Ave & White Plains Rd	8	70	21	49
	Bx24	EB	Pelham Bay Station	3	49	156	-107
	Bx24	WB	Pelham Bay Station	2	47	58	-11
Notes: (1) Peak Hours: 7:30-8:30 AM and 4:00-5:00 PM. (2) Assumes service adjustment to address capacity shortfalls in No-Action condition. (3) Available capacity per NYCT loading guidelines of 54 passengers per standard bus and 85 passengers per articulated bus.							

BUS LINE-HAUL ANALYSIS—2028 NO-ACTION CONDITION

Peak hour volumes for the 2028 No-Action condition were generated by combining bus trips from discrete No-Action projects in the study area with estimated 2028 bus ridership grown from existing conditions bus ridership using the *CEQR Technical Manual* annual background growth rates. It should be noted that the 2028 No-Action condition does not include the Phase I completion of the proposed project. As shown in **Table 14-79**, the same capacity shortfalls that exist in the 2023 No-Action condition would exist in the 2028 No-Action condition if no changes were made to the number of buses serving the southbound Bx21 and westbound Bx24 during the weekday AM peak hour; and the number of buses serving the eastbound Bx24 during the weekday PM peak hour. The southbound Bx21 and westbound Bx24 would require one additional bus during the weekday AM peak hour to meet the bus loading guidelines. Similarly, the eastbound Bx24 would require one additional bus during the weekday PM peak hour to meet the bus loading guidelines. As such, if service were increased to meet the loading guidelines in 2023, this additional capacity would accommodate the incremental ridership growth between 2023 and 2028. NYCT policy is to meet these loading guidelines where possible, and as such it is anticipated that these or similar service changes would be implemented to address any capacity shortfalls.

Bronx Psychiatric Center Redevelopment

Table 14-79
2028 No-Action Weekday Local Bus Analysis

Peak Hour (1)	Route	Direction	Maximum Load Point	2028 Peak Hour Passengers	No-Action Condition with Current Service Levels			No-Action Condition with Potential Service Changes		
					Peak Hour Buses (2)	Average Passengers Per Bus	Available Capacity (3)	Peak Hour Buses (4)	Average Passengers Per Bus	Available Capacity (3)
AM	Bx21	NB	Morris Park Ave & White Plains Rd	404	8	51	28	8	51	28
	Bx21	SB	Boston Rd & E 169 St	553	10	55	-13	11	50	41
	Bx24	EB	Research Ave & Ampere Ave	30	2	15	78	2	15	78
	Bx24	WB	Pelham Bay Station	115	2	58	-7	3	38	47
PM	Bx21	NB	3 Ave & E 149 St	352	8	44	80	8	44	80
	Bx21	SB	Morris Park Ave & White Plains Rd	365	8	46	67	8	46	67
	Bx24	EB	Pelham Bay Station	113	2	57	-5	3	38	49
	Bx24	WB	Pelham Bay Station	61	2	31	47	2	31	47

Notes:

(1) Peak Hours: 7:30-8:30 AM and 4:00-5:00 PM.

(2) Based on most recent NYCT bus schedules and NYCT ridership data from 2011-2014.

(3) Available capacity per NYCT loading guidelines of 54 passengers per standard bus and 85 passengers per articulated bus.

(4) Additional bus service added to meet loading guidelines.

BUS LINE-HAUL ANALYSIS—2028 WITH-ACTION CONDITION

Peak hour bus trip volumes for the 2028 With-Action condition were generated by adding the Phase II project-generated bus trip increments to the 2028 No-Action condition volumes. The With-Action analysis assumes that NYCT adds the necessary buses to rectify the capacity shortfalls identified in the No-Action condition. As shown in **Table 14-80**, the Bx21 and Bx24 are projected to experience capacity shortfalls in the 2028 With-Action condition. During the weekday AM peak hour, the northbound Bx21 is projected to exceed loading guidelines by 12 passengers. During the weekday AM peak hour, the eastbound and westbound Bx24 is projected to exceed loading guidelines by 6 and 222 passengers, respectively. In the weekday PM peak hour, the Bx24 is projected to operate with a capacity shortfall of 243 passengers in the eastbound direction and 52 in the westbound direction. The exceedance of these guideline capacities in these three instances constitutes significant adverse bus line-haul impacts. As in the No-Action condition, NYCT policy is to meet these loading guidelines where possible, and as such additional bus service would remedy the capacity shortfall and mitigate these significant adverse impacts.

Table 14-80
2028 With-Action Weekday Local Bus Analysis

Peak Hour (1)	Route	Direction	Maximum Load Point (MLP)	Peak Hour Buses (2)	No-Action Available Capacity (3)	Project Increment Through MLP	Available Capacity with Proposed Action
AM	Bx21	NB	Morris Park Ave & White Plains Rd	8	28	40	-12
	Bx21	SB	Boston Rd & E 169 St	11	41	0	41
	Bx24	EB	Research Ave & Ampere Ave	2	78	84	-6
	Bx24	WB	Pelham Bay Station	3	47	269	-222
PM	Bx21	NB	3 Ave & E 149 St	8	80	7	73
	Bx21	SB	Morris Park Ave & White Plains Rd	8	67	42	25
	Bx24	EB	Pelham Bay Station	3	49	292	-243
	Bx24	WB	Pelham Bay Station	2	47	99	-52

Notes:
 (1) Peak Hours: 7:30-8:30 AM and 4:00-5:00 PM.
 (2) Assumes service adjustment to address capacity shortfalls in No-Action condition.
 (3) Available capacity per NYCT loading guidelines of 54 passengers per standard bus and 85 passengers per articulated bus.

G. DETAILED PEDESTRIAN ANALYSIS

As described above in Section B, “Preliminary Analysis Methodology and Screening Assessment,” Level 1 and Level 2 screening analyses were prepared to identify the pedestrian elements that warrant a detailed analysis. Based on the assignment of pedestrian trips, nine sidewalks, nine corners, and five crosswalks were selected for analysis. In addition, the east and south crosswalks at the Marconi Street and Project Driveway intersection were included in the No-Action and With-Action conditions pedestrian analyses. Lastly, a new north crosswalk at the Marconi Street and Project Driveway intersection was also included in the With-Action condition pedestrian analysis.

EXISTING CONDITIONS

Pedestrian data were collected in June 2015 in accordance with procedures outlined in the *CEQR Technical Manual* during the weekday hours of 7:00 AM to 10:00 AM, 11:00 AM to 2:00 PM, and 4:00 PM to 7:00 PM.

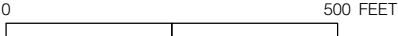
STREET-LEVEL PEDESTRIAN OPERATIONS

Peak hours were determined by comparing rolling hourly averages and the highest 15-minute volumes within the selected peak hours were selected for analysis. The existing peak hour pedestrian

volumes are shown in **Figures 14-36 through 14-38**. A summary of the Existing conditions pedestrian analysis results is presented in **Table 14-81**. As shown in **Tables 14-82 through 14-84**, all sidewalk, corner reservoir, and crosswalk analysis locations currently operate at favorable LOS A or B (with a minimum of 234.7 SFP platoon-adjusted flows for sidewalks and minimum of 71.4 SFP for corners and crosswalks).

Table 14-81
Summary of Existing Pedestrian Analysis Results

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
Sidewalks			
Sidewalks at LOS A/B/C	9	9	9
Sidewalks at LOS D	0	0	0
Sidewalks at LOS E	0	0	0
Sidewalks at LOS F	0	0	0
Total	9	9	9
Corner Reservoirs			
Corners at LOS A/B/C	9	9	9
Corners at LOS D	0	0	0
Corners at LOS E	0	0	0
Corners at LOS F	0	0	0
Total	9	9	9
Crosswalks			
Crosswalks at LOS A/B/C	5	5	5
Crosswalks at LOS D	0	0	0
Crosswalks at LOS E	0	0	0
Crosswalks at LOS F	0	0	0
Total	5	5	5
Note: LOS = Level of service.			



2015 Existing Pedestrian Volumes
Weekday AM Peak Hour
Figure 14-36



 Project Site

0 500 FEET

Table 14-82
Existing Conditions: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	64	0.73	1709.3	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	296	0.76	653.2	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	223	0.81	832.1	A
Waters Place between Fink Avenue and BPC Driveway	North	7.5	100	0.83	989.5	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	101	0.77	899.8	A
Waters Place between Marconi Street and Eastchester Road	North	3.5	207	0.88	234.7	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	95	0.74	1360.9	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	65	0.74	1620.8	A
Marconi Street between Waters Place and Project Driveway	East	2.5	120	0.75	247.3	B
Weekday Midday Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	91	0.78	1296.4	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	331	0.85	653.0	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	611	0.78	294.2	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	82	0.62	899.6	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	148	0.74	593.9	A
Waters Place between Marconi Street and Eastchester Road	North	3.5	191	0.88	256.4	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	138	0.89	1117.4	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	61	0.69	1619.5	A
Marconi Street between Waters Place and Project Driveway	East	2.5	83	0.94	449.8	B
Weekday PM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	78	0.85	1636.0	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	270	0.75	703.9	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	391	0.90	526.8	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	68	0.85	1485.0	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	68	0.65	1142.5	A
Waters Place between Marconi Street and Eastchester Road	North	3.5	129	0.66	282.6	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	120	0.71	1036.7	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	55	0.57	1485.2	A
Marconi Street between Waters Place and Project Driveway	East	2.5	69	0.78	449.8	B

Note: SFP = square feet per pedestrian.

Table 14-83
Existing Conditions: Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS
Westchester Avenue and Middletown Road	Northeast	1106.0	A	1414.8	A	545.8	A
Westchester Avenue and Waters Place	Northwest	891.7	A	600.0	A	857.8	A
Westchester Avenue and E Tremont Avenue	Northwest	300.7	A	242.1	A	297.7	A
	Southwest	204.0	A	186.2	A	237.1	A
Waters Place and BPC Driveway	Northeast	551.9	A	607.3	A	556.7	A
	Northwest	578.4	A	577.6	A	658.5	A
Waters Place and Marconi Street	Northeast	278.9	A	258.4	A	309.2	A
	Northwest	267.6	A	207.8	A	277.2	A
Waters Place and Eastchester Road	Northeast	977.3	A	1021.6	A	862.6	A

Note: SFP = square feet per pedestrian.

Table 14-84

Existing Conditions: Crosswalk Analysis

Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	Two-way Peak Hour Volume	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	47	160.5	A
Westchester Avenue and E Tremont Avenue	West	70	20	450	114.4	A
Waters Place and HRP Exit Ramp	North	26.5	10	19	1187.3	A
Waters Place and BPC Driveway	North	42	12	82	413.2	A
Waters Place and Marconi Street	North	47	12	164	154.1	A
Weekday Midday Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	58	176.1	A
Westchester Avenue and E Tremont Avenue	West	70	20	500	97.2	A
Waters Place and HRP Exit Ramp	North	26.5	10	18	1188.5	A
Waters Place and BPC Driveway	North	42	12	74	441.6	A
Waters Place and Marconi Street	North	47	12	177	179.4	A
Weekday PM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	50	216.4	A
Westchester Avenue and E Tremont Avenue	West	70	20	501	110.5	A
Waters Place and HRP Exit Ramp	North	26.5	10	9	2781.0	A
Waters Place and BPC Driveway	North	42	12	52	483.4	A
Waters Place and Marconi Street	North	47	12	104	303.4	A
Note: SFP = square feet per pedestrian.						

THE FUTURE WITHOUT THE PROPOSED PROJECT (WITHOUT HRP IMPROVEMENTS)*2023 NO-ACTION CONDITION*

The 2023 No-Action without HRP Improvements condition pedestrian volumes were generated by combining pedestrian trips from discrete No-Action projects in the study area with estimated 2023 pedestrian volumes grown from the existing conditions pedestrian volumes using the *CEQR Technical Manual* annual background growth rates. In addition, as discussed above, NYCDOT has independently installed a new traffic signal at the existing unsignalized intersection of Marconi Street and Project Driveway subsequent to the existing data collection efforts. The east and south crosswalks at this intersection were included for the future 2023 and 2028 pedestrian analyses.

As discussed above in Section D, “Detailed Traffic Analysis” and Section F, “Detailed Transit Analysis”, under No-Action projects, the MTA has committed to initiating MNR service to a proposed new MNR Morris Park station intended to serve New Haven Line trains along existing Amtrak tracks, adjacent to the BPC, into Penn Station. The new MNR Morris Park Station is part of the Penn Station Access project that is currently undergoing its own environmental review. Based on previous discussions with the MTA, availability of that project’s ridership projections and completion of the MTA environmental review would be beyond the timeframe of this environmental review. In addition to the expected shift in trip-making away from autos and other transit modes, the future MNR Morris Park Station is also expected to result in pedestrian trip assignment pattern changes in the immediate vicinity of the Marconi Street and Project Driveway intersection. However, since the ridership projections and completion date for the study are unknown at this time, the new MNR Morris Park station was conservatively assumed not to be part of the No-Action condition analysis presented below.

The 2023 No-Action without HRP Improvements condition peak hour pedestrian volumes are shown in **Figures 14-39 through 14-41**. A summary of pedestrian level of service results in the 2023 No-Action without HRP Improvements condition is shown in **Table 14-85**. As detailed in **Tables 14-86 through 14-88**, all sidewalk, corner reservoir, and crosswalk analysis locations are projected to operate at favorable LOS A or B during the 2023 No-Action without HRP Improvements condition.

Table 14-85

**Summary of 2023 No-Action without HRP Improvements
Pedestrian Analysis Results**

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
Sidewalks			
Sidewalks at LOS A/B/C	9	9	9
Sidewalks at LOS D	0	0	0
Sidewalks at LOS E	0	0	0
Sidewalks at LOS F	0	0	0
Total	9	9	9
Corner Reservoirs			
Corners at LOS A/B/C	9	9	9
Corners at LOS D	0	0	0
Corners at LOS E	0	0	0
Corners at LOS F	0	0	0
Total	9	9	9
Crosswalks			
Crosswalks at LOS A/B/C	7	7	7
Crosswalks at LOS D	0	0	0
Crosswalks at LOS E	0	0	0
Crosswalks at LOS F	0	0	0
Total	7	7	7
Note: LOS = Level of service.			



Project Site

0 500 FEET

2023 No-Action Pedestrian Volumes
Weekday AM Peak Hour
Figure 14-39



Project Site

0 500 FEET

2023 No-Action Pedestrian Volumes
Weekday Midday Peak Hour
Figure 14-40



 Project Site

0 500 FEET

2023 No-Action Pedestrian Volumes
Weekday PM Peak Hour
Figure 14-41

Table 14-86

2023 No-Action without HRP Improvements: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	85	0.73	1287.0	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	337	0.76	573.7	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	271	0.81	684.7	A
Waters Place between Fink Avenue and BPC Driveway	North	7.5	124	0.83	798.0	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	125	0.77	727.0	A
Waters Place between Marconi Street and Eastchester Road	North	3.5	228	0.88	213.0	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	101	0.74	1280.0	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	88	0.74	1197.1	A
Marconi Street between Waters Place and Project Driveway	East	2.5	220	0.75	134.6	B
Weekday Midday Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	108	0.78	1092.3	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	362	0.85	597.1	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	654	0.78	274.8	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	102	0.62	723.2	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	168	0.74	523.2	B
Waters Place between Marconi Street and Eastchester Road	North	3.5	209	0.88	234.3	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	147	0.89	1048.9	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	80	0.69	1234.9	A
Marconi Street between Waters Place and Project Driveway	East	2.5	139	0.94	268.5	B
Weekday PM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	100	0.85	1276.0	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	311	0.75	611.1	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	443	0.90	464.9	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	93	0.85	1085.8	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	93	0.65	835.4	A
Waters Place between Marconi Street and Eastchester Road	North	3.5	154	0.66	236.7	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	133	0.71	935.3	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	80	0.57	1021.0	A
Marconi Street between Waters Place and Project Driveway	East	2.5	114	0.78	272.1	B
Note: SFP = square feet per pedestrian.						

Table 14-87

2023 No-Action without HRP Improvements: Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS
Westchester Avenue and Middletown Road	Northeast	1000.7	A	1266.7	A	506.7	A
Westchester Avenue and Waters Place	Northwest	667.6	A	516.0	A	639.9	A
Westchester Avenue and E Tremont Avenue	Northwest	279.0	A	230.2	A	276.3	A
	Southwest	192.0	A	178.6	A	223.3	A
Waters Place and BPC Driveway	Northeast	442.0	A	492.6	A	405.0	A
	Northwest	462.4	A	467.8	A	455.9	A
Waters Place and Marconi Street	Northeast	217.2	A	219.8	A	222.9	A
	Northwest	219.3	A	189.9	A	238.4	A
Waters Place and Eastchester Road	Northeast	816.6	A	903.4	A	741.2	A
Note: SFP = square feet per pedestrian.							

Table 14-88

2023 No-Action without HRP Improvements: Crosswalk Analysis

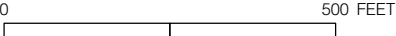
Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	Two-way Peak Hour Volume	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	67	102.3	A
Westchester Avenue and E Tremont Avenue	West	70	20	493	103.9	A
Waters Place and HRP Exit Ramp	North	26.5	10	41	539.8	A
Waters Place and BPC Driveway	North	42	12	106	319.9	A
Waters Place and Marconi Street	North	47	12	193	99.2	A
Marconi Street and Project Driveway	East	37	6.5	122	167.5	A
	South	43	10	39	124.5	A
Weekday Midday Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	74	132.9	A
Westchester Avenue and E Tremont Avenue	West	70	20	534	90.7	A
Waters Place and HRP Exit Ramp	North	26.5	10	36	588.3	A
Waters Place and BPC Driveway	North	42	12	94	345.6	A
Waters Place and Marconi Street	North	47	12	194	145.4	A
Marconi Street and Project Driveway	East	37	6.5	123	138.9	A
	South	43	10	36	121.8	A
Weekday PM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	72	147.6	A
Westchester Avenue and E Tremont Avenue	West	70	20	546	101.1	A
Waters Place and HRP Exit Ramp	North	26.5	10	33	725.8	A
Waters Place and BPC Driveway	North	42	12	77	323.4	A
Waters Place and Marconi Street	North	47	12	124	239.9	A
Marconi Street and Project Driveway	East	37	6.5	108	146.3	A
	South	43	10	21	152.4	A

Note: SFP = square feet per pedestrian.

THE FUTURE WITH THE PROPOSED PROJECT (WITHOUT HRP IMPROVEMENTS)

2023 WITH-ACTION

Peak hour pedestrian trip volumes for the 2023 With-Action without HRP Improvements condition were generated by adding the Phase I project-generated pedestrian trip increments to the 2023 No-Action without HRP Improvements pedestrian volumes. The 2023 With-Action without HRP Improvements condition peak hour pedestrian volumes are shown in **Figures 14-42 through 14-44**. As discussed above in Section D, “Detailed Traffic Analysis,” the BPC west access road would provide a secondary access and egress point at the intersection of Waters Place and BPC Driveway for the proposed project. This secondary access and egress point would be for the proposed project’s traffic demands only. The proposed project’s pedestrian trips would be restricted from using the BPC west access road to walk to and from the project site. They would walk to and from the project site along Marconi Street. As described in Section D, “Detailed Traffic Analysis: Surface Streets,” the Project Driveway and Marconi Street would be reconfigured under the future With-Action conditions. As part of this change, crosswalks would be provided on all four legs of the intersection and the existing northbound Bx24 bus stop would be relocated from the south to the north side of this intersection. Also as described in Section B, “Preliminary Analysis Methodology and Screening Assessment,” the proposed project, at the request of OMH, would relocate the existing Bx21 bus stop within the BPC campus to the intersection of Waters Place and BPC Driveway. This change would result in small shifts in bus-related pedestrian trips traversing the pedestrian analysis elements (i.e., sidewalks,



2023 With-Action Pedestrian Volumes
Weekday AM Peak Hour
Figure 14-42



Project Site

0 500 FEET



Project Site

0 500 FEET

2023 With-Action Pedestrian Volumes
Weekday PM Peak Hour
Figure 14-44

Bronx Psychiatric Center Redevelopment

crosswalks, and corner reservoirs) at the Waters Place and BPC Driveway intersection. These change have been incorporated into the With-Action pedestrian analyses presented below.

A summary of the results of the 2023 With-Action without HRP Improvements condition pedestrian analysis is provided in **Table 14-89**. As shown in **Tables 14-90 through 14-92**, all sidewalk, corner reservoir, and crosswalk analysis locations are projected to operate at an acceptable LOS C or better during the 2023 With-Action without HRP Improvements condition.

Table 14-89

**Summary of 2023 With-Action without HRP Improvements Pedestrian
Analysis Results**

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
Sidewalks			
Sidewalks at LOS A/B/C	9	9	9
Sidewalks at LOS D	0	0	0
Sidewalks at LOS E	0	0	0
Sidewalks at LOS F	0	0	0
Total	9	9	9
Corner Reservoirs			
Corners at LOS A/B/C	9	9	9
Corners at LOS D	0	0	0
Corners at LOS E	0	0	0
Corners at LOS F	0	0	0
Total	9	9	9
Crosswalks			
Crosswalks at LOS A/B/C	8	8	8
Crosswalks at LOS D	0	0	0
Crosswalks at LOS E	0	0	0
Crosswalks at LOS F	0	0	0
Total	8	8	8
Note: LOS = Level of service.			

Table 14-90

2023 With-Action without HRP Improvements: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	146	0.73	749.2	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	476	0.76	406.1	B
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	445	0.81	416.9	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	197	0.83	502.2	B
Waters Place between BPC Driveway and Marconi Street	North	7.5	249	0.77	364.8	B
Waters Place between Marconi Street and Eastchester Road	North	3.5	288	0.88	168.5	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	114	0.74	1134.0	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	161	0.74	654.3	A
Marconi Street between Waters Place and Project Driveway	East	2.5	370	0.75	79.6	C
Weekday Midday Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	195	0.78	604.9	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	470	0.85	459.8	B
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	792	0.78	226.8	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	207	0.62	356.2	B
Waters Place between BPC Driveway and Marconi Street	North	7.5	306	0.74	287.1	B
Waters Place between Marconi Street and Eastchester Road	North	3.5	287	0.88	170.4	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	175	0.89	881.1	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	185	0.69	533.9	A
Marconi Street between Waters Place and Project Driveway	East	2.5	344	0.94	108.1	B
Weekday PM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	178	0.85	716.8	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	491	0.75	387.0	B
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	686	0.90	300.1	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	187	0.85	539.9	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	211	0.65	368.1	B
Waters Place between Marconi Street and Eastchester Road	North	3.5	248	0.66	146.7	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	174	0.71	714.9	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	171	0.57	477.6	B
Marconi Street between Waters Place and Project Driveway	East	2.5	296	0.78	104.4	B
Note: SFP = square feet per pedestrian.						

Table 14-91

2023 With-Action without HRP Improvements: Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS
Westchester Avenue and Middletown Road	Northeast	822.9	A	803.0	A	408.6	A
Westchester Avenue and Waters Place	Northwest	378.4	A	280.3	A	324.8	A
Westchester Avenue and E Tremont Avenue	Northwest	228.2	A	203.0	A	216.0	A
	Southwest	164.5	A	162.1	A	186.0	A
Waters Place and BPC Driveway	Northeast	228.9	A	219.5	A	172.5	A
	Northwest	206.5	A	199.9	A	174.1	A
Waters Place and Marconi Street	Northeast	120.6	A	112.7	A	98.1	A
	Northwest	135.8	A	124.5	A	148.4	A
Waters Place and Eastchester Road	Northeast	528.8	A	580.3	A	488.0	A
Note: SFP = square feet per pedestrian.							

Table 14-92

2023 With-Action without HRP Improvements: Crosswalk Analysis

Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	Two-way Peak Hour Volume	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	128	48.4	B
Westchester Avenue and E Tremont Avenue	West	70	20	632	80.1	A
Waters Place and HRP Exit Ramp	North	26.5	10	114	188.7	A
Waters Place and BPC Driveway	North	42	12	200	112.8	A
Waters Place and Marconi Street	North	47	12	281	44.1	B
Marconi Street and Project Driveway	East	56	12	213	122.5	A
	South	55	12	60	90.3	A
	North	46	12	53	262.1	A
Weekday Midday Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	161	56.4	B
Westchester Avenue and E Tremont Avenue	West	70	20	642	75.0	A
Waters Place and HRP Exit Ramp	North	26.5	10	141	144.3	A
Waters Place and BPC Driveway	North	42	12	213	127.9	A
Waters Place and Marconi Street	North	47	12	288	80.2	A
Marconi Street and Project Driveway	East	56	12	186	96.7	A
	South	55	12	93	51.3	B
	North	46	12	45	434.7	A
Weekday PM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	150	63.1	A
Westchester Avenue and E Tremont Avenue	West	70	20	726	75.5	A
Waters Place and HRP Exit Ramp	North	26.5	10	124	184.5	A
Waters Place and BPC Driveway	North	42	12	176	122.0	A
Waters Place and Marconi Street	North	47	12	205	128.9	A
Marconi Street and Project Driveway	East	56	12	148	162.0	A
	South	55	12	167	27.4	C
	North	46	12	56	290.2	A

Note: SFP = square feet per pedestrian.

THE FUTURE WITHOUT THE PROPOSED PROJECT (WITH HRP IMPROVEMENTS)**2028 NO-ACTION**

The 2028 No-Action with HRP Improvements condition pedestrian volumes were generated by combining pedestrian trips from discrete No-Action projects in the study area with estimated 2028 pedestrian grown from the existing conditions pedestrian volumes using the *CEQR Technical Manual* annual background growth rates. It should be noted that the 2028 No-Action with HRP Improvements condition does not include the Phase I completion of the proposed project. The 2028 No-Action with HRP Improvements condition peak hour pedestrian volumes are shown in **Figures 14-45 through 14-47**. A summary of level of service results in the 2028 No-Action with HRP Improvements condition is shown in **Table 14-93**. As detailed in **Tables 14-94 through 14-96**, all sidewalk, corner reservoir, and crosswalk analysis locations are projected to operate at favorable LOS A or B during the 2028 No-Action with HRP Improvements condition.



Project Site

0 500 FEET

2028 No-Action Pedestrian Volumes
Weekday AM Peak Hour
Figure 14-45

Table 14-93

Summary of 2028 No-Action with HRP Improvements
Pedestrian Analysis Results

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
Sidewalks			
Sidewalks at LOS A/B/C	9	9	9
Sidewalks at LOS D	0	0	0
Sidewalks at LOS E	0	0	0
Sidewalks at LOS F	0	0	0
Total	9	9	9
Corner Reservoirs			
Corners at LOS A/B/C	9	9	9
Corners at LOS D	0	0	0
Corners at LOS E	0	0	0
Corners at LOS F	0	0	0
Total	9	9	9
Crosswalks			
Crosswalks at LOS A/B/C	7	7	7
Crosswalks at LOS D	0	0	0
Crosswalks at LOS E	0	0	0
Crosswalks at LOS F	0	0	0
Total	7	7	7
Notes: LOS = Level of service.			

Table 14-94
2028 No-Action with HRP Improvements: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	85	0.73	1287.0	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	339	0.76	570.3	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	273	0.81	679.7	A
Waters Place between Fink Avenue and BPC Driveway	North	7.5	124	0.83	798.0	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	125	0.77	727.0	A
Waters Place between Marconi Street and Eastchester Road	North	3.5	229	0.88	212.1	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	103	0.74	1255.2	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	89	0.74	1183.7	A
Marconi Street between Waters Place and Project Driveway	East	2.5	199	0.75	148.9	B
Weekday Midday Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	108	0.78	1092.3	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	365	0.85	592.2	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	658	0.78	273.1	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	102	0.62	723.2	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	170	0.74	517.0	B
Waters Place between Marconi Street and Eastchester Road	North	3.5	210	0.88	233.1	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	149	0.89	1034.9	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	81	0.69	1219.6	A
Marconi Street between Waters Place and Project Driveway	East	2.5	140	0.94	266.5	B
Weekday PM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	101	0.85	1263.4	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	313	0.75	607.2	A
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	445	0.90	462.9	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	93	0.85	1085.8	A
Waters Place between BPC Driveway and Marconi Street	North	7.5	94	0.65	826.5	A
Waters Place between Marconi Street and Eastchester Road	North	3.5	155	0.66	235.1	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	134	0.71	928.4	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	80	0.57	1021.0	A
Marconi Street between Waters Place and Project Driveway	East	2.5	114	0.78	272.1	B
Note: SFP = square feet per pedestrian.						

Table 14-95
2028 No-Action with HRP Improvements: Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS
Westchester Avenue and Middletown Road	Northeast	1238.4	A	1266.7	A	504.1	A
Westchester Avenue and Waters Place	Northwest	667.6	A	516.0	A	639.9	A
Westchester Avenue and E Tremont Avenue	Northwest	277.2	A	228.8	A	274.7	A
	Southwest	190.5	A	177.4	A	222.2	A
Waters Place and BPC Driveway	Northeast	442.0	A	492.6	A	405.0	A
	Northwest	462.4	A	467.8	A	455.9	A
Waters Place and Marconi Street	Northeast	216.2	A	218.7	A	221.2	A
	Northwest	218.0	A	188.6	A	238.4	A
Waters Place and Eastchester Road	Northeast	811.7	A	895.8	A	741.2	A
Note: SFP = square feet per pedestrian.							

Table 14-96

2028 No-Action with HRP Improvements: Crosswalk Analysis

Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	Two-way Peak Hour Volume	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	69	99.2	A
Westchester Avenue and E Tremont Avenue	West	70	20	497	103.0	A
Waters Place and HRP Exit Ramp	North	26.5	10	41	539.8	A
Waters Place and BPC Driveway	North	42	12	106	330.5	A
Waters Place and Marconi Street	North	47	12	193	149.9	A
Marconi Street and Project Driveway	East	37	6.5	124	159.0	A
	South	43	10	39	126.7	A
Weekday Midday Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	75	130.9	A
Westchester Avenue and E Tremont Avenue	West	70	20	538	90.0	A
Waters Place and HRP Exit Ramp	North	26.5	10	36	588.3	A
Waters Place and BPC Driveway	North	42	12	94	349.9	A
Waters Place and Marconi Street	North	47	12	195	163.9	A
Marconi Street and Project Driveway	East	37	6.5	124	122.8	A
	South	43	10	36	125.7	A
Weekday PM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	72	147.3	A
Westchester Avenue and E Tremont Avenue	West	70	20	549	100.5	A
Waters Place and HRP Exit Ramp	North	26.5	10	33	725.8	A
Waters Place and BPC Driveway	North	42	12	77	326.3	A
Waters Place and Marconi Street	North	47	12	124	258.9	A
Marconi Street and Project Driveway	East	37	6.5	109	123.2	A
	South	43	10	21	164.3	A
Note: SFP = square feet per pedestrian.						

THE FUTURE WITH THE PROPOSED PROJECT (WITH HRP IMPROVEMENTS)

2028 WITH-ACTION

Peak hour pedestrian trip volumes for the 2028 With-Action with HRP Improvements condition were generated by adding the Phase II project-generated pedestrian trips to the 2028 No-Action with HRP Improvements condition pedestrian volumes. The 2028 With-Action with HRP Improvements condition peak hour pedestrian volumes are shown in **Figures 14-48 through 14-50**. A summary of the results of the 2028 With-Action with HRP Improvements condition pedestrian analysis is provided in **Table 14-97**. As shown in **Tables 14-98 through 14-100**, all sidewalk, corner reservoir, and crosswalk analysis locations are projected to operate at an acceptable LOS C or better during the 2028 With-Action with HRP Improvements condition.



Project Site

0 500 FEET

2028 With-Action Pedestrian Volumes
Weekday AM Peak Hour
Figure 14-48

2028 With-Action Pedestrian Volumes
Weekday Midday Peak Hour
Figure 14-49



Project Site

0 500 FEET

2028 With-Action Pedestrian Volumes
Weekday PM Peak Hour
Figure 14-50

Table 14-97

Summary of 2028 With-Action with HRP Improvements
Pedestrian Analysis Results

Level of Service	Analysis Peak Hours		
	Weekday AM	Weekday Midday	Weekday PM
Sidewalks			
Sidewalks at LOS A/B/C	9	9	9
Sidewalks at LOS D	0	0	0
Sidewalks at LOS E	0	0	0
Sidewalks at LOS F	0	0	0
Total	9	9	9
Corner Reservoirs			
Corners at LOS A/B/C	9	9	9
Corners at LOS D	0	0	0
Corners at LOS E	0	0	0
Corners at LOS F	0	0	0
Total	9	9	9
Crosswalks			
Crosswalks at LOS A/B/C	8	8	8
Crosswalks at LOS D	0	0	0
Crosswalks at LOS E	0	0	0
Crosswalks at LOS F	0	0	0
Total	8	8	8
Notes: LOS = Level of service.			

Table 14-98

2028 With-Action with HRP Improvements: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	187	0.73	584.9	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	598	0.76	323.2	B
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	595	0.81	311.7	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	244	0.83	405.4	B
Waters Place between BPC Driveway and Marconi Street	North	7.5	297	0.77	305.8	B
Waters Place between Marconi Street and Eastchester Road	North	3.5	332	0.88	146.1	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	126	0.74	1026.0	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	209	0.74	504.0	B
Marconi Street between Waters Place and Project Driveway	East	2.5	473	0.75	61.9	C
Weekday Midday Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	229	0.78	515.1	B
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	558	0.85	387.3	B
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	900	0.78	199.5	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	247	0.62	298.5	B
Waters Place between BPC Driveway and Marconi Street	North	7.5	347	0.74	253.1	B
Waters Place between Marconi Street and Eastchester Road	North	3.5	328	0.88	149.1	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	194	0.89	794.8	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	226	0.69	437.0	B
Marconi Street between Waters Place and Project Driveway	East	2.5	413	0.94	89.8	C
Weekday PM Peak Hour						
Westchester Avenue between HRP E and Waters Place	West	9.5	227	0.85	562.0	A
Westchester Avenue between E Tremont Avenue and Lane Avenue	West	16.0	609	0.75	311.9	B
E Tremont Avenue between Westchester Avenue and Lane Avenue	North	14.5	826	0.90	249.2	B
Waters Place between Fink Avenue and BPC Driveway	North	7.5	242	0.85	417.1	B
Waters Place between BPC Driveway and Marconi Street	North	7.5	266	0.65	291.9	B
Waters Place between Marconi Street and Eastchester Road	North	3.5	316	0.66	115.0	B
Eastchester Road between Waters Place and Bassett Avenue	East	11.0	189	0.71	658.2	A
Waters Place between Westchester Avenue and Fink Avenue/HRP Southbound Exit Ramp	East	9.0	226	0.57	361.3	B
Marconi Street between Waters Place and Project Driveway	East	2.5	386	0.78	79.8	C
Note: SFP = square feet per pedestrian.						

Table 14-99

2028 With-Action with HRP Improvements: Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS
Westchester Avenue and Middletown Road	Northeast	747.7	A	709.9	A	365.9	A
Westchester Avenue and Waters Place	Northwest	299.0	A	235.8	A	250.1	A
Westchester Avenue and E Tremont Avenue	Northwest	195.9	A	184.4	A	187.7	A
	Southwest	145.0	A	150.1	A	166.9	A
Waters Place and BPC Driveway	Northeast	188.0	A	186.6	A	137.3	A
	Northwest	174.8	A	170.5	A	136.3	A
Waters Place and Marconi Street	Northeast	94.6	A	95.8	A	76.2	A
	Northwest	104.2	A	108.3	A	123.8	A
Waters Place and Eastchester Road	Northeast	429.2	A	490.5	A	372.1	A

Note: SFP = square feet per pedestrian.

Table 14-100

2028 With-Action with HRP Improvements: Crosswalk Analysis

Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	Two-way Peak Hour Volume	SFP	LOS
Weekday AM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	171	34.0	C
Westchester Avenue and E Tremont Avenue	West	70	20	756	66.2	A
Waters Place and HRP Exit Ramp	North	26.5	10	161	130.9	A
Waters Place and BPC Driveway	North	42	12	247	111.7	A
Waters Place and Marconi Street	North	47	12	348	50.7	B
Marconi Street and Project Driveway	East	56	12	276	74.9	A
	South	55	12	61	100.5	A
	North	46	12	88	224.4	A
Weekday Midday Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	196	43.7	B
Westchester Avenue and E Tremont Avenue	West	70	20	731	65.5	A
Waters Place and HRP Exit Ramp	North	26.5	10	181	111.1	A
Waters Place and BPC Driveway	North	42	12	253	110.7	A
Waters Place and Marconi Street	North	47	12	326	77.9	A
Marconi Street and Project Driveway	East	56	12	216	74.3	A
	South	55	12	93	52.8	B
	North	46	12	107	153.0	A
Weekday PM Peak Hour						
Westchester Avenue and Middletown Road	West	40	12	198	43.0	B
Westchester Avenue and E Tremont Avenue	West	70	20	845	64.4	A
Waters Place and HRP Exit Ramp	North	26.5	10	179	122.5	A
Waters Place and BPC Driveway	North	42	12	231	93.8	A
Waters Place and Marconi Street	North	47	12	244	124.3	A
Marconi Street and Project Driveway	East	56	12	187	96.1	A
	South	55	12	167	26.0	C
	North	46	12	228	56.4	B

Note: SFP = square feet per pedestrian.

H. VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

Crash data for the study area intersections were obtained from NYCDOT for the period between January 1, 2014 and December 31, 2016. The data obtained quantify the total number of reportable crashes (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 vehicular crashes with pedestrians and bicycles at each location.

During the January 1, 2014 to December 31, 2016 three-year period, a total of 349 reportable and non-reportable crashes, zero fatalities, 358 injuries, and 60 pedestrian/bicyclist-related crashes occurred at the study area intersections. A rolling yearly total of crash data identifies one study area intersection as a high crash location: Eastchester Road and Waters Place. **Table 14-101** depicts total crash characteristics by intersection during the study period, as well as a breakdown of pedestrian and bicycle crashes by year and location. **Table 14-102** shows a detailed description of each pedestrian/bicyclist-related crash at the high crash location listed above during the three-year period.

Table 14-101
Crash Summary

Intersection		Study Period					Crashes by Year					
North-South Roadway	East-West Roadway	All Crashes by Year			Total Fatalities	Total Injuries	Pedestrian			Bicycle		
		2014	2015	2016			2014	2015	2016	2014	2015	2016
Williamsbridge Road	Pelham Parkway North	5	10	10	0	36	0	0	2	0	1	1
Williamsbridge Road	Pelham Parkway (WB)	0	3	1	0	4	0	0	0	0	0	0
Williamsbridge Road	Pelham Parkway East/South	6	7	12	0	39	0	0	0	0	0	0
Eastchester Road	Pelham Parkway North	8	5	6	0	19	1	3	0	0	0	0
Eastchester Road	Pelham Parkway (WB)	0	1	0	0	1	0	0	0	0	0	0
Eastchester Road	Pelham Parkway East/South	10	9	7	0	26	2	1	0	0	0	0
Eastchester Road	Morris Park Avenue	7	6	8	0	19	2	1	1	0	1	0
Eastchester Road	Waters Place	12	19	15	0	45	4	5	1	1	0	0
Eastchester Road	Blondell Avenue	2	7	1	0	8	0	1	0	0	1	0
Eastchester Road	Williamsbridge Road	6	8	5	0	19	1	2	1	2	0	0
Silver Street	East Tremont Avenue	5	1	6	0	15	0	0	0	0	0	0
Marconi Street	Project Driveway	0	0	0	0	0	0	0	0	0	0	0
Marconi Street	Waters Place	6	10	4	0	16	0	1	1	0	1	0
BPC Driveway	Waters Place	0	0	0	0	0	0	0	0	0	0	0
Fink Avenue	Waters Place	3	3	4	0	13	1	1	2	0	0	0
Westchester Avenue/Ericson Place	Middletown Road	6	4	6	0	9	0	0	0	0	0	0
Westchester Avenue	Waters Place	10	8	13	0	24	1	1	0	0	1	1
Westchester Avenue	Waters Avenue	0	0	0	0	0	0	0	0	0	0	0
Westchester Avenue	Tan Place	1	3	0	0	1	0	0	0	0	0	0
Westchester Avenue	Blondell Avenue	6	3	4	0	14	0	0	0	0	0	0
Westchester Avenue	East Tremont Avenue	5	6	5	0	17	0	2	0	1	0	1
Westchester Avenue	Commerce Place	5	4	6	0	11	2	0	3	0	0	0
East Tremont Avenue	Tan Place	0	1	1	0	5	0	0	1	0	0	0
HRP East	East Tremont Avenue	3	1	2	0	7	0	1	0	0	0	0
HRP NB Exit/Ericson Place	East Tremont Avenue	2	3	2	0	9	0	2	0	0	0	0
Ericson Place	Roebling Avenue	1	0	0	0	1	1	0	0	0	0	0

Source: NYCDOT January 1st, 2014 to December 31st, 2016 crash data.
Notes: **Bold** intersections are high crash locations

Table 14-102
Vehicle and Pedestrian Crash Details

Intersection	Year	Date	Time	Crash Class			Action of Vehicle	Action of Pedestrian/ Cyclist	Cause of Crash			
				Ped/ Cyclist	Injured	Killed			Left / Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
Eastchester Road and Waters Place	2014	4/30/14	12:49 PM	Ped	X		Making Left Turn - SB	Crossing with Signal	X			Rain conditions
		6/5/14	7:30 PM	Ped	X		Making Right Turn - NB	Crossing with Signal	X			
		7/11/14	12:04 PM	Ped	X		Making Right Turn - NW	Crossing with Signal			X	
		9/18/14	8:40 AM	Ped	X		Making Left Turn - EB	Crossing with Signal	X			Glare
		11/17/14	1:30 PM	Cyclist	X		Making Left Turn - NB	Crossing, No Signal, Marked Crosswalk	X			Rain conditions
	2015	1/31/15	8:35 AM	Ped	X		Making Left Turn - WB	Crossing Against Signal	X			
		3/17/15	6:04 AM	Ped	X		Making Left Turn - EB	Crossing with Signal	X			
		4/20/15	5:45 PM	Ped	X		Making Right Turn - NB	Crossing with Signal	X			
		5/6/15	5:54 PM	Ped	X		Making Left Turn - SB	Crossing with Signal		X		
		11/13/15	7:17 AM	Ped	X		Making Left Turn - EB	Crossing with Signal	X			Glare
	2016	1/19/16	6:15 PM	Ped	X		Making Left Turn - EB	Crossing with Signal	X			

EASTCHESTER ROAD AND WATERS PLACE

Based on the review of the crash history at the intersection of Eastchester Road and Waters Place, no prevailing trends with regard to geometric deficiencies were identified as the primary causes of recorded crashes. The intersection of Eastchester Road and Waters Place is a signalized T-intersection with three high visibility crosswalks. In terms of project-generated activity, the intersection would experience incremental peak-hour volume increases of approximately 990 or fewer vehicle trips and fewer than 200 pedestrian trips at any crosswalk during each of the three analysis peak hours. The majority of pedestrian crashes involved turning vehicles striking pedestrians crossing in the crosswalk with the signal. As such, measures to increase pedestrian visibility may be warranted. Potential pedestrian safety improvement measure such as restriping faded crosswalks can be implemented to improve pedestrian safety at this intersection.

As part of its Vision Zero initiative, the City will explore additional measures for potential implementation at these high crash locations and others in the study area to enhance traffic and pedestrian safety.

I. PARKING ASSESSMENT

The proposed project would include approximately 2,509 accessory parking spaces by Phase I completion in 2023 and a total of 4,029 accessory parking spaces by Phase II full build-out in 2028 within the project site. In the 2023 With-Action condition, as shown in **Table 14-103**, a maximum of 1,583 or 63 percent of accessory parking spaces in the project site would be utilized in the peak weekday parking hour. In the 2028 With-Action condition, as shown in **Table 14-104**, a maximum of 3,015 or 75 percent of accessory parking spaces in the project site would be utilized in the peak weekday parking hour. Because the on-site accessory parking utilization levels are within the proposed project's parking capacity under both 2023 and 2028 With-Action conditions, a detailed on-street and off-street parking analysis is not warranted, and the proposed project is not expected to result in the potential for a parking shortfall or significant adverse parking impacts.

Table 14-103

Proposed Project—2023 With-Action Parking Demand and Utilization

Hour	Commercial Office	Medical Facility	Community College	Hotel	Conference Center		Local Retail	Accessory Use	Biotech/ Research	Total Demand	Parking Utilization
					Patrons	Employees					
12 AM–01 AM	0	0	0	57	0	0	0	64	0	121	5%
01 AM–02 AM	0	0	0	59	0	0	0	64	0	123	5%
02 AM–03 AM	0	0	0	59	0	0	0	64	0	123	5%
03 AM–04 AM	0	0	0	59	0	0	0	64	0	123	5%
04 AM–05 AM	0	5	0	59	0	0	0	64	0	128	5%
05 AM–06 AM	0	38	0	59	0	0	0	64	0	161	6%
06 AM–07 AM	0	134	0	59	0	0	0	64	0	257	10%
07 AM–08 AM	20	318	22	59	1	3	0	56	4	483	19%
08 AM–09 AM	274	589	103	51	12	12	0	41	45	1,127	45%
09 AM–10 AM	463	737	191	43	20	16	0	31	79	1,580	63%
10 AM–11 AM	446	746	200	43	27	18	0	24	79	1,583	63%
11 AM–12 PM	438	725	187	43	31	18	0	21	77	1,540	61%
12 PM–01 PM	416	699	170	69	32	18	0	22	77	1,503	60%
01 PM–02 PM	440	745	170	58	32	18	0	22	78	1,563	62%
02 PM–03 PM	453	729	155	49	30	17	0	22	79	1,534	61%
03 PM–04 PM	473	577	129	40	26	17	0	22	76	1,360	54%
04 PM–05 PM	342	311	81	29	21	12	0	26	49	871	35%
05 PM–06 PM	52	140	104	42	12	4	0	34	26	414	17%
06 PM–07 PM	14	82	79	29	0	2	0	44	6	256	10%
07 PM–08 PM	3	61	47	36	0	1	0	53	0	201	8%
08 PM–09 PM	0	41	0	39	0	0	0	56	0	136	5%
09 PM–10 PM	0	30	0	44	0	0	0	59	0	133	5%
10 PM–11 PM	0	1	0	51	0	0	0	61	0	113	5%
11 PM–12 AM	0	0	0	55	0	0	0	64	0	119	5%
Total										1,583	63%

Table 14-104

Proposed Project—2028 With-Action Parking Demand and Utilization

Hour	Commercial Office	Medical Facility	Community College	Hotel	Conference Center		Local Retail	Accessory Use	Biotech/ Research	Total Demand	Parking Utilization
					Patrons	Employees					
12 AM–01 AM	0	0	0	57	0	0	0	160	0	217	5%
01 AM–02 AM	0	0	0	59	0	0	0	160	0	219	5%
02 AM–03 AM	0	0	0	59	0	0	0	160	0	219	5%
03 AM–04 AM	0	0	0	59	0	0	0	160	0	219	5%
04 AM–05 AM	0	11	0	59	0	0	0	160	0	230	6%
05 AM–06 AM	0	83	0	59	0	0	0	160	0	302	7%
06 AM–07 AM	0	291	0	59	0	0	0	160	0	510	13%
07 AM–08 AM	46	685	22	59	1	3	0	140	4	960	24%
08 AM–09 AM	592	1,268	103	51	12	12	0	102	45	2,185	54%
09 AM–10 AM	1,002	1,588	191	43	20	16	0	76	79	3,015	75%
10 AM–11 AM	966	1,608	200	43	27	18	0	60	79	3,001	74%
11 AM–12 PM	950	1,562	187	43	31	18	0	54	77	2,922	73%
12 PM–01 PM	905	1,506	170	69	32	18	0	55	77	2,832	70%
01 PM–02 PM	955	1,602	170	58	32	18	0	55	78	2,968	74%
02 PM–03 PM	981	1,567	155	49	30	17	0	55	79	2,933	73%
03 PM–04 PM	1,023	1,238	129	40	26	17	0	56	76	2,605	65%
04 PM–05 PM	738	667	81	29	21	12	0	66	49	1,663	41%
05 PM–06 PM	113	300	104	42	12	4	0	87	26	688	17%
06 PM–07 PM	30	174	79	29	0	2	0	111	6	431	11%
07 PM–08 PM	6	129	47	36	0	1	0	132	0	351	9%
08 PM–09 PM	0	86	0	39	0	0	0	141	0	266	7%
09 PM–10 PM	0	63	0	44	0	0	0	148	0	255	6%
10 PM–11 PM	0	1	0	51	0	0	0	154	0	206	5%
11 PM–12 AM	0	0	0	55	0	0	0	160	0	215	5%
Total										3,015	75%

*